

## Overview

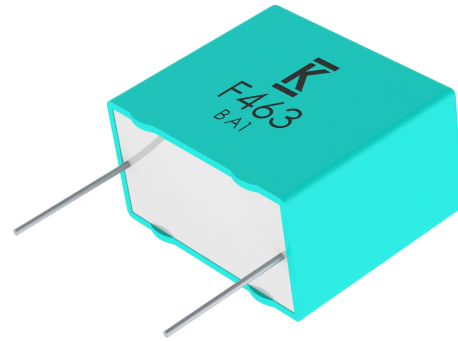
The F461 – 464 Series is a metallized polypropylene film encapsulated with self-extinguishing resin, in a box of material meeting the requirements of UL 94 V-0. Four different winding constructions are used depending on voltage and lead spacing. Please see Table 1 for more information.

## Applications

Typical applications include pulse operation in switched mode power supplies (SMPS), electrical ballasts, inverter high frequency filtering and other high frequency applications demanding stable operation.

## Benefits

- Rated voltage: 160 – 2,500 VDC
- Rated voltage: 90 – 900 VAC
- Capacitance range: 0.001 – 56  $\mu$ F
- Lead spacing: 5 – 37.5 mm
- Capacitance tolerance:  $\pm 5\%$  and  $\pm 10\%$
- Climatic category: 55/105/56, IEC 60068-1
- Tape & Reel packaging in accordance with IEC 60286-2
- RoHS Compliant and lead-free terminations
- Category temperature range of  $-55^{\circ}\text{C}$  to  $+105^{\circ}\text{C}$
- Rated temperature  $+85^{\circ}\text{C}$



## Part Number System

| F               | 46x                                                      | K                                                                        | E                   | 223                                                                                    | J                               | 160                                                                                                                         | C                          |
|-----------------|----------------------------------------------------------|--------------------------------------------------------------------------|---------------------|----------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------|----------------------------|
| Capacitor Class | Series                                                   | Lead Spacing (mm)                                                        | Size Code           | Capacitance Code (pF)                                                                  | Capacitance Tolerance           | Rated Voltage (VDC)                                                                                                         | Packaging                  |
| F = Film        | Metallized Polypropylene<br>x = sections in construction | J = 5<br>K = 7.5<br>A = 10<br>B = 15<br>D = 22.5<br>F = 27.5<br>R = 37.5 | See Dimension Table | First two digits represent significant figures. Third digit specifies number of zeros. | J = $\pm 5\%$<br>K = $\pm 10\%$ | 160 = 160<br>250 = 250<br>400 = 400<br>630 = 630<br>1K0 = 1,000<br>1L2 = 1,250<br>1K6 = 1,600<br>2K0 = 2,000<br>2K5 = 2,500 | See Ordering Options Table |

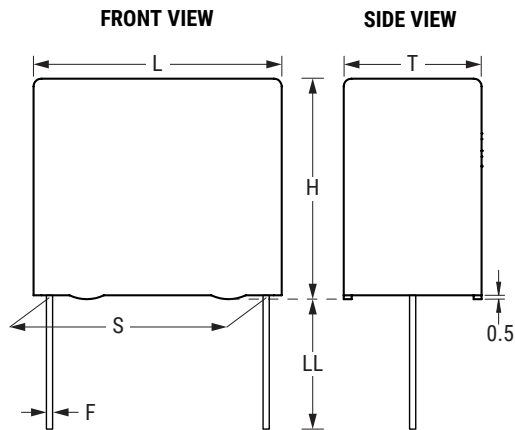
## Ordering Options Table

| Lead Spacing<br>Nominal<br>(mm) | Type of Leads and Packaging                | Lead Length<br>(mm)        | Lead and<br>Packaging<br>Code |
|---------------------------------|--------------------------------------------|----------------------------|-------------------------------|
| 5                               | <b>Standard Lead and Packaging Options</b> |                            |                               |
|                                 | Bulk (Bag) – Short Leads                   | 4 +2/-0                    | C                             |
|                                 | Bulk (Bag) – Long Leads                    | 17 +0/-1                   | A                             |
|                                 | Tape & Reel (Standard Reel)                | H <sub>0</sub> = 18.5 ±0.5 | L                             |
|                                 | <b>Other Lead and Packaging Options</b>    |                            |                               |
|                                 | Bulk (Bag) – Maximum Length Leads          | 20 +5/-0                   | ALL0L                         |
|                                 | Ammo Pack                                  | H <sub>0</sub> = 18.5 ±0.5 | R                             |
| 7.5                             | <b>Standard Lead and Packaging Options</b> |                            |                               |
|                                 | Bulk (Bag) – Short Leads                   | 4 +2/-0                    | C                             |
|                                 | Bulk (Bag) – Long Leads                    | 17 +0/-1                   | A                             |
|                                 | Tape & Reel (Standard Reel)                | H <sub>0</sub> = 18.5 ±0.5 | L                             |
|                                 | <b>Other Lead and Packaging Options</b>    |                            |                               |
|                                 | Bulk (Bag) – Maximum Length Leads          | 20 +5/-0                   | ALL0L                         |
|                                 | Ammo Pack                                  | H <sub>0</sub> = 18.5 ±0.5 | R                             |
| 10                              | <b>Standard Lead and Packaging Options</b> |                            |                               |
|                                 | Bulk (Bag) – Short Leads                   | 4 +2/-0                    | C                             |
|                                 | Bulk (Bag) – Long Leads                    | 17 +0/-1                   | A                             |
|                                 | Tape & Reel (Standard Reel)                | H <sub>0</sub> = 18.5 ±0.5 | L                             |
|                                 | <b>Other Lead and Packaging Options</b>    |                            |                               |
|                                 | Bulk (Bag) – Maximum Length Leads          | 20 +5/-0                   | ALL0L                         |
|                                 | Ammo Pack                                  | H <sub>0</sub> = 18.5 ±0.5 | R                             |
| 15                              | <b>Standard Lead and Packaging Options</b> |                            |                               |
|                                 | Bulk (Bag) – Short Leads                   | 4 +2/-0                    | C                             |
|                                 | Bulk (Bag) – Long Leads                    | 17 +0/-1                   | A                             |
|                                 | Pizza Pack                                 | 4 +2/-0                    | Z                             |
|                                 | <b>Other Lead and Packaging Options</b>    |                            |                               |
|                                 | Pizza – Short Leads                        | 3.2 +0.3/-0.2              | ZL32K                         |
|                                 | Tape & Reel (Standard Reel)                | H <sub>0</sub> = 18.5 ±0.5 | L                             |
|                                 | Tape & Reel (Large Reel)                   | H <sub>0</sub> = 18.5 ±0.5 | P                             |
|                                 | Bulk (Bag) – Maximum Length Leads          | 25 +5/-0                   | ALR0L                         |
|                                 | Ammo Pack                                  | H <sub>0</sub> = 18.5 ±0.5 | R                             |

## Ordering Options Table cont.

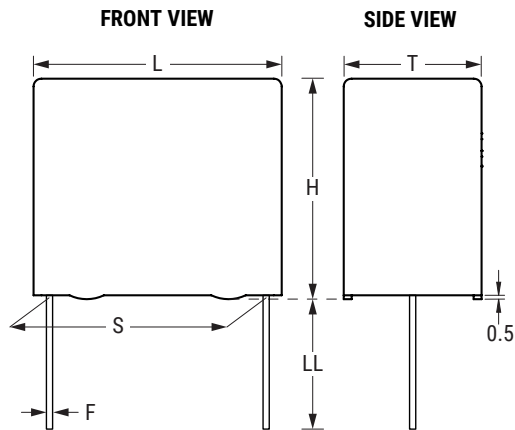
| Lead Spacing<br>Nominal<br>(mm) | Type of Leads and Packaging                | Lead Length<br>(mm)        | Lead and<br>Packaging<br>Code |
|---------------------------------|--------------------------------------------|----------------------------|-------------------------------|
| 22.5                            | <b>Standard Lead and Packaging Options</b> |                            |                               |
|                                 | Pizza – Long Leads                         | 17 +0/-1                   | ZLH0J                         |
|                                 | Pizza Pack                                 | 4 +2/-0                    | Z                             |
|                                 | <b>Other Lead and Packaging Options</b>    |                            |                               |
|                                 | Pizza – Short Leads                        | 3.2 +0.3/-0.2              | ZL32K                         |
|                                 | Tape & Reel (Standard Reel)                | H <sub>0</sub> = 18.5 ±0.5 | L                             |
|                                 | Tape & Reel (Large Reel)                   | H <sub>0</sub> = 18.5 ±0.5 | P                             |
|                                 | Ammo Pack                                  | H <sub>0</sub> = 18.5 ±0.5 | R                             |
| 27.5                            | <b>Standard Lead and Packaging Options</b> |                            |                               |
|                                 | Pizza – Long Leads                         | 17 +0/-1                   | ZLH0J                         |
|                                 | <b>Other Lead and Packaging Options</b>    |                            |                               |
|                                 | Pizza Pack                                 | 4 +2/-0                    | Z                             |
|                                 | Pizza – Short Leads                        | 3.2 +0.3/-0.2              | ZL32K                         |
| 37.5                            | <b>Standard Lead and Packaging Options</b> |                            |                               |
|                                 | Pizza – Long Leads                         | 17 +0/-1                   | ZLH0J                         |
|                                 | <b>Other Lead and Packaging Options</b>    |                            |                               |
|                                 | Pizza Pack                                 | 4 +2/-0                    | Z                             |
|                                 | Pizza – Short Leads                        | 3.2 +0.3/-0.2              | ZL32K                         |

## Dimensions – Millimeters



| Size Code                                                      | S       |           | T       |           | H       |           | L       |           | F       |           |
|----------------------------------------------------------------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|
|                                                                | Nominal | Tolerance | Nominal | Tolerance | Nominal | Tolerance | Nominal | Tolerance | Nominal | Tolerance |
| JF                                                             | 5.0     | ±0.4      | 2.5     | 0 / -0.5  | 6.5     | 0 / -0.5  | 7.2     | 0 / -0.5  | 0.5     | ±0.05     |
| JG                                                             | 5.0     | ±0.4      | 3.5     | 0 / -0.5  | 7.5     | 0 / -0.5  | 7.2     | 0 / -0.5  | 0.5     | ±0.05     |
| JM                                                             | 5.0     | ±0.4      | 4.5     | 0 / -0.5  | 9.5     | 0 / -0.5  | 7.2     | 0 / -0.5  | 0.5     | ±0.05     |
| JQ                                                             | 5.0     | ±0.4      | 5.0     | 0 / -0.5  | 10.0    | 0 / -0.5  | 7.2     | 0 / -0.5  | 0.5     | ±0.05     |
| JT                                                             | 5.0     | ±0.4      | 6.0     | 0 / -0.5  | 11.0    | 0 / -0.5  | 7.2     | 0 / -0.5  | 0.5     | ±0.05     |
| JU                                                             | 5.0     | ±0.4      | 7.2     | 0 / -0.5  | 13.0    | 0 / -0.5  | 7.2     | 0 / -0.5  | 0.5     | ±0.05     |
| KE                                                             | 7.5     | ±0.4      | 2.5     | 0 / -0.5  | 6.0     | 0 / -0.5  | 10.0    | 0 / -0.5  | 0.6     | ±0.05     |
| KF                                                             | 7.5     | ±0.4      | 3.0     | 0 / -0.5  | 8.0     | 0 / -0.5  | 10.0    | 0 / -0.5  | 0.6     | ±0.05     |
| KG                                                             | 7.5     | ±0.4      | 4.0     | 0 / -0.5  | 8.0     | 0 / -0.5  | 10.0    | 0 / -0.5  | 0.6     | ±0.05     |
| KJ                                                             | 7.5     | ±0.4      | 5.0     | 0 / -0.5  | 10.5    | 0 / -0.5  | 10.0    | 0 / -0.5  | 0.6     | ±0.05     |
| KM                                                             | 7.5     | ±0.4      | 6.0     | 0 / -0.5  | 12.0    | 0 / -0.5  | 10.5    | 0 / -0.5  | 0.6     | ±0.05     |
| AG                                                             | 10.0    | ±0.4      | 4.0     | 0 / -0.5  | 9.0     | 0 / -0.5  | 13.0    | 0 / -0.5  | 0.6     | ±0.05     |
| AK                                                             | 10.0    | ±0.4      | 5.0     | 0 / -0.5  | 11.0    | 0 / -0.5  | 13.0    | 0 / -0.5  | 0.6     | ±0.05     |
| AP                                                             | 10.0    | ±0.4      | 6.0     | 0 / -0.5  | 12.0    | 0 / -0.5  | 13.0    | 0 / -0.5  | 0.6     | ±0.05     |
| BB                                                             | 15.0    | ±0.4      | 4.0     | 0 / -0.5  | 10.0    | 0 / -0.5  | 18.0    | 0 / -0.5  | 0.8     | ±0.05     |
| BC                                                             | 15.0    | ±0.4      | 5.0     | 0 / -0.5  | 11.0    | 0 / -0.5  | 18.0    | 0 / -0.5  | 0.8     | ±0.05     |
| BE                                                             | 15.0    | ±0.4      | 5.5     | 0 / -0.5  | 12.5    | 0 / -0.5  | 18.0    | 0 / -0.5  | 0.8     | ±0.05     |
| BG                                                             | 15.0    | ±0.4      | 6.0     | 0 / -0.5  | 12.0    | 0 / -0.5  | 18.0    | 0 / -0.5  | 0.8     | ±0.05     |
| BK                                                             | 15.0    | ±0.4      | 7.5     | 0 / -0.5  | 13.5    | 0 / -0.5  | 18.0    | 0 / -0.5  | 0.8     | ±0.05     |
| BI                                                             | 15.0    | ±0.4      | 6.0     | 0 / -0.5  | 17.5    | 0 / -0.5  | 18.0    | 0 / -0.5  | 0.8     | ±0.05     |
| BP                                                             | 15.0    | ±0.4      | 8.5     | 0 / -0.5  | 14.5    | 0 / -0.5  | 18.0    | 0 / -0.5  | 0.8     | ±0.05     |
| BS                                                             | 15.0    | ±0.4      | 10.0    | 0 / -0.5  | 16.0    | 0 / -0.5  | 18.0    | 0 / -0.5  | 0.8     | ±0.05     |
| BY                                                             | 15.0    | ±0.4      | 11.0    | 0 / -0.5  | 19.0    | 0 / -0.5  | 18.0    | 0 / -0.5  | 0.8     | ±0.05     |
| DB                                                             | 22.5    | ±0.4      | 6.0     | 0 / -0.5  | 14.5    | 0 / -0.5  | 26.0    | 0 / -0.5  | 0.8     | ±0.05     |
| DI                                                             | 22.5    | ±0.4      | 7.0     | 0 / -0.5  | 16.0    | 0 / -0.5  | 26.0    | 0 / -0.5  | 0.8     | ±0.05     |
| DH                                                             | 22.5    | ±0.4      | 8.0     | 0 / -0.5  | 16.0    | 0 / -0.5  | 26.0    | 0 / -0.5  | 0.8     | ±0.05     |
| DJ                                                             | 22.5    | ±0.4      | 8.5     | 0 / -0.5  | 17.0    | 0 / -0.5  | 26.0    | 0 / -0.5  | 0.8     | ±0.05     |
| DM                                                             | 22.5    | ±0.4      | 9.0     | 0 / -0.5  | 18.5    | 0 / -0.5  | 26.0    | 0 / -0.5  | 0.8     | ±0.05     |
| DO                                                             | 22.5    | ±0.4      | 10.0    | 0 / -0.5  | 18.5    | 0 / -0.5  | 26.0    | 0 / -0.5  | 0.8     | ±0.05     |
| Note: See Ordering Options Table for lead length (LL) options. |         |           |         |           |         |           |         |           |         |           |

## Dimensions – Millimeters cont.

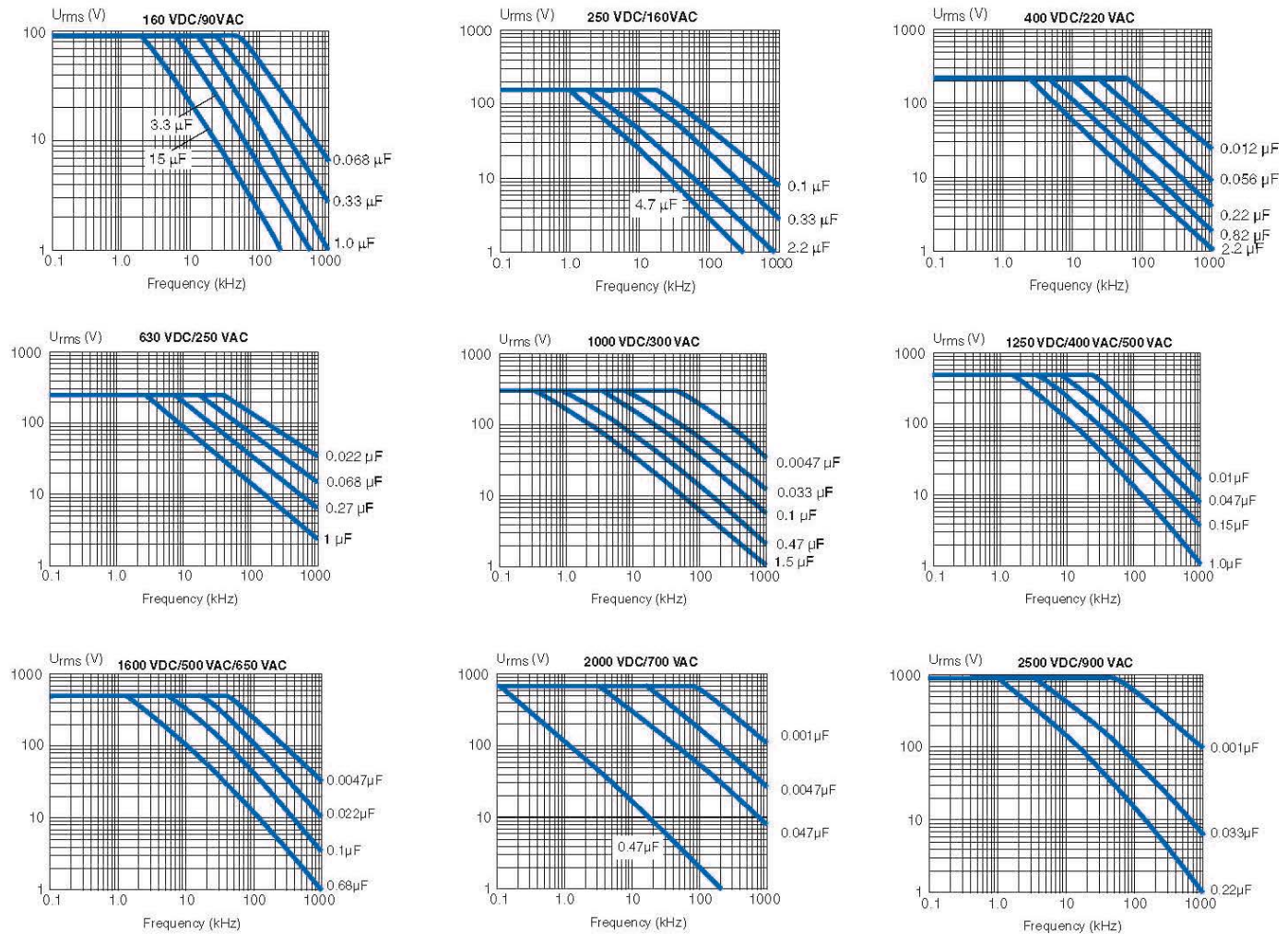


| Size Code                                                      | S       |           | T       |           | H       |           | L       |           | F       |           |
|----------------------------------------------------------------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|
|                                                                | Nominal | Tolerance | Nominal | Tolerance | Nominal | Tolerance | Nominal | Tolerance | Nominal | Tolerance |
| DP                                                             | 22.5    | ±0.4      | 11.0    | 0 / -0.5  | 20.0    | 0 / -0.5  | 26.0    | 0 / -0.5  | 0.8     | ±0.05     |
| DU                                                             | 22.5    | ±0.4      | 13.0    | 0 / -0.5  | 22.0    | 0 / -0.5  | 26.0    | 0 / -0.5  | 0.8     | ±0.05     |
| DY                                                             | 22.5    | ±0.4      | 15.5    | 0 / -0.5  | 24.5    | 0 / -0.5  | 26.0    | 0 / -0.5  | 0.8     | ±0.05     |
| FB                                                             | 27.5    | ±0.4      | 9.0     | 0 / -0.7  | 17.0    | 0 / -0.7  | 31.5    | 0 / -0.7  | 0.8     | ±0.05     |
| FC                                                             | 27.5    | ±0.4      | 11.0    | 0 / -0.7  | 20.0    | 0 / -0.7  | 31.5    | 0 / -0.7  | 0.8     | ±0.05     |
| FI                                                             | 27.5    | ±0.4      | 13.0    | 0 / -0.7  | 25.0    | 0 / -0.7  | 31.5    | 0 / -0.7  | 0.8     | ±0.05     |
| FN                                                             | 27.5    | ±0.4      | 14.0    | 0 / -0.7  | 28.0    | 0 / -0.7  | 31.5    | 0 / -0.7  | 0.8     | ±0.05     |
| FR                                                             | 27.5    | ±0.4      | 17.5    | 0 / -0.7  | 28.0    | 0 / -0.7  | 31.5    | 0 / -0.7  | 0.8     | ±0.05     |
| FS                                                             | 27.5    | ±0.4      | 19.0    | 0 / -0.7  | 29.0    | 0 / -0.7  | 31.5    | 0 / -0.7  | 0.8     | ±0.05     |
| FY                                                             | 27.5    | ±0.4      | 22.0    | 0 / -0.7  | 37.0    | 0 / -0.7  | 31.5    | 0 / -0.7  | 0.8     | ±0.05     |
| RB                                                             | 37.5    | ±0.5      | 11.0    | 0 / -0.7  | 22.0    | 0 / -0.7  | 41.0    | 0 / -0.7  | 1       | ±0.05     |
| RF                                                             | 37.5    | ±0.5      | 13.0    | 0 / -0.7  | 24.0    | 0 / -0.7  | 41.0    | 0 / -0.7  | 1       | ±0.05     |
| RH                                                             | 37.5    | ±0.5      | 15.0    | 0 / -0.7  | 26.0    | 0 / -0.7  | 41.0    | 0 / -0.7  | 1       | ±0.05     |
| RC                                                             | 37.5    | ±0.5      | 16.0    | 0 / -0.7  | 28.5    | 0 / -0.7  | 41.0    | 0 / -0.7  | 1       | ±0.05     |
| RD                                                             | 37.5    | ±0.5      | 19.0    | 0 / -0.7  | 32.0    | 0 / -0.7  | 41.0    | 0 / -0.7  | 1       | ±0.05     |
| RP                                                             | 37.5    | ±0.5      | 21.0    | 0 / -0.7  | 38.0    | 0 / -0.7  | 41.0    | 0 / -0.7  | 1       | ±0.05     |
| RO                                                             | 37.5    | ±0.5      | 24.0    | 0 / -0.7  | 44.0    | 0 / -0.7  | 41.0    | 0 / -0.7  | 1       | ±0.05     |
| RU                                                             | 37.5    | ±0.5      | 30.0    | 0 / -0.7  | 45.0    | 0 / -0.7  | 41.0    | 0 / -0.7  | 1       | ±0.05     |
| Note: See Ordering Options Table for lead length (LL) options. |         |           |         |           |         |           |         |           |         |           |

## Performance Characteristics

| Series                     | F461                                                                                                                                                                                                      | F461         | F461           | F461                | F462             | F462            | F463            | F462           | F463            | F463             | F464            |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------------|---------------------|------------------|-----------------|-----------------|----------------|-----------------|------------------|-----------------|
| Sections                   | 1                                                                                                                                                                                                         | 1            | 1              | 1                   | 2                | 2               | 3               | 2              | 3               | 3                | 4               |
| Voltage Range (VDC)        | 160                                                                                                                                                                                                       | 250          | 400            | 630                 | 1,000            | 1,250           | 1,250           | 1,600          | 1,600           | 2,000            | 2,500           |
| Voltage Range (VAC)        | 90                                                                                                                                                                                                        | 160          | 220            | 250                 | 300              | 400             | 500             | 500            | 650             | 700              | 900             |
| Capacitance Range (μF)     | 0.01<br>– 56                                                                                                                                                                                              | 0.01<br>– 39 | 0.0033<br>– 18 | 0.0015<br>– 8.2     | 0.0047<br>– 3.9  | 0.0033<br>– 2.7 | 0.0047<br>– 2.2 | 0.001<br>– 1.5 | 0.0033<br>– 1.5 | 0.0010<br>– 0.82 | 0.001<br>– 0.56 |
| Capacitance Values         | In accordance with IEC E12 series                                                                                                                                                                         |              |                |                     |                  |                 |                 |                |                 |                  |                 |
| Capacitance Tolerance      | ±5%, ±10%                                                                                                                                                                                                 |              |                |                     |                  |                 |                 |                |                 |                  |                 |
| Category Temperature Range | –55°C to +105°C                                                                                                                                                                                           |              |                |                     |                  |                 |                 |                |                 |                  |                 |
| Rated Temperature          | +85°C                                                                                                                                                                                                     |              |                |                     |                  |                 |                 |                |                 |                  |                 |
| Voltage Derating DC        | The rated voltage is decreased with 2.0%/°C between +85°C and +105°C                                                                                                                                      |              |                |                     |                  |                 |                 |                |                 |                  |                 |
| Voltage Derating AC        | The voltage is decreased with 1.25%/°C between +85°C and +105°C                                                                                                                                           |              |                |                     |                  |                 |                 |                |                 |                  |                 |
| Climatic Category          | IEC 60068–1, 55/105/56                                                                                                                                                                                    |              |                |                     |                  |                 |                 |                |                 |                  |                 |
| Passive Flammability       | Category B or C according to IEC 60384–1 depending on size                                                                                                                                                |              |                |                     |                  |                 |                 |                |                 |                  |                 |
| Maximum Pulse Steepness    | dV/dt according to Table 1. For peak to peak voltages lower than rated voltage (V <sub>pp</sub> < V <sub>R</sub> ), the specified dV/dt can be multiplied by the factor V <sub>R</sub> /V <sub>pp</sub> . |              |                |                     |                  |                 |                 |                |                 |                  |                 |
| Temperature Coefficient    | –200 (+50, –100) ppm/°C (at 1 kHz)                                                                                                                                                                        |              |                |                     |                  |                 |                 |                |                 |                  |                 |
| Self-Inductance            | Approximately 6 nH/cm for the total length of capacitor winding and the leads                                                                                                                             |              |                |                     |                  |                 |                 |                |                 |                  |                 |
| Dissipation Factor tand    | Maximum Values at +23°C                                                                                                                                                                                   |              |                |                     |                  |                 |                 |                |                 |                  |                 |
|                            |                                                                                                                                                                                                           | C ≤ 0.1 μF   |                | 0.1 μF < C ≤ 1.0 μF |                  | C > 1.0 μF      |                 |                |                 |                  |                 |
|                            | 1 kHz                                                                                                                                                                                                     | 0.0005       |                | 0.0005              |                  | 0.001           |                 |                |                 |                  |                 |
|                            | 10 kHz                                                                                                                                                                                                    | 0.0006       |                | 0.0008              |                  | –               |                 |                |                 |                  |                 |
|                            | 100 kHz                                                                                                                                                                                                   | 0.0025       |                | –                   |                  | –               |                 |                |                 |                  |                 |
| Insulation Resistance      | Measured at +23°C, 100 VDC 60 seconds for V <sub>R</sub> < 500 VDC and at 500 VDC for V <sub>R</sub> ≥ 500 VDC                                                                                            |              |                |                     |                  |                 |                 |                |                 |                  |                 |
|                            | Minimum Values Between Terminals                                                                                                                                                                          |              |                |                     |                  |                 |                 |                |                 |                  |                 |
|                            | C ≤ 0.33 μF                                                                                                                                                                                               |              |                |                     | ≥ 100,000 MΩ     |                 |                 |                |                 |                  |                 |
|                            | C > 0.33 μF                                                                                                                                                                                               |              |                |                     | ≥ 30,000 MΩ • μF |                 |                 |                |                 |                  |                 |
|                            | Minimum Values Between Terminals and Case                                                                                                                                                                 |              |                |                     |                  |                 |                 |                |                 |                  |                 |
|                            |                                                                                                                                                                                                           |              |                |                     | ≥ 100,000 MΩ     |                 |                 |                |                 |                  |                 |

## Derating of $V_{rms}$ vs. Frequency, +85°C Ambient Temperature and 10°C Internal Heating, Typical Values



## Environmental Test Data

| Test                         | IEC Publication         | Procedure                                                                                    | Requirements                                                                                                                                                                                                                                                                                                      |
|------------------------------|-------------------------|----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Voltage Proof                | 60384-1 Clause 4.6      | $1.6 \times V_R$ after 60 seconds                                                            | The capacitors must withstand the voltage without breakdowns or flashovers and without decreased insulation resistance below the value in each detail specification.<br>No visible damage                                                                                                                         |
|                              | Clause 4.6 2.3          | $2 \times V_R$ (minimum 400 VDC to case) after 60 seconds                                    | As above                                                                                                                                                                                                                                                                                                          |
| Vibration                    | 60068-2-6 Test Fc       | 6 hours with 10 – 500 Hz and 0.75 mm amplitude or 98 m/s <sup>2</sup> depending on frequency | No visible damage<br>$\tan\delta \leq 1.2 \times$ stated value at 100 kHz<br>$\Delta C/C \leq \pm 0.5\%$                                                                                                                                                                                                          |
| Bump                         | 60068-2-29 Test Eb      | 4,000 bumps with 390 m/s <sup>2</sup> mounted on PCB                                         | $\Delta C/C \leq \pm 0.5\%$<br>$\tan\delta \leq 1.2 \times$ stated value at 100 kHz<br>Insulation resistance:<br>$\geq 100,000 \text{ M}\Omega$ for $C_R \leq 0.33 \text{ }\mu\text{F}$<br>$\geq 30,000 \text{ M}\Omega, \text{ }\mu\text{F}$ for $C_R > 0.33 \text{ }\mu\text{F}$                                |
| Resistance to Soldering Heat | 60068-2-20 Method 1A    | Solder bath at $+260^\circ\text{C} \pm 5^\circ\text{C}$ with screening                       | Immersion of the terminations into the solder bath shall be completed in a time not exceeding 1 second and the terminations shall remain immersed to the specified depth for 10 +1 second and then be withdrawn.<br>$\Delta C/C \leq \pm 1.0\%$<br>$\tan\delta$ increase $< 0.001$<br>No visible damage           |
| Climatic Sequence            | 60384-1 Paragraph 4:21  | 60068-2.2 dry heat 16 hours<br>60068-2-34 damp heat, one cycle,<br>60068-2-1 Test Aa 2 hours | Insulation resistance:<br>$\geq 100,000 \text{ M}\Omega$ for $C_R \leq 0.33 \text{ }\mu\text{F}$<br>$\geq 30,000 \text{ M}\Omega, \text{ }\mu\text{F}$ for $C_R > 0.33 \text{ }\mu\text{F}$<br>$\Delta C/C \leq \pm 0.5\%$<br>$\tan\delta \leq 1.2 \times$ stated value at 100 kHz                                |
| Damp Heat Steady State       | 60068-2-3 Test Ca       | $+40^\circ\text{C}$ and 90% – D1095% RH                                                      | 56 days no visible damage<br>Insulation resistance:<br>$\geq 50,000 \text{ M}\Omega$ for $C_R \leq 0.33 \text{ }\mu\text{F}$<br>$\geq 15,000 \text{ M}\Omega \cdot \text{ }\mu\text{F}$ for $C_R > 0.33 \text{ }\mu\text{F}$<br>$\Delta C/C \leq \pm 1\%$<br>$\tan\delta \leq 1.2 \times$ stated value at 100 kHz |
| Endurance, AC                |                         | 1,000 hours at $+85^\circ\text{C}$ and $1.25 \times V_R \text{ AC}$                          | No visible damage<br>$\Delta C/C \leq \pm 3\%$<br>$\tan\delta \leq 1.5 \times$ stated value at 100 kHz<br>Insulation resistance:<br>$\geq 100,000 \text{ M}\Omega$ for $C_R \leq 0.33 \text{ }\mu\text{F}$<br>$\geq 30,000 \text{ M}\Omega, \text{ }\mu\text{F}$ for $C_R > 0.33 \text{ }\mu\text{F}$             |
| Charge and Discharge         | 60384-17 Paragraph 4.13 | 10,000 pulses and with (2 x) dV/dt according to detail specification                         | $\tan\delta$ (100 kHz) $\leq 2 \times$ stated value (100 kHz)<br>$\Delta C/C \leq \pm 0.5\%$<br>Insulation resistance:<br>$\geq 50,000 \text{ M}\Omega$ for $C_R \leq 0.33 \text{ }\mu\text{F}$<br>$\geq 15,000 \text{ M}\Omega, \text{ }\mu\text{F}$ for $C_R > 0.33 \text{ }\mu\text{F}$                        |

## Environmental Compliance

All KEMET MKP capacitors in green boxes are RoHS Compliant and Halogen Free.



**Table 1 – Ratings & Part Number Reference**

| VDC | VAC | Capacitance Value (μF) | Size Code | Max Dimensions in mm |        |        | Lead Spacing (S) | dV/dt (V/μs) | Part Number        |
|-----|-----|------------------------|-----------|----------------------|--------|--------|------------------|--------------|--------------------|
|     |     |                        |           | T                    | H      | L      |                  |              |                    |
| 160 | 90  | 0.01                   | JF        | 2.5                  | 6.5    | 7.2    | 5                | 100          | F461JF103(1)160(2) |
| 160 | 90  | 0.012                  | JF        | 2.5                  | 6.5    | 7.2    | 5                | 100          | F461JF123(1)160(2) |
| 160 | 90  | 0.015                  | JF        | 2.5                  | 6.5    | 7.2    | 5                | 100          | F461JF153(1)160(2) |
| 160 | 90  | 0.018                  | JF        | 2.5                  | 6.5    | 7.2    | 5                | 100          | F461JF183(1)160(2) |
| 160 | 90  | 0.022                  | JG        | 3.5                  | 7.5    | 7.2    | 5                | 100          | F461JG223(1)160(2) |
| 160 | 90  | 0.027                  | JG        | 3.5                  | 7.5    | 7.2    | 5                | 100          | F461JG273(1)160(2) |
| 160 | 90  | 0.033                  | JG        | 3.5                  | 7.5    | 7.2    | 5                | 100          | F461JG333(1)160(2) |
| 160 | 90  | 0.039                  | JG        | 3.5                  | 7.5    | 7.2    | 5                | 100          | F461JG393(1)160(2) |
| 160 | 90  | 0.047                  | JM        | 4.5                  | 9.5    | 7.2    | 5                | 100          | F461JM473(1)160(2) |
| 160 | 90  | 0.056                  | JM        | 4.5                  | 9.5    | 7.2    | 5                | 100          | F461JM563(1)160(2) |
| 160 | 90  | 0.068                  | JM        | 4.5                  | 9.5    | 7.2    | 5                | 100          | F461JM683(1)160(2) |
| 160 | 90  | 0.082                  | JM        | 4.5                  | 9.5    | 7.2    | 5                | 100          | F461JM823(1)160(2) |
| 160 | 90  | 0.1                    | JT        | 6                    | 11     | 7.2    | 5                | 100          | F461JT104(1)160(2) |
| 160 | 90  | 0.12                   | JT        | 6                    | 11     | 7.2    | 5                | 100          | F461JT124(1)160(2) |
| 160 | 90  | 0.15                   | JU        | 7.2                  | 13     | 7.2    | 5                | 100          | F461JU154(1)160(2) |
| 160 | 90  | 0.18                   | JU        | 7.2                  | 13     | 7.2    | 5                | 100          | F461JU184(1)160(2) |
| 160 | 90  | 0.22                   | JU        | 7.2                  | 13     | 7.2    | 5                | 100          | F461JU224(3)160(2) |
| 160 | 90  | 0.015                  | KE        | 2.5                  | 6      | 10     | 7.5              | 300          | F461KE153(1)160(2) |
| 160 | 90  | 0.018                  | KE        | 2.5                  | 6      | 10     | 7.5              | 300          | F461KE183(1)160(2) |
| 160 | 90  | 0.022                  | KE        | 2.5                  | 6      | 10     | 7.5              | 300          | F461KE223(1)160(2) |
| 160 | 90  | 0.027                  | KF        | 3                    | 8      | 10     | 7.5              | 300          | F461KF273(1)160(2) |
| 160 | 90  | 0.033                  | KF        | 3                    | 8      | 10     | 7.5              | 300          | F461KF333(1)160(2) |
| 160 | 90  | 0.039                  | KF        | 3                    | 8      | 10     | 7.5              | 300          | F461KF393(1)160(2) |
| 160 | 90  | 0.047                  | KF        | 3                    | 8      | 10     | 7.5              | 300          | F461KF473(1)160(2) |
| 160 | 90  | 0.056                  | KF        | 3                    | 8      | 10     | 7.5              | 300          | F461KF563(1)160(2) |
| 160 | 90  | 0.068                  | KG        | 4                    | 8      | 10     | 7.5              | 300          | F461KG683(1)160(2) |
| 160 | 90  | 0.082                  | KG        | 4                    | 8      | 10     | 7.5              | 300          | F461KG823(1)160(2) |
| 160 | 90  | 0.1                    | KJ        | 5                    | 10.5   | 10     | 7.5              | 300          | F461KJ104(1)160(2) |
| 160 | 90  | 0.12                   | KJ        | 5                    | 10.5   | 10     | 7.5              | 300          | F461KJ124(1)160(2) |
| 160 | 90  | 0.15                   | KJ        | 5                    | 10.5   | 10     | 7.5              | 300          | F461KJ154(1)160(2) |
| 160 | 90  | 0.18                   | KJ        | 5                    | 10.5   | 10     | 7.5              | 300          | F461KJ184(1)160(2) |
| 160 | 90  | 0.22                   | KM        | 6                    | 12     | 10.5   | 7.5              | 300          | F461KM224(1)160(2) |
| 160 | 90  | 0.27                   | KM        | 6                    | 12     | 10.5   | 7.5              | 300          | F461KM274(1)160(2) |
| 160 | 90  | 0.1                    | AG        | 4                    | 9      | 13     | 10               | 180          | F461AG104(1)160(2) |
| 160 | 90  | 0.12                   | AG        | 4                    | 9      | 13     | 10               | 180          | F461AG124(1)160(2) |
| 160 | 90  | 0.15                   | AG        | 4                    | 9      | 13     | 10               | 180          | F461AG154(1)160(2) |
| 160 | 90  | 0.18                   | AK        | 5                    | 11     | 13     | 10               | 180          | F461AK184(1)160(2) |
| 160 | 90  | 0.22                   | AK        | 5                    | 11     | 13     | 10               | 180          | F461AK224(1)160(2) |
| 160 | 90  | 0.27                   | AK        | 5                    | 11     | 13     | 10               | 180          | F461AK274(1)160(2) |
| 160 | 90  | 0.33                   | AP        | 6                    | 12     | 13     | 10               | 180          | F461AP334(1)160(2) |
| 160 | 90  | 0.39                   | AP        | 6                    | 12     | 13     | 10               | 180          | F461AP394(1)160(2) |
| 160 | 90  | 0.47                   | AP        | 6                    | 12     | 13     | 10               | 180          | F461AP474(1)160(2) |
| 160 | 90  | 0.15                   | BB        | 4                    | 10     | 18     | 15               | 100          | F461BB154(1)160(2) |
| 160 | 90  | 0.18                   | BB        | 4                    | 10     | 18     | 15               | 100          | F461BB184(1)160(2) |
| 160 | 90  | 0.22                   | BB        | 4                    | 10     | 18     | 15               | 100          | F461BB224(1)160(2) |
| 160 | 90  | 0.27                   | BB        | 4                    | 10     | 18     | 15               | 100          | F461BB274(1)160(2) |
| 160 | 90  | 0.33                   | BC        | 5                    | 11     | 18     | 15               | 100          | F461BC334(1)160(2) |
| 160 | 90  | 0.39                   | BC        | 5                    | 11     | 18     | 15               | 100          | F461BC394(1)160(2) |
| 160 | 90  | 0.47                   | BE        | 5.5                  | 12.5   | 18     | 15               | 100          | F461BE474(1)160(2) |
| 160 | 90  | 0.56                   | BE        | 5.5                  | 12.5   | 18     | 15               | 100          | F461BE564(1)160(2) |
| 160 | 90  | 0.68                   | BK        | 7.5                  | 13.5   | 18     | 15               | 100          | F461BK684(1)160(2) |
| 160 | 90  | 0.82                   | BK        | 7.5                  | 13.5   | 18     | 15               | 100          | F461BK824(1)160(2) |
| 160 | 90  | 1                      | BK        | 7.5                  | 13.5   | 18     | 15               | 100          | F461BK105(1)160(2) |
| 160 | 90  | 1.2                    | BP        | 8.5                  | 14.5   | 18     | 15               | 100          | F461BP125(1)160(2) |
| 160 | 90  | 1.5                    | BS        | 10                   | 16     | 18     | 15               | 100          | F461BS155(1)160(2) |
| 160 | 90  | 2.2                    | BY        | 11                   | 19     | 18     | 15               | 100          | F461BY225(1)160(2) |
| 160 | 90  | 2.7                    | BY        | 11                   | 19     | 18     | 15               | 100          | F461BY275(1)160(2) |
| 160 | 90  | 1                      | DB        | 6                    | 14.5   | 26     | 22.5             | 60           | F461DB105(1)160(2) |
| 160 | 90  | 1.2                    | DB        | 6                    | 14.5   | 26     | 22.5             | 60           | F461DB125(1)160(2) |
| 160 | 90  | 1.5                    | DI        | 7                    | 16     | 26     | 22.5             | 60           | F461DI155(1)160(2) |
| VDC | VAC | Capacitance Value (μF) | Size Code | T (mm)               | H (mm) | L (mm) | Lead Spacing (S) | dV/dt (V/μs) | Part Number        |

- (1) J = 5%, K = 10%  
(2) Insert lead and packaging code. See Ordering Options Table for available options.  
(3) K = ±10% (only available tolerance).

**Table 1 – Ratings & Part Number Reference cont.**

| VDC | VAC | Capacitance Value (μF) | Size Code | Max Dimensions in mm |        |        | Lead Spacing (S) | dV/dt (V/μs) | Part Number        |
|-----|-----|------------------------|-----------|----------------------|--------|--------|------------------|--------------|--------------------|
|     |     |                        |           | T                    | H      | L      |                  |              |                    |
| 160 | 90  | 1.8                    | DI        | 7                    | 16     | 26     | 22.5             | 60           | F461DI185(1)160(2) |
| 160 | 90  | 2.2                    | DJ        | 8.5                  | 17     | 26     | 22.5             | 60           | F461DJ225(1)160(2) |
| 160 | 90  | 2.7                    | DM        | 9                    | 18.5   | 26     | 22.5             | 60           | F461DM275(1)160(2) |
| 160 | 90  | 3.3                    | DM        | 9                    | 18.5   | 26     | 22.5             | 60           | F461DM335(1)160(2) |
| 160 | 90  | 3.9                    | DP        | 11                   | 20     | 26     | 22.5             | 60           | F461DP395(1)160(2) |
| 160 | 90  | 4.7                    | DU        | 13                   | 22     | 26     | 22.5             | 60           | F461DU475(1)160(2) |
| 160 | 90  | 5.6                    | DU        | 13                   | 22     | 26     | 22.5             | 60           | F461DU565(1)160(2) |
| 160 | 90  | 6.8                    | DY        | 15.5                 | 24.5   | 26     | 22.5             | 60           | F461DY685(1)160(2) |
| 160 | 90  | 8.2                    | DY        | 15.5                 | 24.5   | 26     | 22.5             | 60           | F461DY825(1)160(2) |
| 160 | 90  | 2.2                    | FB        | 9                    | 17     | 31.5   | 27.5             | 50           | F461FB225(1)160(2) |
| 160 | 90  | 2.7                    | FB        | 9                    | 17     | 31.5   | 27.5             | 50           | F461FB275(1)160(2) |
| 160 | 90  | 3.3                    | FB        | 9                    | 17     | 31.5   | 27.5             | 50           | F461FB335(1)160(2) |
| 160 | 90  | 3.9                    | FC        | 11                   | 20     | 31.5   | 27.5             | 50           | F461FC395(1)160(2) |
| 160 | 90  | 4.7                    | FC        | 11                   | 20     | 31.5   | 27.5             | 50           | F461FC475(1)160(2) |
| 160 | 90  | 5.6                    | FI        | 13                   | 25     | 31.5   | 27.5             | 50           | F461FI565(1)160(2) |
| 160 | 90  | 6.8                    | FI        | 13                   | 25     | 31.5   | 27.5             | 50           | F461FI685(1)160(2) |
| 160 | 90  | 8.2                    | FI        | 13                   | 25     | 31.5   | 27.5             | 50           | F461FI825(1)160(2) |
| 160 | 90  | 10                     | FR        | 17.5                 | 28     | 31.5   | 27.5             | 50           | F461FR106(1)160(2) |
| 160 | 90  | 12                     | FR        | 17.5                 | 28     | 31.5   | 27.5             | 50           | F461FR126(1)160(2) |
| 160 | 90  | 15                     | FY        | 22                   | 37     | 31.5   | 27.5             | 50           | F461FY156(1)160(2) |
| 160 | 90  | 18                     | FY        | 22                   | 37     | 31.5   | 27.5             | 50           | F461FY186(1)160(2) |
| 160 | 90  | 22                     | FY        | 22                   | 37     | 31.5   | 27.5             | 50           | F461FY226(1)160(2) |
| 160 | 90  | 6.8                    | RB        | 11                   | 22     | 41     | 37.5             | 35           | F461RB685(1)160(2) |
| 160 | 90  | 8.2                    | RB        | 11                   | 22     | 41     | 37.5             | 35           | F461RB825(1)160(2) |
| 160 | 90  | 10                     | RF        | 13                   | 24     | 41     | 37.5             | 35           | F461RF106(1)160(2) |
| 160 | 90  | 12                     | RH        | 15                   | 26     | 41     | 37.5             | 35           | F461RH126(1)160(2) |
| 160 | 90  | 15                     | RC        | 16                   | 28.5   | 41     | 37.5             | 35           | F461RC156(1)160(2) |
| 160 | 90  | 18                     | RD        | 19                   | 32     | 41     | 37.5             | 35           | F461RD186(1)160(2) |
| 160 | 90  | 22                     | RD        | 19                   | 32     | 41     | 37.5             | 35           | F461RD226(1)160(2) |
| 160 | 90  | 27                     | RP        | 21                   | 38     | 41     | 37.5             | 35           | F461RP276(1)160(2) |
| 160 | 90  | 33                     | RO        | 24                   | 44     | 41     | 37.5             | 35           | F461RO336(1)160(2) |
| 160 | 90  | 39                     | RO        | 24                   | 44     | 41     | 37.5             | 35           | F461RO396(1)160(2) |
| 160 | 90  | 47                     | RU        | 30                   | 45     | 41     | 37.5             | 35           | F461RU476(1)160(2) |
| 160 | 90  | 56                     | RU        | 30                   | 45     | 41     | 37.5             | 35           | F461RU566(1)160(2) |
| 250 | 160 | 0.01                   | JF        | 2.5                  | 6.5    | 7.2    | 5                | 250          | F461JF103(1)250(2) |
| 250 | 160 | 0.012                  | JF        | 2.5                  | 6.5    | 7.2    | 5                | 250          | F461JF123(1)250(2) |
| 250 | 160 | 0.015                  | JF        | 2.5                  | 6.5    | 7.2    | 5                | 250          | F461JF153(1)250(2) |
| 250 | 160 | 0.022                  | JG        | 3.5                  | 7.5    | 7.2    | 5                | 250          | F461JG223(1)250(2) |
| 250 | 160 | 0.027                  | JG        | 3.5                  | 7.5    | 7.2    | 5                | 250          | F461JG273(1)250(2) |
| 250 | 160 | 0.033                  | JM        | 4.5                  | 9.5    | 7.2    | 5                | 250          | F461JM333(1)250(2) |
| 250 | 160 | 0.039                  | JM        | 4.5                  | 9.5    | 7.2    | 5                | 250          | F461JM393(1)250(2) |
| 250 | 160 | 0.047                  | JQ        | 5                    | 10     | 7.2    | 5                | 250          | F461JQ473(1)250(2) |
| 250 | 160 | 0.056                  | JQ        | 5                    | 10     | 7.2    | 5                | 250          | F461JQ563(1)250(2) |
| 250 | 160 | 0.068                  | JT        | 6                    | 11     | 7.2    | 5                | 250          | F461JT683(1)250(2) |
| 250 | 160 | 0.082                  | JT        | 6                    | 11     | 7.2    | 5                | 250          | F461JT823(1)250(2) |
| 250 | 160 | 0.1                    | JU        | 7.2                  | 13     | 7.2    | 5                | 250          | F461JU104(1)250(2) |
| 250 | 160 | 0.12                   | JU        | 7.2                  | 13     | 7.2    | 5                | 250          | F461JU124(1)250(2) |
| 250 | 160 | 0.15                   | JU        | 7.2                  | 13     | 7.2    | 5                | 250          | F461JU154(1)250(2) |
| 250 | 160 | 0.01                   | KE        | 2.5                  | 6      | 10     | 7.5              | 650          | F461KE103(1)250(2) |
| 250 | 160 | 0.012                  | KE        | 2.5                  | 6      | 10     | 7.5              | 650          | F461KE123(1)250(2) |
| 250 | 160 | 0.015                  | KF        | 3                    | 8      | 10     | 7.5              | 650          | F461KF153(1)250(2) |
| 250 | 160 | 0.018                  | KF        | 3                    | 8      | 10     | 7.5              | 650          | F461KF183(1)250(2) |
| 250 | 160 | 0.022                  | KF        | 3                    | 8      | 10     | 7.5              | 650          | F461KF223(1)250(2) |
| 250 | 160 | 0.027                  | KF        | 3                    | 8      | 10     | 7.5              | 650          | F461KF273(1)250(2) |
| 250 | 160 | 0.033                  | KF        | 3                    | 8      | 10     | 7.5              | 650          | F461KF333(1)250(2) |
| 250 | 160 | 0.039                  | KG        | 4                    | 8      | 10     | 7.5              | 650          | F461KG393(1)250(2) |
| 250 | 160 | 0.047                  | KG        | 4                    | 8      | 10     | 7.5              | 650          | F461KG473(1)250(2) |
| 250 | 160 | 0.056                  | KG        | 4                    | 8      | 10     | 7.5              | 650          | F461KG563(1)250(2) |
| 250 | 160 | 0.068                  | KJ        | 5                    | 10.5   | 10     | 7.5              | 650          | F461KJ683(1)250(2) |
| 250 | 160 | 0.082                  | KJ        | 5                    | 10.5   | 10     | 7.5              | 650          | F461KJ823(1)250(2) |
| VDC | VAC | Capacitance Value (μF) | Size Code | T (mm)               | H (mm) | L (mm) | Lead Spacing (S) | dV/dt (V/μs) | Part Number        |

- (1) J = 5%, K = 10%  
(2) Insert lead and packaging code. See Ordering Options Table for available options.  
(3) K = ±10% (only available tolerance).

**Table 1 – Ratings & Part Number Reference cont.**

| VDC | VAC | Capacitance Value (μF) | Size Code | Max Dimensions in mm |        |        | Lead Spacing (S) | dV/dt (V/μs) | Part Number        |
|-----|-----|------------------------|-----------|----------------------|--------|--------|------------------|--------------|--------------------|
|     |     |                        |           | T                    | H      | L      |                  |              |                    |
| 250 | 160 | 0.1                    | KJ        | 5                    | 10.5   | 10     | 7.5              | 650          | F461KJ104(1)250(2) |
| 250 | 160 | 0.12                   | KM        | 6                    | 12     | 10.5   | 7.5              | 650          | F461KM124(1)250(2) |
| 250 | 160 | 0.15                   | KM        | 6                    | 12     | 10.5   | 7.5              | 650          | F461KM154(1)250(2) |
| 250 | 160 | 0.068                  | AG        | 4                    | 9      | 13     | 10               | 550          | F461AG683(1)250(2) |
| 250 | 160 | 0.082                  | AG        | 4                    | 9      | 13     | 10               | 550          | F461AG823(1)250(2) |
| 250 | 160 | 0.1                    | AG        | 4                    | 9      | 13     | 10               | 550          | F461AG104(1)250(2) |
| 250 | 160 | 0.12                   | AK        | 5                    | 11     | 13     | 10               | 550          | F461AK124(1)250(2) |
| 250 | 160 | 0.15                   | AK        | 5                    | 11     | 13     | 10               | 550          | F461AK154(1)250(2) |
| 250 | 160 | 0.18                   | AK        | 5                    | 11     | 13     | 10               | 550          | F461AK184(1)250(2) |
| 250 | 160 | 0.22                   | AP        | 6                    | 12     | 13     | 10               | 550          | F461AP224(1)250(2) |
| 250 | 160 | 0.27                   | AP        | 6                    | 12     | 13     | 10               | 550          | F461AP274(1)250(2) |
| 250 | 160 | 0.1                    | BB        | 4                    | 10     | 18     | 15               | 300          | F461BB104(1)250(2) |
| 250 | 160 | 0.12                   | BB        | 4                    | 10     | 18     | 15               | 300          | F461BB124(1)250(2) |
| 250 | 160 | 0.15                   | BB        | 4                    | 10     | 18     | 15               | 300          | F461BB154(1)250(2) |
| 250 | 160 | 0.18                   | BB        | 4                    | 10     | 18     | 15               | 300          | F461BB184(1)250(2) |
| 250 | 160 | 0.22                   | BC        | 5                    | 11     | 18     | 15               | 300          | F461BC224(1)250(2) |
| 250 | 160 | 0.27                   | BC        | 5                    | 11     | 18     | 15               | 300          | F461BC274(1)250(2) |
| 250 | 160 | 0.33                   | BG        | 6                    | 12     | 18     | 15               | 300          | F461BG334(1)250(2) |
| 250 | 160 | 0.39                   | BK        | 7.5                  | 13.5   | 18     | 15               | 300          | F461BK394(1)250(2) |
| 250 | 160 | 0.47                   | BK        | 7.5                  | 13.5   | 18     | 15               | 300          | F461BK474(1)250(2) |
| 250 | 160 | 0.56                   | BK        | 7.5                  | 13.5   | 18     | 15               | 300          | F461BK564(1)250(2) |
| 250 | 160 | 0.68                   | BP        | 8.5                  | 14.5   | 18     | 15               | 300          | F461BP684(1)250(2) |
| 250 | 160 | 0.82                   | BP        | 8.5                  | 14.5   | 18     | 15               | 300          | F461BP824(1)250(2) |
| 250 | 160 | 1                      | BS        | 10                   | 16     | 18     | 15               | 300          | F461BS105(1)250(2) |
| 250 | 160 | 1.2                    | BY        | 11                   | 19     | 18     | 15               | 300          | F461BY125(1)250(2) |
| 250 | 160 | 1.5                    | BY        | 11                   | 19     | 18     | 15               | 300          | F461BY155(1)250(2) |
| 250 | 160 | 1.8                    | BY        | 11                   | 19     | 18     | 15               | 300          | F461BY185(1)250(2) |
| 250 | 160 | 0.47                   | DB        | 6                    | 14.5   | 26     | 22.5             | 125          | F461DB474(1)250(2) |
| 250 | 160 | 0.56                   | DB        | 6                    | 14.5   | 26     | 22.5             | 125          | F461DB564(1)250(2) |
| 250 | 160 | 0.68                   | DB        | 6                    | 14.5   | 26     | 22.5             | 125          | F461DB684(1)250(2) |
| 250 | 160 | 0.82                   | DI        | 7                    | 16     | 26     | 22.5             | 125          | F461DI824(1)250(2) |
| 250 | 160 | 1                      | DI        | 7                    | 16     | 26     | 22.5             | 125          | F461DI105(1)250(2) |
| 250 | 160 | 1.2                    | DH        | 8                    | 16     | 26     | 22.5             | 125          | F461DH125(1)250(2) |
| 250 | 160 | 1.5                    | DM        | 9                    | 18.5   | 26     | 22.5             | 125          | F461DM155(1)250(2) |
| 250 | 160 | 1.8                    | DM        | 9                    | 18.5   | 26     | 22.5             | 125          | F461DM185(1)250(2) |
| 250 | 160 | 2.2                    | DO        | 10                   | 18.5   | 26     | 22.5             | 125          | F461DO225(1)250(2) |
| 250 | 160 | 2.7                    | DU        | 13                   | 22     | 26     | 22.5             | 125          | F461DU275(1)250(2) |
| 250 | 160 | 3.3                    | DU        | 13                   | 22     | 26     | 22.5             | 125          | F461DU335(1)250(2) |
| 250 | 160 | 3.9                    | DY        | 15.5                 | 24.5   | 26     | 22.5             | 125          | F461DY395(1)250(2) |
| 250 | 160 | 4.7                    | DY        | 15.5                 | 24.5   | 26     | 22.5             | 125          | F461DY475(1)250(2) |
| 250 | 160 | 5.6                    | DY        | 15.5                 | 24.5   | 26     | 22.5             | 125          | F461DY565(1)250(2) |
| 250 | 160 | 1.5                    | FB        | 9                    | 17     | 31.5   | 27.5             | 100          | F461FB155(1)250(2) |
| 250 | 160 | 1.8                    | FB        | 9                    | 17     | 31.5   | 27.5             | 100          | F461FB185(1)250(2) |
| 250 | 160 | 2.2                    | FC        | 11                   | 20     | 31.5   | 27.5             | 100          | F461FC225(1)250(2) |
| 250 | 160 | 2.7                    | FC        | 11                   | 20     | 31.5   | 27.5             | 100          | F461FC275(1)250(2) |
| 250 | 160 | 3.3                    | FC        | 11                   | 20     | 31.5   | 27.5             | 100          | F461FC335(1)250(2) |
| 250 | 160 | 3.9                    | FI        | 13                   | 25     | 31.5   | 27.5             | 100          | F461FI395(1)250(2) |
| 250 | 160 | 4.7                    | FI        | 13                   | 25     | 31.5   | 27.5             | 100          | F461FI475(1)250(2) |
| 250 | 160 | 5.6                    | FN        | 14                   | 28     | 31.5   | 27.5             | 100          | F461FN565(1)250(2) |
| 250 | 160 | 6.8                    | FR        | 17.5                 | 28     | 31.5   | 27.5             | 100          | F461FR685(1)250(2) |
| 250 | 160 | 8.2                    | FS        | 19                   | 29     | 31.5   | 27.5             | 100          | F461FS825(1)250(2) |
| 250 | 160 | 10                     | FY        | 22                   | 37     | 31.5   | 27.5             | 100          | F461FY106(1)250(2) |
| 250 | 160 | 12                     | FY        | 22                   | 37     | 31.5   | 27.5             | 100          | F461FY126(1)250(2) |
| 250 | 160 | 15                     | FY        | 22                   | 37     | 31.5   | 27.5             | 100          | F461FY156(1)250(2) |
| 250 | 160 | 3.3                    | RB        | 11                   | 22     | 41     | 37.5             | 40           | F461RB335(1)250(2) |
| 250 | 160 | 3.9                    | RB        | 11                   | 22     | 41     | 37.5             | 40           | F461RB395(1)250(2) |
| 250 | 160 | 4.7                    | RB        | 11                   | 22     | 41     | 37.5             | 40           | F461RB475(1)250(2) |
| 250 | 160 | 5.6                    | RF        | 13                   | 24     | 41     | 37.5             | 40           | F461RF565(1)250(2) |
| 250 | 160 | 6.8                    | RF        | 13                   | 24     | 41     | 37.5             | 40           | F461RF685(1)250(2) |
| 250 | 160 | 8.2                    | RH        | 15                   | 26     | 41     | 37.5             | 40           | F461RH825(1)250(2) |
| VDC | VAC | Capacitance Value (μF) | Size Code | T (mm)               | H (mm) | L (mm) | Lead Spacing (S) | dV/dt (V/μs) | Part Number        |

(1) J = 5%, K = 10%

(2) Insert lead and packaging code. See Ordering Options Table for available options.

(3) K = ±10% (only available tolerance).

**Table 1 – Ratings & Part Number Reference cont.**

| VDC | VAC | Capacitance Value (μF) | Size Code | Max Dimensions in mm |        |        | Lead Spacing (S) | dV/dt (V/μs) | Part Number        |
|-----|-----|------------------------|-----------|----------------------|--------|--------|------------------|--------------|--------------------|
|     |     |                        |           | T                    | H      | L      |                  |              |                    |
| 250 | 160 | 10                     | RC        | 16                   | 28.5   | 41     | 37.5             | 40           | F461RC106(1)250(2) |
| 250 | 160 | 12                     | RD        | 19                   | 32     | 41     | 37.5             | 40           | F461RD126(1)250(2) |
| 250 | 160 | 15                     | RD        | 19                   | 32     | 41     | 37.5             | 40           | F461RD156(1)250(2) |
| 250 | 160 | 18                     | RP        | 21                   | 38     | 41     | 37.5             | 40           | F461RP186(1)250(2) |
| 250 | 160 | 22                     | RO        | 24                   | 44     | 41     | 37.5             | 40           | F461RO226(1)250(2) |
| 250 | 160 | 27                     | RO        | 24                   | 44     | 41     | 37.5             | 40           | F461RO276(1)250(2) |
| 250 | 160 | 33                     | RU        | 30                   | 45     | 41     | 37.5             | 40           | F461RU336(1)250(2) |
| 250 | 160 | 39                     | RU        | 30                   | 45     | 41     | 37.5             | 40           | F461RU396(1)250(2) |
| 400 | 220 | 0.0033                 | JF        | 2.5                  | 6.5    | 7.2    | 5                | 400          | F461JF332(1)400(2) |
| 400 | 220 | 0.0039                 | JF        | 2.5                  | 6.5    | 7.2    | 5                | 400          | F461JF392(1)400(2) |
| 400 | 220 | 0.0047                 | JF        | 2.5                  | 6.5    | 7.2    | 5                | 400          | F461JF472(1)400(2) |
| 400 | 220 | 0.0056                 | JF        | 2.5                  | 6.5    | 7.2    | 5                | 400          | F461JF562(1)400(2) |
| 400 | 220 | 0.0068                 | JG        | 3.5                  | 7.5    | 7.2    | 5                | 400          | F461JG682(1)400(2) |
| 400 | 220 | 0.0082                 | JG        | 3.5                  | 7.5    | 7.2    | 5                | 400          | F461JG822(1)400(2) |
| 400 | 220 | 0.01                   | JG        | 3.5                  | 7.5    | 7.2    | 5                | 400          | F461JG103(1)400(2) |
| 400 | 220 | 0.012                  | JG        | 3.5                  | 7.5    | 7.2    | 5                | 400          | F461JG123(1)400(2) |
| 400 | 220 | 0.015                  | JM        | 4.5                  | 9.5    | 7.2    | 5                | 400          | F461JM153(1)400(2) |
| 400 | 220 | 0.018                  | JM        | 4.5                  | 9.5    | 7.2    | 5                | 400          | F461JM183(1)400(2) |
| 400 | 220 | 0.022                  | JM        | 4.5                  | 9.5    | 7.2    | 5                | 400          | F461JM223(1)400(2) |
| 400 | 220 | 0.027                  | JQ        | 5                    | 10     | 7.2    | 5                | 400          | F461JQ273(1)400(2) |
| 400 | 220 | 0.033                  | JT        | 6                    | 11     | 7.2    | 5                | 400          | F461JT333(1)400(2) |
| 400 | 220 | 0.039                  | JT        | 6                    | 11     | 7.2    | 5                | 400          | F461JT393(1)400(2) |
| 400 | 220 | 0.047                  | JU        | 7.2                  | 13     | 7.2    | 5                | 400          | F461JU473(1)400(2) |
| 400 | 220 | 0.056                  | JU        | 7.2                  | 13     | 7.2    | 5                | 400          | F461JU563(1)400(2) |
| 400 | 220 | 0.0033                 | KE        | 2.5                  | 6      | 10     | 7.5              | 1,500        | F461KE332(1)400(2) |
| 400 | 220 | 0.0039                 | KE        | 2.5                  | 6      | 10     | 7.5              | 1,500        | F461KE392(1)400(2) |
| 400 | 220 | 0.0047                 | KE        | 2.5                  | 6      | 10     | 7.5              | 1,500        | F461KE472(1)400(2) |
| 400 | 220 | 0.0056                 | KF        | 3                    | 8      | 10     | 7.5              | 1,500        | F461KF562(1)400(2) |
| 400 | 220 | 0.0068                 | KF        | 3                    | 8      | 10     | 7.5              | 1,500        | F461KF682(1)400(2) |
| 400 | 220 | 0.0082                 | KF        | 3                    | 8      | 10     | 7.5              | 1,500        | F461KF822(1)400(2) |
| 400 | 220 | 0.01                   | KF        | 3                    | 8      | 10     | 7.5              | 1,500        | F461KF103(1)400(2) |
| 400 | 220 | 0.012                  | KF        | 3                    | 8      | 10     | 7.5              | 1,500        | F461KF123(1)400(2) |
| 400 | 220 | 0.015                  | KG        | 4                    | 8      | 10     | 7.5              | 1,500        | F461KG153(1)400(2) |
| 400 | 220 | 0.018                  | KG        | 4                    | 8      | 10     | 7.5              | 1,500        | F461KG183(1)400(2) |
| 400 | 220 | 0.022                  | KG        | 4                    | 8      | 10     | 7.5              | 1,500        | F461KG223(1)400(2) |
| 400 | 220 | 0.027                  | KJ        | 5                    | 10.5   | 10     | 7.5              | 1,500        | F461KJ273(1)400(2) |
| 400 | 220 | 0.033                  | KJ        | 5                    | 10.5   | 10     | 7.5              | 1,500        | F461KJ333(1)400(2) |
| 400 | 220 | 0.039                  | KJ        | 5                    | 10.5   | 10     | 7.5              | 1,500        | F461KJ393(1)400(2) |
| 400 | 220 | 0.047                  | KJ        | 5                    | 10.5   | 10     | 7.5              | 1,500        | F461KJ473(1)400(2) |
| 400 | 220 | 0.056                  | KM        | 6                    | 12     | 10.5   | 7.5              | 1,500        | F461KM563(1)400(2) |
| 400 | 220 | 0.068                  | KM        | 6                    | 12     | 10.5   | 7.5              | 1,500        | F461KM683(1)400(2) |
| 400 | 220 | 0.022                  | AG        | 4                    | 9      | 13     | 10               | 1,300        | F461AG223(1)400(2) |
| 400 | 220 | 0.027                  | AG        | 4                    | 9      | 13     | 10               | 1,300        | F461AG273(1)400(2) |
| 400 | 220 | 0.033                  | AG        | 4                    | 9      | 13     | 10               | 1,300        | F461AG333(1)400(2) |
| 400 | 220 | 0.039                  | AG        | 4                    | 9      | 13     | 10               | 1,300        | F461AG393(1)400(2) |
| 400 | 220 | 0.047                  | AK        | 5                    | 11     | 13     | 10               | 1,300        | F461AK473(1)400(2) |
| 400 | 220 | 0.056                  | AK        | 5                    | 11     | 13     | 10               | 1,300        | F461AK563(1)400(2) |
| 400 | 220 | 0.068                  | AK        | 5                    | 11     | 13     | 10               | 1,300        | F461AK683(1)400(2) |
| 400 | 220 | 0.082                  | AK        | 5                    | 11     | 13     | 10               | 1,300        | F461AK823(1)400(2) |
| 400 | 220 | 0.1                    | AK        | 5                    | 11     | 13     | 10               | 1,300        | F461AK104(1)400(2) |
| 400 | 220 | 0.12                   | AP        | 6                    | 12     | 13     | 10               | 1,300        | F461AP124(1)400(2) |
| 400 | 220 | 0.047                  | BB        | 4                    | 10     | 18     | 15               | 900          | F461BB473(1)400(2) |
| 400 | 220 | 0.056                  | BB        | 4                    | 10     | 18     | 15               | 900          | F461BB563(1)400(2) |
| 400 | 220 | 0.068                  | BB        | 4                    | 10     | 18     | 15               | 900          | F461BB683(1)400(2) |
| 400 | 220 | 0.082                  | BC        | 5                    | 11     | 18     | 15               | 900          | F461BC823(1)400(2) |
| 400 | 220 | 0.1                    | BC        | 5                    | 11     | 18     | 15               | 900          | F461BC104(1)400(2) |
| 400 | 220 | 0.12                   | BE        | 5.5                  | 12.5   | 18     | 15               | 900          | F461BE124(1)400(2) |
| 400 | 220 | 0.15                   | BE        | 5.5                  | 12.5   | 18     | 15               | 900          | F461BE154(1)400(2) |
| 400 | 220 | 0.18                   | BK        | 7.5                  | 13.5   | 18     | 15               | 900          | F461BK184(1)400(2) |
| 400 | 220 | 0.22                   | BK        | 7.5                  | 13.5   | 18     | 15               | 900          | F461BK224(1)400(2) |
| VDC | VAC | Capacitance Value (μF) | Size Code | T (mm)               | H (mm) | L (mm) | Lead Spacing (S) | dV/dt (V/μs) | Part Number        |

(1) J = 5%, K = 10%

(2) Insert lead and packaging code. See Ordering Options Table for available options.

(3) K = ±10% (only available tolerance).

**Table 1 – Ratings & Part Number Reference cont.**

| VDC | VAC | Capacitance Value (μF) | Size Code | Max Dimensions in mm |        |        | Lead Spacing (S) | dV/dt (V/μs) | Part Number        |
|-----|-----|------------------------|-----------|----------------------|--------|--------|------------------|--------------|--------------------|
|     |     |                        |           | T                    | H      | L      |                  |              |                    |
| 400 | 220 | 0.27                   | BK        | 7.5                  | 13.5   | 18     | 15               | 900          | F461BK274(1)400(2) |
| 400 | 220 | 0.33                   | BI        | 6                    | 17.5   | 18     | 15               | 900          | F461BI334(1)400(2) |
| 400 | 220 | 0.39                   | BS        | 10                   | 16     | 18     | 15               | 900          | F461BS394(1)400(2) |
| 400 | 220 | 0.47                   | BS        | 10                   | 16     | 18     | 15               | 900          | F461BS474(1)400(2) |
| 400 | 220 | 0.56                   | BY        | 11                   | 19     | 18     | 15               | 900          | F461BY564(1)400(2) |
| 400 | 220 | 0.68                   | BY        | 11                   | 19     | 18     | 15               | 900          | F461BY684(1)400(2) |
| 400 | 220 | 0.82                   | BY        | 11                   | 19     | 18     | 15               | 900          | F461BY824(1)400(2) |
| 400 | 220 | 0.22                   | DB        | 6                    | 14.5   | 26     | 22.5             | 300          | F461DB224(1)400(2) |
| 400 | 220 | 0.27                   | DB        | 6                    | 14.5   | 26     | 22.5             | 300          | F461DB274(1)400(2) |
| 400 | 220 | 0.33                   | DB        | 6                    | 14.5   | 26     | 22.5             | 300          | F461DB334(1)400(2) |
| 400 | 220 | 0.39                   | DI        | 7                    | 16     | 26     | 22.5             | 300          | F461DI394(1)400(2) |
| 400 | 220 | 0.47                   | DI        | 7                    | 16     | 26     | 22.5             | 300          | F461DI474(1)400(2) |
| 400 | 220 | 0.56                   | DH        | 8                    | 16     | 26     | 22.5             | 300          | F461DH564(1)400(2) |
| 400 | 220 | 0.68                   | DM        | 9                    | 18.5   | 26     | 22.5             | 300          | F461DM684(1)400(2) |
| 400 | 220 | 0.82                   | DM        | 9                    | 18.5   | 26     | 22.5             | 300          | F461DM824(1)400(2) |
| 400 | 220 | 1                      | DP        | 11                   | 20     | 26     | 22.5             | 300          | F461DP105(1)400(2) |
| 400 | 220 | 1.2                    | DP        | 11                   | 20     | 26     | 22.5             | 300          | F461DP125(1)400(2) |
| 400 | 220 | 1.5                    | DU        | 13                   | 22     | 26     | 22.5             | 300          | F461DU155(1)400(2) |
| 400 | 220 | 1.8                    | DY        | 15.5                 | 24.5   | 26     | 22.5             | 300          | F461DY185(1)400(2) |
| 400 | 220 | 2.2                    | DY        | 15.5                 | 24.5   | 26     | 22.5             | 300          | F461DY225(3)400(2) |
| 400 | 220 | 0.56                   | FB        | 9                    | 17     | 31.5   | 27.5             | 130          | F461FB564(1)400(2) |
| 400 | 220 | 0.68                   | FB        | 9                    | 17     | 31.5   | 27.5             | 130          | F461FB684(1)400(2) |
| 400 | 220 | 0.82                   | FB        | 9                    | 17     | 31.5   | 27.5             | 130          | F461FB824(1)400(2) |
| 400 | 220 | 1                      | FC        | 11                   | 20     | 31.5   | 27.5             | 130          | F461FC105(1)400(2) |
| 400 | 220 | 1.2                    | FC        | 11                   | 20     | 31.5   | 27.5             | 130          | F461FC125(1)400(2) |
| 400 | 220 | 1.5                    | FC        | 11                   | 20     | 31.5   | 27.5             | 130          | F461FC155(1)400(2) |
| 400 | 220 | 1.8                    | FI        | 13                   | 25     | 31.5   | 27.5             | 130          | F461FI185(1)400(2) |
| 400 | 220 | 2.2                    | FI        | 13                   | 25     | 31.5   | 27.5             | 130          | F461FI225(1)400(2) |
| 400 | 220 | 2.7                    | FN        | 14                   | 28     | 31.5   | 27.5             | 130          | F461FN275(1)400(2) |
| 400 | 220 | 3.3                    | FR        | 17.5                 | 28     | 31.5   | 27.5             | 130          | F461FR335(1)400(2) |
| 400 | 220 | 3.9                    | FS        | 19                   | 29     | 31.5   | 27.5             | 130          | F461FS395(1)400(2) |
| 400 | 220 | 4.7                    | FY        | 22                   | 37     | 31.5   | 27.5             | 130          | F461FY475(1)400(2) |
| 400 | 220 | 5.6                    | FY        | 22                   | 37     | 31.5   | 27.5             | 130          | F461FY565(1)400(2) |
| 400 | 220 | 6.8                    | FY        | 22                   | 37     | 31.5   | 27.5             | 130          | F461FY685(1)400(2) |
| 400 | 220 | 1.5                    | RB        | 11                   | 22     | 41     | 37.5             | 70           | F461RB155(1)400(2) |
| 400 | 220 | 1.8                    | RB        | 11                   | 22     | 41     | 37.5             | 70           | F461RB185(1)400(2) |
| 400 | 220 | 2.2                    | RB        | 11                   | 22     | 41     | 37.5             | 70           | F461RB225(1)400(2) |
| 400 | 220 | 2.7                    | RF        | 13                   | 24     | 41     | 37.5             | 70           | F461RF275(1)400(2) |
| 400 | 220 | 3.3                    | RF        | 13                   | 24     | 41     | 37.5             | 70           | F461RF335(1)400(2) |
| 400 | 220 | 3.9                    | RH        | 15                   | 26     | 41     | 37.5             | 70           | F461RH395(1)400(2) |
| 400 | 220 | 4.7                    | RC        | 16                   | 28.5   | 41     | 37.5             | 70           | F461RC475(1)400(2) |
| 400 | 220 | 5.6                    | RD        | 19                   | 32     | 41     | 37.5             | 70           | F461RD565(1)400(2) |
| 400 | 220 | 6.8                    | RD        | 19                   | 32     | 41     | 37.5             | 70           | F461RD685(1)400(2) |
| 400 | 220 | 8.2                    | RP        | 21                   | 38     | 41     | 37.5             | 70           | F461RP825(1)400(2) |
| 400 | 220 | 10                     | RO        | 24                   | 44     | 41     | 37.5             | 70           | F461RO106(1)400(2) |
| 400 | 220 | 12                     | RO        | 24                   | 44     | 41     | 37.5             | 70           | F461RO126(1)400(2) |
| 400 | 220 | 15                     | RU        | 30                   | 45     | 41     | 37.5             | 70           | F461RU156(1)400(2) |
| 400 | 220 | 18                     | RU        | 30                   | 45     | 41     | 37.5             | 70           | F461RU186(1)400(2) |
| 630 | 250 | 0.0015                 | JF        | 2.5                  | 6.5    | 7.2    | 5                | 500          | F461JF152(1)630(2) |
| 630 | 250 | 0.0018                 | JF        | 2.5                  | 6.5    | 7.2    | 5                | 500          | F461JF182(1)630(2) |
| 630 | 250 | 0.0022                 | JF        | 2.5                  | 6.5    | 7.2    | 5                | 500          | F461JF222(1)630(2) |
| 630 | 250 | 0.0027                 | JF        | 2.5                  | 6.5    | 7.2    | 5                | 500          | F461JF272(1)630(2) |
| 630 | 250 | 0.0033                 | JF        | 2.5                  | 6.5    | 7.2    | 5                | 500          | F461JF332(1)630(2) |
| 630 | 250 | 0.0039                 | JG        | 3.5                  | 7.5    | 7.2    | 5                | 500          | F461JG392(1)630(2) |
| 630 | 250 | 0.0047                 | JG        | 3.5                  | 7.5    | 7.2    | 5                | 500          | F461JG472(1)630(2) |
| 630 | 250 | 0.0056                 | JG        | 3.5                  | 7.5    | 7.2    | 5                | 500          | F461JG562(1)630(2) |
| 630 | 250 | 0.0068                 | JM        | 4.5                  | 9.5    | 7.2    | 5                | 500          | F461JM682(1)630(2) |
| 630 | 250 | 0.0082                 | JM        | 4.5                  | 9.5    | 7.2    | 5                | 500          | F461JM822(1)630(2) |
| 630 | 250 | 0.01                   | JM        | 4.5                  | 9.5    | 7.2    | 5                | 500          | F461JM103(1)630(2) |
| 630 | 250 | 0.012                  | JQ        | 5                    | 10     | 7.2    | 5                | 500          | F461JQ123(1)630(2) |
| VDC | VAC | Capacitance Value (μF) | Size Code | T (mm)               | H (mm) | L (mm) | Lead Spacing (S) | dV/dt (V/μs) | Part Number        |

- (1) J = 5%, K = 10%  
(2) Insert lead and packaging code. See Ordering Options Table for available options.  
(3) K = ±10% (only available tolerance).

**Table 1 – Ratings & Part Number Reference cont.**

| VDC | VAC | Capacitance Value (μF) | Size Code | Max Dimensions in mm |        |        | Lead Spacing (S) | dV/dt (V/μs) | Part Number        |
|-----|-----|------------------------|-----------|----------------------|--------|--------|------------------|--------------|--------------------|
|     |     |                        |           | T                    | H      | L      |                  |              |                    |
| 630 | 250 | 0.015                  | JT        | 6                    | 11     | 7.2    | 5                | 500          | F461JT153(1)630(2) |
| 630 | 250 | 0.018                  | JT        | 6                    | 11     | 7.2    | 5                | 500          | F461JT183(1)630(2) |
| 630 | 250 | 0.022                  | JT        | 6                    | 11     | 7.2    | 5                | 500          | F461JT223(3)630(2) |
| 630 | 250 | 0.022                  | JU        | 7.2                  | 13     | 7.2    | 5                | 500          | F461JU223(1)630(2) |
| 630 | 250 | 0.027                  | JU        | 7.2                  | 13     | 7.2    | 5                | 500          | F461JU273(1)630(2) |
| 630 | 250 | 0.033                  | JU        | 7.2                  | 13     | 7.2    | 5                | 500          | F461JU333(1)630(2) |
| 630 | 250 | 0.0015                 | KE        | 2.5                  | 6      | 10     | 7.5              | 2,400        | F461KE152(1)630(2) |
| 630 | 250 | 0.0018                 | KE        | 2.5                  | 6      | 10     | 7.5              | 2,400        | F461KE182(1)630(2) |
| 630 | 250 | 0.0022                 | KE        | 2.5                  | 6      | 10     | 7.5              | 2,400        | F461KE222(1)630(2) |
| 630 | 250 | 0.0027                 | KF        | 3                    | 8      | 10     | 7.5              | 2,400        | F461KF272(1)630(2) |
| 630 | 250 | 0.0033                 | KF        | 3                    | 8      | 10     | 7.5              | 2,400        | F461KF332(1)630(2) |
| 630 | 250 | 0.0039                 | KF        | 3                    | 8      | 10     | 7.5              | 2,400        | F461KF392(1)630(2) |
| 630 | 250 | 0.0047                 | KF        | 3                    | 8      | 10     | 7.5              | 2,400        | F461KF472(1)630(2) |
| 630 | 250 | 0.0056                 | KF        | 3                    | 8      | 10     | 7.5              | 2,400        | F461KF562(1)630(2) |
| 630 | 250 | 0.0068                 | KF        | 3                    | 8      | 10     | 7.5              | 2,400        | F461KF682(1)630(2) |
| 630 | 250 | 0.0082                 | KG        | 4                    | 8      | 10     | 7.5              | 2,400        | F461KG822(1)630(2) |
| 630 | 250 | 0.01                   | KG        | 4                    | 8      | 10     | 7.5              | 2,400        | F461KG103(1)630(2) |
| 630 | 250 | 0.012                  | KJ        | 5                    | 10.5   | 10     | 7.5              | 2,400        | F461KJ123(1)630(2) |
| 630 | 250 | 0.015                  | KJ        | 5                    | 10.5   | 10     | 7.5              | 2,400        | F461KJ153(1)630(2) |
| 630 | 250 | 0.018                  | KJ        | 5                    | 10.5   | 10     | 7.5              | 2,400        | F461KJ183(1)630(2) |
| 630 | 250 | 0.022                  | KJ        | 5                    | 10.5   | 10     | 7.5              | 2,400        | F461KJ223(1)630(2) |
| 630 | 250 | 0.027                  | KM        | 6                    | 12     | 10.5   | 7.5              | 2,400        | F461KM273(1)630(2) |
| 630 | 250 | 0.033                  | KM        | 6                    | 12     | 10.5   | 7.5              | 2,400        | F461KM333(1)630(2) |
| 630 | 250 | 0.039                  | KM        | 6                    | 12     | 10.5   | 7.5              | 2,400        | F461KM393(1)630(2) |
| 630 | 250 | 0.01                   | AG        | 4                    | 9      | 13     | 10               | 2,000        | F461AG103(1)630(2) |
| 630 | 250 | 0.012                  | AG        | 4                    | 9      | 13     | 10               | 2,000        | F461AG123(1)630(2) |
| 630 | 250 | 0.015                  | AG        | 4                    | 9      | 13     | 10               | 2,000        | F461AG153(1)630(2) |
| 630 | 250 | 0.018                  | AG        | 4                    | 9      | 13     | 10               | 2,000        | F461AG183(1)630(2) |
| 630 | 250 | 0.022                  | AG        | 4                    | 9      | 13     | 10               | 2,000        | F461AG223(1)630(2) |
| 630 | 250 | 0.027                  | AK        | 5                    | 11     | 13     | 10               | 2,000        | F461AK273(1)630(2) |
| 630 | 250 | 0.033                  | AK        | 5                    | 11     | 13     | 10               | 2,000        | F461AK333(1)630(2) |
| 630 | 250 | 0.039                  | AK        | 5                    | 11     | 13     | 10               | 2,000        | F461AK393(1)630(2) |
| 630 | 250 | 0.047                  | AP        | 6                    | 12     | 13     | 10               | 2,000        | F461AP473(1)630(2) |
| 630 | 250 | 0.056                  | AP        | 6                    | 12     | 13     | 10               | 2,000        | F461AP563(1)630(2) |
| 630 | 250 | 0.068                  | AP        | 6                    | 12     | 13     | 10               | 2,000        | F461AP683(1)630(2) |
| 630 | 250 | 0.022                  | BB        | 4                    | 10     | 18     | 15               | 1,000        | F461BB223(1)630(2) |
| 630 | 250 | 0.027                  | BB        | 4                    | 10     | 18     | 15               | 1,000        | F461BB273(1)630(2) |
| 630 | 250 | 0.033                  | BB        | 4                    | 10     | 18     | 15               | 1,000        | F461BB333(1)630(2) |
| 630 | 250 | 0.039                  | BB        | 4                    | 10     | 18     | 15               | 1,000        | F461BB393(1)630(2) |
| 630 | 250 | 0.047                  | BC        | 5                    | 11     | 18     | 15               | 1,000        | F461BC473(1)630(2) |
| 630 | 250 | 0.056                  | BC        | 5                    | 11     | 18     | 15               | 1,000        | F461BC563(1)630(2) |
| 630 | 250 | 0.063                  | BC        | 5                    | 11     | 18     | 15               | 1,000        | F461BC633(1)630(2) |
| 630 | 250 | 0.068                  | BE        | 5.5                  | 12.5   | 18     | 15               | 1,000        | F461BE683(1)630(2) |
| 630 | 250 | 0.082                  | BE        | 5.5                  | 12.5   | 18     | 15               | 1,000        | F461BE823(1)630(2) |
| 630 | 250 | 0.1                    | BK        | 7.5                  | 13.5   | 18     | 15               | 1,000        | F461BK104(1)630(2) |
| 630 | 250 | 0.12                   | BK        | 7.5                  | 13.5   | 18     | 15               | 1,000        | F461BK124(1)630(2) |
| 630 | 250 | 0.15                   | BK        | 7.5                  | 13.5   | 18     | 15               | 1,000        | F461BK154(1)630(2) |
| 630 | 250 | 0.18                   | BP        | 8.5                  | 14.5   | 18     | 15               | 1,000        | F461BP184(1)630(2) |
| 630 | 250 | 0.22                   | BS        | 10                   | 16     | 18     | 15               | 1,000        | F461BS224(1)630(2) |
| 630 | 250 | 0.27                   | BY        | 11                   | 19     | 18     | 15               | 1,000        | F461BY274(1)630(2) |
| 630 | 250 | 0.33                   | BY        | 11                   | 19     | 18     | 15               | 1,000        | F461BY334(1)630(2) |
| 630 | 250 | 0.39                   | BY        | 11                   | 19     | 18     | 15               | 1,000        | F461BY394(1)630(2) |
| 630 | 250 | 0.1                    | DB        | 6                    | 14.5   | 26     | 22.5             | 400          | F461DB104(1)630(2) |
| 630 | 250 | 0.12                   | DB        | 6                    | 14.5   | 26     | 22.5             | 400          | F461DB124(1)630(2) |
| 630 | 250 | 0.15                   | DB        | 6                    | 14.5   | 26     | 22.5             | 400          | F461DB154(1)630(2) |
| 630 | 250 | 0.18                   | DI        | 7                    | 16     | 26     | 22.5             | 400          | F461DI184(1)630(2) |
| 630 | 250 | 0.22                   | DI        | 7                    | 16     | 26     | 22.5             | 400          | F461DI224(1)630(2) |
| 630 | 250 | 0.27                   | DH        | 8                    | 16     | 26     | 22.5             | 400          | F461DH274(1)630(2) |
| 630 | 250 | 0.33                   | DJ        | 8.5                  | 17     | 26     | 22.5             | 400          | F461DJ334(1)630(2) |
| 630 | 250 | 0.39                   | DM        | 9                    | 18.5   | 26     | 22.5             | 400          | F461DM394(1)630(2) |
| VDC | VAC | Capacitance Value (μF) | Size Code | T (mm)               | H (mm) | L (mm) | Lead Spacing (S) | dV/dt (V/μs) | Part Number        |

(1) J = 5%, K = 10%

(2) Insert lead and packaging code. See Ordering Options Table for available options.

(3) K = ±10% (only available tolerance).

**Table 1 – Ratings & Part Number Reference cont.**

| VDC  | VAC | Capacitance Value (μF) | Size Code | Max Dimensions in mm |        |        | Lead Spacing (S) | dV/dt (V/μs) | Part Number        |
|------|-----|------------------------|-----------|----------------------|--------|--------|------------------|--------------|--------------------|
|      |     |                        |           | T                    | H      | L      |                  |              |                    |
| 630  | 250 | 0.47                   | DM        | 9                    | 18.5   | 26     | 22.5             | 400          | F461DM474(1)630(2) |
| 630  | 250 | 0.56                   | DP        | 11                   | 20     | 26     | 22.5             | 400          | F461DP564(1)630(2) |
| 630  | 250 | 0.68                   | DU        | 13                   | 22     | 26     | 22.5             | 400          | F461DU684(1)630(2) |
| 630  | 250 | 0.82                   | DU        | 13                   | 22     | 26     | 22.5             | 400          | F461DU824(1)630(2) |
| 630  | 250 | 1                      | DY        | 15.5                 | 24.5   | 26     | 22.5             | 400          | F461DY105(1)630(2) |
| 630  | 250 | 1.2                    | DY        | 15.5                 | 24.5   | 26     | 22.5             | 400          | F461DY125(1)630(2) |
| 630  | 250 | 0.33                   | FB        | 9                    | 17     | 31.5   | 27.5             | 180          | F461FB334(1)630(2) |
| 630  | 250 | 0.39                   | FB        | 9                    | 17     | 31.5   | 27.5             | 180          | F461FB394(1)630(2) |
| 630  | 250 | 0.47                   | FB        | 9                    | 17     | 31.5   | 27.5             | 180          | F461FB474(1)630(2) |
| 630  | 250 | 0.56                   | FC        | 11                   | 20     | 31.5   | 27.5             | 180          | F461FC564(1)630(2) |
| 630  | 250 | 0.68                   | FC        | 11                   | 20     | 31.5   | 27.5             | 180          | F461FC684(1)630(2) |
| 630  | 250 | 0.82                   | FC        | 11                   | 20     | 31.5   | 27.5             | 180          | F461FC824(1)630(2) |
| 630  | 250 | 1                      | FI        | 13                   | 25     | 31.5   | 27.5             | 180          | F461FI105(1)630(2) |
| 630  | 250 | 1.2                    | FI        | 13                   | 25     | 31.5   | 27.5             | 180          | F461FI125(1)630(2) |
| 630  | 250 | 1.5                    | FN        | 14                   | 28     | 31.5   | 27.5             | 180          | F461FN155(1)630(2) |
| 630  | 250 | 1.8                    | FR        | 17.5                 | 28     | 31.5   | 27.5             | 180          | F461FR185(1)630(2) |
| 630  | 250 | 2.2                    | FS        | 19                   | 29     | 31.5   | 27.5             | 180          | F461FS225(1)630(2) |
| 630  | 250 | 2.7                    | FY        | 22                   | 37     | 31.5   | 27.5             | 180          | F461FY275(1)630(2) |
| 630  | 250 | 3.3                    | FY        | 22                   | 37     | 31.5   | 27.5             | 180          | F461FY335(1)630(2) |
| 630  | 250 | 3.9                    | FY        | 22                   | 37     | 31.5   | 27.5             | 180          | F461FY395(1)630(2) |
| 630  | 250 | 0.68                   | RB        | 11                   | 22     | 41     | 37.5             | 90           | F461RB684(1)630(2) |
| 630  | 250 | 0.82                   | RB        | 11                   | 22     | 41     | 37.5             | 90           | F461RB824(1)630(2) |
| 630  | 250 | 1                      | RB        | 11                   | 22     | 41     | 37.5             | 90           | F461RB105(1)630(2) |
| 630  | 250 | 1.2                    | RB        | 11                   | 22     | 41     | 37.5             | 90           | F461RB125(1)630(2) |
| 630  | 250 | 1.5                    | RF        | 13                   | 24     | 41     | 37.5             | 90           | F461RF155(1)630(2) |
| 630  | 250 | 1.8                    | RF        | 13                   | 24     | 41     | 37.5             | 90           | F461RF185(1)630(2) |
| 630  | 250 | 2.2                    | RH        | 15                   | 26     | 41     | 37.5             | 90           | F461RH225(1)630(2) |
| 630  | 250 | 2.7                    | RC        | 16                   | 28.5   | 41     | 37.5             | 90           | F461RC275(1)630(2) |
| 630  | 250 | 3.3                    | RD        | 19                   | 32     | 41     | 37.5             | 90           | F461RD335(1)630(2) |
| 630  | 250 | 3.9                    | RP        | 21                   | 38     | 41     | 37.5             | 90           | F461RP395(1)630(2) |
| 630  | 250 | 4.7                    | RP        | 21                   | 38     | 41     | 37.5             | 90           | F461RP475(1)630(2) |
| 630  | 250 | 5.6                    | RO        | 24                   | 44     | 41     | 37.5             | 90           | F461RO565(1)630(2) |
| 630  | 250 | 6.8                    | RO        | 24                   | 44     | 41     | 37.5             | 90           | F461RO685(1)630(2) |
| 630  | 250 | 8.2                    | RU        | 30                   | 45     | 41     | 37.5             | 90           | F461RU825(1)630(2) |
| 1000 | 300 | 0.0047                 | AG        | 4                    | 9      | 13     | 10               | 2,000        | F462AG472(1)1K0(2) |
| 1000 | 300 | 0.0056                 | AG        | 4                    | 9      | 13     | 10               | 2,000        | F462AG562(1)1K0(2) |
| 1000 | 300 | 0.0068                 | AG        | 4                    | 9      | 13     | 10               | 2,000        | F462AG682(1)1K0(2) |
| 1000 | 300 | 0.0082                 | AK        | 5                    | 11     | 13     | 10               | 2,000        | F462AK822(1)1K0(2) |
| 1000 | 300 | 0.01                   | AK        | 5                    | 11     | 13     | 10               | 2,000        | F462AK103(1)1K0(2) |
| 1000 | 300 | 0.012                  | AK        | 5                    | 11     | 13     | 10               | 2,000        | F462AK123(1)1K0(2) |
| 1000 | 300 | 0.015                  | AP        | 6                    | 12     | 13     | 10               | 2,000        | F462AP153(1)1K0(2) |
| 1000 | 300 | 0.018                  | AP        | 6                    | 12     | 13     | 10               | 2,000        | F462AP183(1)1K0(2) |
| 1000 | 300 | 0.022                  | AP        | 6                    | 12     | 13     | 10               | 2,000        | F462AP223(1)1K0(2) |
| 1000 | 300 | 0.01                   | BB        | 4                    | 10     | 18     | 15               | 1,600        | F462BB103(1)1K0(2) |
| 1000 | 300 | 0.012                  | BB        | 4                    | 10     | 18     | 15               | 1,600        | F462BB123(1)1K0(2) |
| 1000 | 300 | 0.015                  | BB        | 4                    | 10     | 18     | 15               | 1,600        | F462BB153(1)1K0(2) |
| 1000 | 300 | 0.018                  | BC        | 5                    | 11     | 18     | 15               | 1,600        | F462BC183(1)1K0(2) |
| 1000 | 300 | 0.022                  | BC        | 5                    | 11     | 18     | 15               | 1,600        | F462BC223(1)1K0(2) |
| 1000 | 300 | 0.027                  | BE        | 5.5                  | 12.5   | 18     | 15               | 1,600        | F462BE273(1)1K0(2) |
| 1000 | 300 | 0.033                  | BE        | 5.5                  | 12.5   | 18     | 15               | 1,600        | F462BE333(1)1K0(2) |
| 1000 | 300 | 0.039                  | BK        | 7.5                  | 13.5   | 18     | 15               | 1,600        | F462BK393(1)1K0(2) |
| 1000 | 300 | 0.047                  | BK        | 7.5                  | 13.5   | 18     | 15               | 1,600        | F462BK473(1)1K0(2) |
| 1000 | 300 | 0.056                  | BK        | 7.5                  | 13.5   | 18     | 15               | 1,600        | F462BK563(1)1K0(2) |
| 1000 | 300 | 0.068                  | BP        | 8.5                  | 14.5   | 18     | 15               | 1,600        | F462BP683(1)1K0(2) |
| 1000 | 300 | 0.082                  | BS        | 10                   | 16     | 18     | 15               | 1,600        | F462BS823(1)1K0(2) |
| 1000 | 300 | 0.1                    | BS        | 10                   | 16     | 18     | 15               | 1,600        | F462BS104(1)1K0(2) |
| 1000 | 300 | 0.12                   | BY        | 11                   | 19     | 18     | 15               | 1,600        | F462BY124(1)1K0(2) |
| 1000 | 300 | 0.15                   | BY        | 11                   | 19     | 18     | 15               | 1,600        | F462BY154(1)1K0(2) |
| 1000 | 300 | 0.047                  | DB        | 6                    | 14.5   | 26     | 22.5             | 600          | F462DB473(1)1K0(2) |
| 1000 | 300 | 0.056                  | DB        | 6                    | 14.5   | 26     | 22.5             | 600          | F462DB563(1)1K0(2) |
| VDC  | VAC | Capacitance Value (μF) | Size Code | T (mm)               | H (mm) | L (mm) | Lead Spacing (S) | dV/dt (V/μs) | Part Number        |

- (1) J = 5%, K = 10%  
(2) Insert lead and packaging code. See Ordering Options Table for available options.  
(3) K = ±10% (only available tolerance).

**Table 1 – Ratings & Part Number Reference cont.**

| VDC  | VAC | Capacitance Value (μF) | Size Code | Max Dimensions in mm |        |        | Lead Spacing (S) | dV/dt (V/μs) | Part Number        |
|------|-----|------------------------|-----------|----------------------|--------|--------|------------------|--------------|--------------------|
|      |     |                        |           | T                    | H      | L      |                  |              |                    |
| 1000 | 300 | 0.068                  | DB        | 6                    | 14.5   | 26     | 22.5             | 600          | F462DB683(1)1K0(2) |
| 1000 | 300 | 0.082                  | DI        | 7                    | 16     | 26     | 22.5             | 600          | F462DI823(1)1K0(2) |
| 1000 | 300 | 0.1                    | DI        | 7                    | 16     | 26     | 22.5             | 600          | F462DI104(1)1K0(2) |
| 1000 | 300 | 0.12                   | DH        | 8                    | 16     | 26     | 22.5             | 600          | F462DH124(1)1K0(2) |
| 1000 | 300 | 0.15                   | DM        | 9                    | 18.5   | 26     | 22.5             | 600          | F462DM154(1)1K0(2) |
| 1000 | 300 | 0.18                   | DO        | 10                   | 18.5   | 26     | 22.5             | 600          | F462DO184(1)1K0(2) |
| 1000 | 300 | 0.22                   | DO        | 10                   | 18.5   | 26     | 22.5             | 600          | F462DO224(1)1K0(2) |
| 1000 | 300 | 0.27                   | DU        | 13                   | 22     | 26     | 22.5             | 600          | F462DU274(1)1K0(2) |
| 1000 | 300 | 0.33                   | DU        | 13                   | 22     | 26     | 22.5             | 600          | F462DU334(1)1K0(2) |
| 1000 | 300 | 0.39                   | DY        | 15.5                 | 24.5   | 26     | 22.5             | 600          | F462DY394(1)1K0(2) |
| 1000 | 300 | 0.47                   | DY        | 15.5                 | 24.5   | 26     | 22.5             | 600          | F462DY474(1)1K0(2) |
| 1000 | 300 | 0.56                   | DY        | 15.5                 | 24.5   | 26     | 22.5             | 600          | F462DY564(1)1K0(2) |
| 1000 | 300 | 0.15                   | FB        | 9                    | 17     | 31.5   | 27.5             | 200          | F462FB154(1)1K0(2) |
| 1000 | 300 | 0.18                   | FB        | 9                    | 17     | 31.5   | 27.5             | 200          | F462FB184(1)1K0(2) |
| 1000 | 300 | 0.22                   | FB        | 9                    | 17     | 31.5   | 27.5             | 200          | F462FB224(1)1K0(2) |
| 1000 | 300 | 0.27                   | FC        | 11                   | 20     | 31.5   | 27.5             | 200          | F462FC274(1)1K0(2) |
| 1000 | 300 | 0.33                   | FC        | 11                   | 20     | 31.5   | 27.5             | 200          | F462FC334(1)1K0(2) |
| 1000 | 300 | 0.39                   | FI        | 13                   | 25     | 31.5   | 27.5             | 200          | F462FI394(1)1K0(2) |
| 1000 | 300 | 0.47                   | FI        | 13                   | 25     | 31.5   | 27.5             | 200          | F462FI474(1)1K0(2) |
| 1000 | 300 | 0.56                   | FN        | 14                   | 28     | 31.5   | 27.5             | 200          | F462FN564(1)1K0(2) |
| 1000 | 300 | 0.68                   | FN        | 14                   | 28     | 31.5   | 27.5             | 200          | F462FN684(1)1K0(2) |
| 1000 | 300 | 0.82                   | FR        | 17.5                 | 28     | 31.5   | 27.5             | 200          | F462FR824(1)1K0(2) |
| 1000 | 300 | 1                      | FY        | 22                   | 37     | 31.5   | 27.5             | 200          | F462FY105(1)1K0(2) |
| 1000 | 300 | 1.2                    | FY        | 22                   | 37     | 31.5   | 27.5             | 200          | F462FY125(1)1K0(2) |
| 1000 | 300 | 1.5                    | FY        | 22                   | 37     | 31.5   | 27.5             | 200          | F462FY155(1)1K0(2) |
| 1000 | 300 | 0.33                   | RB        | 11                   | 22     | 41     | 37.5             | 150          | F462RB334(1)1K0(2) |
| 1000 | 300 | 0.39                   | RB        | 11                   | 22     | 41     | 37.5             | 150          | F462RB394(1)1K0(2) |
| 1000 | 300 | 0.47                   | RB        | 11                   | 22     | 41     | 37.5             | 150          | F462RB474(1)1K0(2) |
| 1000 | 300 | 0.56                   | RB        | 11                   | 22     | 41     | 37.5             | 150          | F462RB564(1)1K0(2) |
| 1000 | 300 | 0.68                   | RF        | 13                   | 24     | 41     | 37.5             | 150          | F462RF684(1)1K0(2) |
| 1000 | 300 | 0.82                   | RH        | 15                   | 26     | 41     | 37.5             | 150          | F462RH824(1)1K0(2) |
| 1000 | 300 | 1                      | RC        | 16                   | 28.5   | 41     | 37.5             | 150          | F462RC105(1)1K0(2) |
| 1000 | 300 | 1.2                    | RD        | 19                   | 32     | 41     | 37.5             | 150          | F462RD125(1)1K0(2) |
| 1000 | 300 | 1.5                    | RD        | 19                   | 32     | 41     | 37.5             | 150          | F462RD155(1)1K0(2) |
| 1000 | 300 | 1.8                    | RP        | 21                   | 38     | 41     | 37.5             | 150          | F462RP185(1)1K0(2) |
| 1000 | 300 | 2.2                    | RP        | 21                   | 38     | 41     | 37.5             | 150          | F462RP225(1)1K0(2) |
| 1000 | 300 | 2.7                    | RO        | 24                   | 44     | 41     | 37.5             | 150          | F462RO275(1)1K0(2) |
| 1000 | 300 | 3.3                    | RU        | 30                   | 45     | 41     | 37.5             | 150          | F462RU335(1)1K0(2) |
| 1000 | 300 | 3.9                    | RU        | 30                   | 45     | 41     | 37.5             | 150          | F462RU395(1)1K0(2) |
| 1250 | 400 | 0.0033                 | AG        | 4                    | 9      | 13     | 10               | 2,200        | F462AG332(1)1L2(2) |
| 1250 | 400 | 0.0047                 | AG        | 4                    | 9      | 13     | 10               | 2,200        | F462AG472(1)1L2(2) |
| 1250 | 400 | 0.0056                 | AG        | 4                    | 9      | 13     | 10               | 2,200        | F462AG562(1)1L2(2) |
| 1250 | 400 | 0.0068                 | AK        | 5                    | 11     | 13     | 10               | 2,200        | F462AK682(1)1L2(2) |
| 1250 | 400 | 0.0082                 | AK        | 5                    | 11     | 13     | 10               | 2,200        | F462AK822(1)1L2(2) |
| 1250 | 400 | 0.01                   | AK        | 5                    | 11     | 13     | 10               | 2,200        | F462AK103(1)1L2(2) |
| 1250 | 400 | 0.012                  | AK        | 5                    | 11     | 13     | 10               | 2,200        | F462AK123(1)1L2(2) |
| 1250 | 400 | 0.015                  | AP        | 6                    | 12     | 13     | 10               | 2,200        | F462AP153(1)1L2(2) |
| 1250 | 400 | 0.0068                 | BB        | 4                    | 10     | 18     | 15               | 2,000        | F462BB682(1)1L2(2) |
| 1250 | 400 | 0.0082                 | BB        | 4                    | 10     | 18     | 15               | 2,000        | F462BB822(1)1L2(2) |
| 1250 | 400 | 0.01                   | BB        | 4                    | 10     | 18     | 15               | 2,000        | F462BB103(1)1L2(2) |
| 1250 | 400 | 0.012                  | BC        | 5                    | 11     | 18     | 15               | 2,000        | F462BC123(1)1L2(2) |
| 1250 | 400 | 0.015                  | BC        | 5                    | 11     | 18     | 15               | 2,000        | F462BC153(1)1L2(2) |
| 1250 | 400 | 0.018                  | BE        | 5.5                  | 12.5   | 18     | 15               | 2,000        | F462BE183(1)1L2(2) |
| 1250 | 400 | 0.022                  | BE        | 5.5                  | 12.5   | 18     | 15               | 2,000        | F462BE223(1)1L2(2) |
| 1250 | 400 | 0.027                  | BK        | 7.5                  | 13.5   | 18     | 15               | 2,000        | F462BK273(1)1L2(2) |
| 1250 | 400 | 0.033                  | BK        | 7.5                  | 13.5   | 18     | 15               | 2,000        | F462BK333(1)1L2(2) |
| 1250 | 400 | 0.039                  | BK        | 7.5                  | 13.5   | 18     | 15               | 2,000        | F462BK393(1)1L2(2) |
| 1250 | 400 | 0.047                  | BK        | 7.5                  | 13.5   | 18     | 15               | 2,000        | F462BK473(1)1L2(2) |
| 1250 | 400 | 0.056                  | BP        | 8.5                  | 14.5   | 18     | 15               | 2,000        | F462BP563(1)1L2(2) |
| 1250 | 400 | 0.068                  | BS        | 10                   | 16     | 18     | 15               | 2,000        | F462BS683(1)1L2(2) |
| VDC  | VAC | Capacitance Value (μF) | Size Code | T (mm)               | H (mm) | L (mm) | Lead Spacing (S) | dV/dt (V/μs) | Part Number        |

(1) J = 5%, K = 10%

(2) Insert lead and packaging code. See Ordering Options Table for available options.

(3) K = ±10% (only available tolerance).

**Table 1 – Ratings & Part Number Reference cont.**

| VDC  | VAC | Capacitance Value (μF) | Size Code | Max Dimensions in mm |        |        | Lead Spacing (S) | dV/dt (V/μs) | Part Number        |
|------|-----|------------------------|-----------|----------------------|--------|--------|------------------|--------------|--------------------|
|      |     |                        |           | T                    | H      | L      |                  |              |                    |
| 1250 | 400 | 0.082                  | BY        | 11                   | 19     | 18     | 15               | 2,000        | F462BY823(1)1L2(2) |
| 1250 | 400 | 0.1                    | BY        | 11                   | 19     | 18     | 15               | 2,000        | F462BY104(1)1L2(2) |
| 1250 | 400 | 0.12                   | BY        | 11                   | 19     | 18     | 15               | 2,000        | F462BY124(1)1L2(2) |
| 1250 | 400 | 0.033                  | DB        | 6                    | 14.5   | 26     | 22.5             | 800          | F462DB333(1)1L2(2) |
| 1250 | 400 | 0.039                  | DB        | 6                    | 14.5   | 26     | 22.5             | 800          | F462DB393(1)1L2(2) |
| 1250 | 400 | 0.047                  | DB        | 6                    | 14.5   | 26     | 22.5             | 800          | F462DB473(1)1L2(2) |
| 1250 | 400 | 0.056                  | DB        | 6                    | 14.5   | 26     | 22.5             | 800          | F462DB563(1)1L2(2) |
| 1250 | 400 | 0.068                  | DI        | 7                    | 16     | 26     | 22.5             | 800          | F462DI683(1)1L2(2) |
| 1250 | 400 | 0.082                  | DI        | 7                    | 16     | 26     | 22.5             | 800          | F462DI823(1)1L2(2) |
| 1250 | 400 | 0.1                    | DJ        | 8.5                  | 17     | 26     | 22.5             | 800          | F462DJ104(1)1L2(2) |
| 1250 | 400 | 0.12                   | DM        | 9                    | 18.5   | 26     | 22.5             | 800          | F462DM124(1)1L2(2) |
| 1250 | 400 | 0.15                   | DM        | 9                    | 18.5   | 26     | 22.5             | 800          | F462DM154(1)1L2(2) |
| 1250 | 400 | 0.18                   | DP        | 11                   | 20     | 26     | 22.5             | 800          | F462DP184(1)1L2(2) |
| 1250 | 400 | 0.22                   | DU        | 13                   | 22     | 26     | 22.5             | 800          | F462DU224(1)1L2(2) |
| 1250 | 400 | 0.27                   | DY        | 15.5                 | 24.5   | 26     | 22.5             | 800          | F462DY274(1)1L2(2) |
| 1250 | 400 | 0.33                   | DY        | 15.5                 | 24.5   | 26     | 22.5             | 800          | F462DY334(1)1L2(2) |
| 1250 | 400 | 0.39                   | DY        | 15.5                 | 24.5   | 26     | 22.5             | 800          | F462DY394(1)1L2(2) |
| 1250 | 400 | 0.1                    | FB        | 9                    | 17     | 31.5   | 27.5             | 380          | F462FB104(1)1L2(2) |
| 1250 | 400 | 0.12                   | FB        | 9                    | 17     | 31.5   | 27.5             | 380          | F462FB124(1)1L2(2) |
| 1250 | 400 | 0.15                   | FB        | 9                    | 17     | 31.5   | 27.5             | 380          | F462FB154(1)1L2(2) |
| 1250 | 400 | 0.18                   | FC        | 11                   | 20     | 31.5   | 27.5             | 380          | F462FC184(1)1L2(2) |
| 1250 | 400 | 0.22                   | FC        | 11                   | 20     | 31.5   | 27.5             | 380          | F462FC224(1)1L2(2) |
| 1250 | 400 | 0.27                   | FI        | 13                   | 25     | 31.5   | 27.5             | 380          | F462FI274(1)1L2(2) |
| 1250 | 400 | 0.33                   | FI        | 13                   | 25     | 31.5   | 27.5             | 380          | F462FI334(1)1L2(2) |
| 1250 | 400 | 0.39                   | FI        | 13                   | 25     | 31.5   | 27.5             | 380          | F462FI394(1)1L2(2) |
| 1250 | 400 | 0.47                   | FN        | 14                   | 28     | 31.5   | 27.5             | 380          | F462FN474(1)1L2(2) |
| 1250 | 400 | 0.56                   | FR        | 17.5                 | 28     | 31.5   | 27.5             | 380          | F462FR564(1)1L2(2) |
| 1250 | 400 | 0.68                   | FS        | 19                   | 29     | 31.5   | 27.5             | 380          | F462FS684(1)1L2(2) |
| 1250 | 400 | 0.82                   | FY        | 22                   | 37     | 31.5   | 27.5             | 380          | F462FY824(1)1L2(2) |
| 1250 | 400 | 1                      | FY        | 22                   | 37     | 31.5   | 27.5             | 380          | F462FY105(1)1L2(2) |
| 1250 | 400 | 1.2                    | FY        | 22                   | 37     | 31.5   | 27.5             | 380          | F462FY125(1)1L2(2) |
| 1250 | 400 | 0.22                   | RB        | 11                   | 22     | 41     | 37.5             | 180          | F462RB224(1)1L2(2) |
| 1250 | 400 | 0.27                   | RB        | 11                   | 22     | 41     | 37.5             | 180          | F462RB274(1)1L2(2) |
| 1250 | 400 | 0.33                   | RB        | 11                   | 22     | 41     | 37.5             | 180          | F462RB334(1)1L2(2) |
| 1250 | 400 | 0.39                   | RB        | 11                   | 22     | 41     | 37.5             | 180          | F462RB394(1)1L2(2) |
| 1250 | 400 | 0.47                   | RF        | 13                   | 24     | 41     | 37.5             | 180          | F462RF474(1)1L2(2) |
| 1250 | 400 | 0.56                   | RF        | 13                   | 24     | 41     | 37.5             | 180          | F462RF564(1)1L2(2) |
| 1250 | 400 | 0.68                   | RH        | 15                   | 26     | 41     | 37.5             | 180          | F462RH684(1)1L2(2) |
| 1250 | 400 | 0.82                   | RC        | 16                   | 28.5   | 41     | 37.5             | 180          | F462RC824(1)1L2(2) |
| 1250 | 400 | 1                      | RD        | 19                   | 32     | 41     | 37.5             | 180          | F462RD105(1)1L2(2) |
| 1250 | 400 | 1.2                    | RP        | 21                   | 38     | 41     | 37.5             | 180          | F462RP125(1)1L2(2) |
| 1250 | 400 | 1.5                    | RP        | 21                   | 38     | 41     | 37.5             | 180          | F462RP155(1)1L2(2) |
| 1250 | 400 | 1.8                    | RO        | 24                   | 44     | 41     | 37.5             | 180          | F462RO185(1)1L2(2) |
| 1250 | 400 | 2.2                    | RU        | 30                   | 45     | 41     | 37.5             | 180          | F462RU225(1)1L2(2) |
| 1250 | 400 | 2.7                    | RU        | 30                   | 45     | 41     | 37.5             | 180          | F462RU275(1)1L2(2) |
| 1250 | 500 | 0.0047                 | BB        | 4                    | 10     | 18     | 15               | 3,500        | F463BB472(1)1L2(2) |
| 1250 | 500 | 0.0056                 | BB        | 4                    | 10     | 18     | 15               | 3,500        | F463BB562(1)1L2(2) |
| 1250 | 500 | 0.0068                 | BB        | 4                    | 10     | 18     | 15               | 3,500        | F463BB682(1)1L2(2) |
| 1250 | 500 | 0.0082                 | BC        | 5                    | 11     | 18     | 15               | 3,500        | F463BC822(1)1L2(2) |
| 1250 | 500 | 0.01                   | BC        | 5                    | 11     | 18     | 15               | 3,500        | F463BC103(1)1L2(2) |
| 1250 | 500 | 0.012                  | BE        | 5.5                  | 12.5   | 18     | 15               | 3,500        | F463BE123(1)1L2(2) |
| 1250 | 500 | 0.015                  | BG        | 6                    | 12     | 18     | 15               | 3,500        | F463BG153(1)1L2(2) |
| 1250 | 500 | 0.018                  | BK        | 7.5                  | 13.5   | 18     | 15               | 3,500        | F463BK183(1)1L2(2) |
| 1250 | 500 | 0.022                  | BK        | 7.5                  | 13.5   | 18     | 15               | 3,500        | F463BK223(1)1L2(2) |
| 1250 | 500 | 0.027                  | BK        | 7.5                  | 13.5   | 18     | 15               | 3,500        | F463BK273(1)1L2(2) |
| 1250 | 500 | 0.033                  | BP        | 8.5                  | 14.5   | 18     | 15               | 3,500        | F463BP333(1)1L2(2) |
| 1250 | 500 | 0.039                  | BS        | 10                   | 16     | 18     | 15               | 3,500        | F463BS393(1)1L2(2) |
| 1250 | 500 | 0.047                  | BS        | 10                   | 16     | 18     | 15               | 3,500        | F463BS473(1)1L2(2) |
| 1250 | 500 | 0.056                  | BY        | 11                   | 19     | 18     | 15               | 3,500        | F463BY563(1)1L2(2) |
| 1250 | 500 | 0.068                  | BY        | 11                   | 19     | 18     | 15               | 3,500        | F463BY683(1)1L2(2) |
| VDC  | VAC | Capacitance Value (μF) | Size Code | T (mm)               | H (mm) | L (mm) | Lead Spacing (S) | dV/dt (V/μs) | Part Number        |

- (1) J = 5%, K = 10%  
(2) Insert lead and packaging code. See Ordering Options Table for available options.  
(3) K = ±10% (only available tolerance).

**Table 1 – Ratings & Part Number Reference cont.**

| VDC  | VAC | Capacitance Value (μF) | Size Code | Max Dimensions in mm |        |        | Lead Spacing (S) | dV/dt (V/μs) | Part Number        |
|------|-----|------------------------|-----------|----------------------|--------|--------|------------------|--------------|--------------------|
|      |     |                        |           | T                    | H      | L      |                  |              |                    |
| 1250 | 500 | 0.022                  | DB        | 6                    | 14.5   | 26     | 22.5             | 2,000        | F463DB223(1)1L2(2) |
| 1250 | 500 | 0.027                  | DB        | 6                    | 14.5   | 26     | 22.5             | 2,000        | F463DB273(1)1L2(2) |
| 1250 | 500 | 0.033                  | DB        | 6                    | 14.5   | 26     | 22.5             | 2,000        | F463DB333(1)1L2(2) |
| 1250 | 500 | 0.039                  | DB        | 6                    | 14.5   | 26     | 22.5             | 2,000        | F463DB393(1)1L2(2) |
| 1250 | 500 | 0.047                  | DI        | 7                    | 16     | 26     | 22.5             | 2,000        | F463DI473(1)1L2(2) |
| 1250 | 500 | 0.056                  | DI        | 7                    | 16     | 26     | 22.5             | 2,000        | F463DI563(1)1L2(2) |
| 1250 | 500 | 0.068                  | DJ        | 8.5                  | 17     | 26     | 22.5             | 2,000        | F463DJ683(1)1L2(2) |
| 1250 | 500 | 0.082                  | DM        | 9                    | 18.5   | 26     | 22.5             | 2,000        | F463DM823(1)1L2(2) |
| 1250 | 500 | 0.1                    | DO        | 10                   | 18.5   | 26     | 22.5             | 2,000        | F463DO104(1)1L2(2) |
| 1250 | 500 | 0.12                   | DP        | 11                   | 20     | 26     | 22.5             | 2,000        | F463DP124(1)1L2(2) |
| 1250 | 500 | 0.15                   | DU        | 13                   | 22     | 26     | 22.5             | 2,000        | F463DU154(1)1L2(2) |
| 1250 | 500 | 0.18                   | DU        | 13                   | 22     | 26     | 22.5             | 2,000        | F463DU184(1)1L2(2) |
| 1250 | 500 | 0.22                   | DY        | 15.5                 | 24.5   | 26     | 22.5             | 2,000        | F463DY224(1)1L2(2) |
| 1250 | 500 | 0.27                   | DY        | 15.5                 | 24.5   | 26     | 22.5             | 2,000        | F463DY274(1)1L2(2) |
| 1250 | 500 | 0.068                  | FB        | 9                    | 17     | 31.5   | 27.5             | 800          | F463FB683(1)1L2(2) |
| 1250 | 500 | 0.082                  | FB        | 9                    | 17     | 31.5   | 27.5             | 800          | F463FB823(1)1L2(2) |
| 1250 | 500 | 0.1                    | FB        | 9                    | 17     | 31.5   | 27.5             | 800          | F463FB104(1)1L2(2) |
| 1250 | 500 | 0.12                   | FB        | 9                    | 17     | 31.5   | 27.5             | 800          | F463FB124(1)1L2(2) |
| 1250 | 500 | 0.15                   | FC        | 11                   | 20     | 31.5   | 27.5             | 800          | F463FC154(1)1L2(2) |
| 1250 | 500 | 0.18                   | FC        | 11                   | 20     | 31.5   | 27.5             | 800          | F463FC184(1)1L2(2) |
| 1250 | 500 | 0.22                   | FI        | 13                   | 25     | 31.5   | 27.5             | 800          | F463FI224(1)1L2(2) |
| 1250 | 500 | 0.27                   | FI        | 13                   | 25     | 31.5   | 27.5             | 800          | F463FI274(1)1L2(2) |
| 1250 | 500 | 0.33                   | FN        | 14                   | 28     | 31.5   | 27.5             | 800          | F463FN334(1)1L2(2) |
| 1250 | 500 | 0.39                   | FR        | 17.5                 | 28     | 31.5   | 27.5             | 800          | F463FR394(1)1L2(2) |
| 1250 | 500 | 0.47                   | FR        | 17.5                 | 28     | 31.5   | 27.5             | 800          | F463FR474(3)1L2(2) |
| 1250 | 500 | 0.47                   | FS        | 19                   | 29     | 31.5   | 27.5             | 800          | F463FS474(1)1L2(2) |
| 1250 | 500 | 0.56                   | FY        | 22                   | 37     | 31.5   | 27.5             | 800          | F463FY564(1)1L2(2) |
| 1250 | 500 | 0.68                   | FY        | 22                   | 37     | 31.5   | 27.5             | 800          | F463FY684(1)1L2(2) |
| 1250 | 500 | 0.82                   | FY        | 22                   | 37     | 31.5   | 27.5             | 800          | F463FY824(1)1L2(2) |
| 1250 | 500 | 0.22                   | RB        | 11                   | 22     | 41     | 37.5             | 400          | F463RB224(1)1L2(2) |
| 1250 | 500 | 0.27                   | RB        | 11                   | 22     | 41     | 37.5             | 400          | F463RB274(1)1L2(2) |
| 1250 | 500 | 0.33                   | RB        | 11                   | 22     | 41     | 37.5             | 400          | F463RB334(1)1L2(2) |
| 1250 | 500 | 0.39                   | RF        | 13                   | 24     | 41     | 37.5             | 400          | F463RF394(1)1L2(2) |
| 1250 | 500 | 0.47                   | RH        | 15                   | 26     | 41     | 37.5             | 400          | F463RH474(1)1L2(2) |
| 1250 | 500 | 0.56                   | RC        | 16                   | 28.5   | 41     | 37.5             | 400          | F463RC564(1)1L2(2) |
| 1250 | 500 | 0.68                   | RC        | 16                   | 28.5   | 41     | 37.5             | 400          | F463RC684(1)1L2(2) |
| 1250 | 500 | 0.82                   | RD        | 19                   | 32     | 41     | 37.5             | 400          | F463RD824(1)1L2(2) |
| 1250 | 500 | 1                      | RP        | 21                   | 38     | 41     | 37.5             | 400          | F463RP105(1)1L2(2) |
| 1250 | 500 | 1.2                    | RP        | 21                   | 38     | 41     | 37.5             | 400          | F463RP125(1)1L2(2) |
| 1250 | 500 | 1.5                    | RO        | 24                   | 44     | 41     | 37.5             | 400          | F463RO155(1)1L2(2) |
| 1250 | 500 | 1.8                    | RU        | 30                   | 45     | 41     | 37.5             | 400          | F463RU185(1)1L2(2) |
| 1250 | 500 | 2.2                    | RU        | 30                   | 45     | 41     | 37.5             | 400          | F463RU225(1)1L2(2) |
| 1600 | 500 | 0.001                  | AG        | 4                    | 9      | 13     | 10               | 6,000        | F462AG102(1)1K6(2) |
| 1600 | 500 | 0.0012                 | AG        | 4                    | 9      | 13     | 10               | 6,000        | F462AG122(1)1K6(2) |
| 1600 | 500 | 0.0015                 | AG        | 4                    | 9      | 13     | 10               | 6,000        | F462AG152(1)1K6(2) |
| 1600 | 500 | 0.0018                 | AG        | 4                    | 9      | 13     | 10               | 6,000        | F462AG182(1)1K6(2) |
| 1600 | 500 | 0.0022                 | AG        | 4                    | 9      | 13     | 10               | 6,000        | F462AG222(1)1K6(2) |
| 1600 | 500 | 0.0027                 | AK        | 5                    | 11     | 13     | 10               | 6,000        | F462AK272(1)1K6(2) |
| 1600 | 500 | 0.0033                 | AK        | 5                    | 11     | 13     | 10               | 6,000        | F462AK332(1)1K6(2) |
| 1600 | 500 | 0.0039                 | AK        | 5                    | 11     | 13     | 10               | 6,000        | F462AK392(1)1K6(2) |
| 1600 | 500 | 0.0047                 | AK        | 5                    | 11     | 13     | 10               | 6,000        | F462AK472(1)1K6(2) |
| 1600 | 500 | 0.0056                 | AP        | 6                    | 12     | 13     | 10               | 6,000        | F462AP562(1)1K6(2) |
| 1600 | 500 | 0.0068                 | AP        | 6                    | 12     | 13     | 10               | 6,000        | F462AP682(1)1K6(2) |
| 1600 | 500 | 0.0033                 | BB        | 4                    | 10     | 18     | 15               | 4,500        | F462BB332(1)1K6(2) |
| 1600 | 500 | 0.0039                 | BB        | 4                    | 10     | 18     | 15               | 4,500        | F462BB392(1)1K6(2) |
| 1600 | 500 | 0.0047                 | BB        | 4                    | 10     | 18     | 15               | 4,500        | F462BB472(1)1K6(2) |
| 1600 | 500 | 0.0056                 | BB        | 4                    | 10     | 18     | 15               | 4,500        | F462BB562(1)1K6(2) |
| 1600 | 500 | 0.0068                 | BC        | 5                    | 11     | 18     | 15               | 4,500        | F462BC682(1)1K6(2) |
| 1600 | 500 | 0.0082                 | BC        | 5                    | 11     | 18     | 15               | 4,500        | F462BC822(1)1K6(2) |
| 1600 | 500 | 0.01                   | BE        | 5.5                  | 12.5   | 18     | 15               | 4,500        | F462BE103(1)1K6(2) |
| VDC  | VAC | Capacitance Value (μF) | Size Code | T (mm)               | H (mm) | L (mm) | Lead Spacing (S) | dV/dt (V/μs) | Part Number        |

- (1) J = 5%, K = 10%  
(2) Insert lead and packaging code. See Ordering Options Table for available options.  
(3) K = ±10% (only available tolerance).

**Table 1 – Ratings & Part Number Reference cont.**

| VDC  | VAC | Capacitance Value (μF) | Size Code | Max Dimensions in mm |        |        | Lead Spacing (S) | dV/dt (V/μs) | Part Number        |
|------|-----|------------------------|-----------|----------------------|--------|--------|------------------|--------------|--------------------|
|      |     |                        |           | T                    | H      | L      |                  |              |                    |
| 1600 | 500 | 0.012                  | BG        | 6                    | 12     | 18     | 15               | 4,500        | F462BG123(1)1K6(2) |
| 1600 | 500 | 0.015                  | BK        | 7.5                  | 13.5   | 18     | 15               | 4,500        | F462BK153(1)1K6(2) |
| 1600 | 500 | 0.018                  | BK        | 7.5                  | 13.5   | 18     | 15               | 4,500        | F462BK183(1)1K6(2) |
| 1600 | 500 | 0.022                  | BK        | 7.5                  | 13.5   | 18     | 15               | 4,500        | F462BK223(1)1K6(2) |
| 1600 | 500 | 0.027                  | BP        | 8.5                  | 14.5   | 18     | 15               | 4,500        | F462BP273(1)1K6(2) |
| 1600 | 500 | 0.033                  | BS        | 10                   | 16     | 18     | 15               | 4,500        | F462BS333(1)1K6(2) |
| 1600 | 500 | 0.039                  | BY        | 11                   | 19     | 18     | 15               | 4,500        | F462BY393(1)1K6(2) |
| 1600 | 500 | 0.047                  | BY        | 11                   | 19     | 18     | 15               | 4,500        | F462BY473(1)1K6(2) |
| 1600 | 500 | 0.056                  | BY        | 11                   | 19     | 18     | 15               | 4,500        | F462BY563(1)1K6(2) |
| 1600 | 500 | 0.015                  | DB        | 6                    | 14.5   | 26     | 22.5             | 1,800        | F462DB153(1)1K6(2) |
| 1600 | 500 | 0.018                  | DB        | 6                    | 14.5   | 26     | 22.5             | 1,800        | F462DB183(1)1K6(2) |
| 1600 | 500 | 0.022                  | DB        | 6                    | 14.5   | 26     | 22.5             | 1,800        | F462DB223(1)1K6(2) |
| 1600 | 500 | 0.027                  | DB        | 6                    | 14.5   | 26     | 22.5             | 1,800        | F462DB273(1)1K6(2) |
| 1600 | 500 | 0.033                  | DI        | 7                    | 16     | 26     | 22.5             | 1,800        | F462DI333(1)1K6(2) |
| 1600 | 500 | 0.039                  | DI        | 7                    | 16     | 26     | 22.5             | 1,800        | F462DI393(1)1K6(2) |
| 1600 | 500 | 0.047                  | DH        | 8                    | 16     | 26     | 22.5             | 1,800        | F462DH473(1)1K6(2) |
| 1600 | 500 | 0.056                  | DM        | 9                    | 18.5   | 26     | 22.5             | 1,800        | F462DM563(1)1K6(2) |
| 1600 | 500 | 0.068                  | DO        | 10                   | 18.5   | 26     | 22.5             | 1,800        | F462DO683(1)1K6(2) |
| 1600 | 500 | 0.082                  | DP        | 11                   | 20     | 26     | 22.5             | 1,800        | F462DP823(1)1K6(2) |
| 1600 | 500 | 0.1                    | DP        | 11                   | 20     | 26     | 22.5             | 1,800        | F462DP104(1)1K6(2) |
| 1600 | 500 | 0.12                   | DU        | 13                   | 22     | 26     | 22.5             | 1,800        | F462DU124(1)1K6(2) |
| 1600 | 500 | 0.15                   | DY        | 15.5                 | 24.5   | 26     | 22.5             | 1,800        | F462DY154(1)1K6(2) |
| 1600 | 500 | 0.18                   | DY        | 15.5                 | 24.5   | 26     | 22.5             | 1,800        | F462DY184(1)1K6(2) |
| 1600 | 500 | 0.22                   | DY        | 15.5                 | 24.5   | 26     | 22.5             | 1,800        | F462DY224(3)1K6(2) |
| 1600 | 500 | 0.047                  | FB        | 9                    | 17     | 31.5   | 27.5             | 500          | F462FB473(1)1K6(2) |
| 1600 | 500 | 0.056                  | FB        | 9                    | 17     | 31.5   | 27.5             | 500          | F462FB563(1)1K6(2) |
| 1600 | 500 | 0.068                  | FB        | 9                    | 17     | 31.5   | 27.5             | 500          | F462FB683(1)1K6(2) |
| 1600 | 500 | 0.082                  | FB        | 9                    | 17     | 31.5   | 27.5             | 500          | F462FB823(1)1K6(2) |
| 1600 | 500 | 0.1                    | FC        | 11                   | 20     | 31.5   | 27.5             | 500          | F462FC104(1)1K6(2) |
| 1600 | 500 | 0.12                   | FC        | 11                   | 20     | 31.5   | 27.5             | 500          | F462FC124(1)1K6(2) |
| 1600 | 500 | 0.15                   | FI        | 13                   | 25     | 31.5   | 27.5             | 500          | F462FI154(1)1K6(2) |
| 1600 | 500 | 0.18                   | FI        | 13                   | 25     | 31.5   | 27.5             | 500          | F462FI184(1)1K6(2) |
| 1600 | 500 | 0.22                   | FN        | 14                   | 28     | 31.5   | 27.5             | 500          | F462FN224(1)1K6(2) |
| 1600 | 500 | 0.27                   | FR        | 17.5                 | 28     | 31.5   | 27.5             | 500          | F462FR274(1)1K6(2) |
| 1600 | 500 | 0.33                   | FR        | 17.5                 | 28     | 31.5   | 27.5             | 500          | F462FR334(1)1K6(2) |
| 1600 | 500 | 0.39                   | FS        | 19                   | 29     | 31.5   | 27.5             | 500          | F462FS394(1)1K6(2) |
| 1600 | 500 | 0.47                   | FY        | 22                   | 37     | 31.5   | 27.5             | 500          | F462FY474(1)1K6(2) |
| 1600 | 500 | 0.56                   | FY        | 22                   | 37     | 31.5   | 27.5             | 500          | F462FY564(1)1K6(2) |
| 1600 | 500 | 0.68                   | FY        | 22                   | 37     | 31.5   | 27.5             | 500          | F462FY684(1)1K6(2) |
| 1600 | 500 | 0.15                   | RB        | 11                   | 22     | 41     | 37.5             | 300          | F462RB154(1)1K6(2) |
| 1600 | 500 | 0.18                   | RB        | 11                   | 22     | 41     | 37.5             | 300          | F462RB184(1)1K6(2) |
| 1600 | 500 | 0.22                   | RB        | 11                   | 22     | 41     | 37.5             | 300          | F462RB224(1)1K6(2) |
| 1600 | 500 | 0.27                   | RF        | 13                   | 24     | 41     | 37.5             | 300          | F462RF274(1)1K6(2) |
| 1600 | 500 | 0.33                   | RH        | 15                   | 26     | 41     | 37.5             | 300          | F462RH334(1)1K6(2) |
| 1600 | 500 | 0.39                   | RC        | 16                   | 28.5   | 41     | 37.5             | 300          | F462RC394(1)1K6(2) |
| 1600 | 500 | 0.47                   | RC        | 16                   | 28.5   | 41     | 37.5             | 300          | F462RC474(1)1K6(2) |
| 1600 | 500 | 0.56                   | RD        | 19                   | 32     | 41     | 37.5             | 300          | F462RD564(1)1K6(2) |
| 1600 | 500 | 0.68                   | RP        | 21                   | 38     | 41     | 37.5             | 300          | F462RP684(1)1K6(2) |
| 1600 | 500 | 0.82                   | RP        | 21                   | 38     | 41     | 37.5             | 300          | F462RP824(1)1K6(2) |
| 1600 | 500 | 1                      | RO        | 24                   | 44     | 41     | 37.5             | 300          | F462RO105(1)1K6(2) |
| 1600 | 500 | 1.2                    | RO        | 24                   | 44     | 41     | 37.5             | 300          | F462RO125(1)1K6(2) |
| 1600 | 500 | 1.5                    | RU        | 30                   | 45     | 41     | 37.5             | 300          | F462RU155(1)1K6(2) |
| 1600 | 650 | 0.0033                 | BB        | 4                    | 10     | 18     | 15               | 6,000        | F463BB332(1)1K6(2) |
| 1600 | 650 | 0.0039                 | BB        | 4                    | 10     | 18     | 15               | 6,000        | F463BB392(1)1K6(2) |
| 1600 | 650 | 0.0047                 | BB        | 4                    | 10     | 18     | 15               | 6,000        | F463BB472(1)1K6(2) |
| 1600 | 650 | 0.0056                 | BC        | 5                    | 11     | 18     | 15               | 6,000        | F463BC562(1)1K6(2) |
| 1600 | 650 | 0.0068                 | BC        | 5                    | 11     | 18     | 15               | 6,000        | F463BC682(1)1K6(2) |
| 1600 | 650 | 0.0082                 | BE        | 5.5                  | 12.5   | 18     | 15               | 6,000        | F463BE822(1)1K6(2) |
| 1600 | 650 | 0.01                   | BG        | 6                    | 12     | 18     | 15               | 6,000        | F463BG103(1)1K6(2) |
| 1600 | 650 | 0.012                  | BK        | 7.5                  | 13.5   | 18     | 15               | 6,000        | F463BK123(1)1K6(2) |
| VDC  | VAC | Capacitance Value (μF) | Size Code | T (mm)               | H (mm) | L (mm) | Lead Spacing (S) | dV/dt (V/μs) | Part Number        |

- (1) J = 5%, K = 10%  
(2) Insert lead and packaging code. See Ordering Options Table for available options.  
(3) K = ±10% (only available tolerance).

**Table 1 – Ratings & Part Number Reference cont.**

| VDC  | VAC | Capacitance Value (μF) | Size Code | Max Dimensions in mm |        |        | Lead Spacing (S) | dV/dt (V/μs) | Part Number        |
|------|-----|------------------------|-----------|----------------------|--------|--------|------------------|--------------|--------------------|
|      |     |                        |           | T                    | H      | L      |                  |              |                    |
| 1600 | 650 | 0.015                  | BK        | 7.5                  | 13.5   | 18     | 15               | 6,000        | F463BK153(1)1K6(2) |
| 1600 | 650 | 0.018                  | BP        | 8.5                  | 14.5   | 18     | 15               | 6,000        | F463BP183(1)1K6(2) |
| 1600 | 650 | 0.022                  | BP        | 8.5                  | 14.5   | 18     | 15               | 6,000        | F463BP223(1)1K6(2) |
| 1600 | 650 | 0.027                  | BS        | 10                   | 16     | 18     | 15               | 6,000        | F463BS273(1)1K6(2) |
| 1600 | 650 | 0.033                  | BY        | 11                   | 19     | 18     | 15               | 6,000        | F463BY333(1)1K6(2) |
| 1600 | 650 | 0.039                  | BY        | 11                   | 19     | 18     | 15               | 6,000        | F463BY393(1)1K6(2) |
| 1600 | 650 | 0.047                  | BY        | 11                   | 19     | 18     | 15               | 6,000        | F463BY473(1)1K6(2) |
| 1600 | 650 | 0.015                  | DB        | 6                    | 14.5   | 26     | 22.5             | 3,000        | F463DB153(1)1K6(2) |
| 1600 | 650 | 0.018                  | DB        | 6                    | 14.5   | 26     | 22.5             | 3,000        | F463DB183(1)1K6(2) |
| 1600 | 650 | 0.022                  | DB        | 6                    | 14.5   | 26     | 22.5             | 3,000        | F463DB223(1)1K6(2) |
| 1600 | 650 | 0.027                  | DB        | 6                    | 14.5   | 26     | 22.5             | 3,000        | F463DB273(1)1K6(2) |
| 1600 | 650 | 0.033                  | DI        | 7                    | 16     | 26     | 22.5             | 3,000        | F463DI333(1)1K6(2) |
| 1600 | 650 | 0.039                  | DI        | 7                    | 16     | 26     | 22.5             | 3,000        | F463DI393(1)1K6(2) |
| 1600 | 650 | 0.047                  | DJ        | 8.5                  | 17     | 26     | 22.5             | 3,000        | F463DJ473(1)1K6(2) |
| 1600 | 650 | 0.056                  | DM        | 9                    | 18.5   | 26     | 22.5             | 3,000        | F463DM563(1)1K6(2) |
| 1600 | 650 | 0.068                  | DO        | 10                   | 18.5   | 26     | 22.5             | 3,000        | F463DO683(1)1K6(2) |
| 1600 | 650 | 0.082                  | DP        | 11                   | 20     | 26     | 22.5             | 3,000        | F463DP823(1)1K6(2) |
| 1600 | 650 | 0.1                    | DU        | 13                   | 22     | 26     | 22.5             | 3,000        | F463DU104(1)1K6(2) |
| 1600 | 650 | 0.12                   | DU        | 13                   | 22     | 26     | 22.5             | 3,000        | F463DU124(1)1K6(2) |
| 1600 | 650 | 0.15                   | DY        | 15.5                 | 24.5   | 26     | 22.5             | 3,000        | F463DY154(1)1K6(2) |
| 1600 | 650 | 0.18                   | DY        | 15.5                 | 24.5   | 26     | 22.5             | 3,000        | F463DY184(1)1K6(2) |
| 1600 | 650 | 0.047                  | FB        | 9                    | 17     | 31.5   | 27.5             | 1,500        | F463FB473(1)1K6(2) |
| 1600 | 650 | 0.056                  | FB        | 9                    | 17     | 31.5   | 27.5             | 1,500        | F463FB563(1)1K6(2) |
| 1600 | 650 | 0.068                  | FB        | 9                    | 17     | 31.5   | 27.5             | 1,500        | F463FB683(1)1K6(2) |
| 1600 | 650 | 0.082                  | FB        | 9                    | 17     | 31.5   | 27.5             | 1,500        | F463FB823(1)1K6(2) |
| 1600 | 650 | 0.1                    | FC        | 11                   | 20     | 31.5   | 27.5             | 1,500        | F463FC104(1)1K6(2) |
| 1600 | 650 | 0.12                   | FC        | 11                   | 20     | 31.5   | 27.5             | 1,500        | F463FC124(1)1K6(2) |
| 1600 | 650 | 0.15                   | FI        | 13                   | 25     | 31.5   | 27.5             | 1,500        | F463FI154(1)1K6(2) |
| 1600 | 650 | 0.18                   | FI        | 13                   | 25     | 31.5   | 27.5             | 1,500        | F463FI184(1)1K6(2) |
| 1600 | 650 | 0.22                   | FN        | 14                   | 28     | 31.5   | 27.5             | 1,500        | F463FN224(1)1K6(2) |
| 1600 | 650 | 0.27                   | FR        | 17.5                 | 28     | 31.5   | 27.5             | 1,500        | F463FR274(1)1K6(2) |
| 1600 | 650 | 0.33                   | FS        | 19                   | 29     | 31.5   | 27.5             | 1,500        | F463FS334(1)1K6(2) |
| 1600 | 650 | 0.39                   | FY        | 22                   | 37     | 31.5   | 27.5             | 1,500        | F463FY394(1)1K6(2) |
| 1600 | 650 | 0.47                   | FY        | 22                   | 37     | 31.5   | 27.5             | 1,500        | F463FY474(1)1K6(2) |
| 1600 | 650 | 0.56                   | FY        | 22                   | 37     | 31.5   | 27.5             | 1,500        | F463FY564(1)1K6(2) |
| 1600 | 650 | 0.15                   | RB        | 11                   | 22     | 41     | 37.5             | 750          | F463RB154(1)1K6(2) |
| 1600 | 650 | 0.18                   | RB        | 11                   | 22     | 41     | 37.5             | 750          | F463RB184(1)1K6(2) |
| 1600 | 650 | 0.22                   | RB        | 11                   | 22     | 41     | 37.5             | 750          | F463RB224(1)1K6(2) |
| 1600 | 650 | 0.27                   | RF        | 13                   | 24     | 41     | 37.5             | 750          | F463RF274(1)1K6(2) |
| 1600 | 650 | 0.33                   | RH        | 15                   | 26     | 41     | 37.5             | 750          | F463RH334(1)1K6(2) |
| 1600 | 650 | 0.39                   | RC        | 16                   | 28.5   | 41     | 37.5             | 750          | F463RC394(1)1K6(2) |
| 1600 | 650 | 0.47                   | RD        | 19                   | 32     | 41     | 37.5             | 750          | F463RD474(1)1K6(2) |
| 1600 | 650 | 0.56                   | RD        | 19                   | 32     | 41     | 37.5             | 750          | F463RD564(1)1K6(2) |
| 1600 | 650 | 0.68                   | RP        | 21                   | 38     | 41     | 37.5             | 750          | F463RP684(1)1K6(2) |
| 1600 | 650 | 0.82                   | RP        | 21                   | 38     | 41     | 37.5             | 750          | F463RP824(1)1K6(2) |
| 1600 | 650 | 1                      | RO        | 24                   | 44     | 41     | 37.5             | 750          | F463RO105(1)1K6(2) |
| 1600 | 650 | 1.2                    | RO        | 24                   | 44     | 41     | 37.5             | 750          | F463RO125(1)1K6(2) |
| 1600 | 650 | 1.5                    | RU        | 30                   | 45     | 41     | 37.5             | 750          | F463RU155(1)1K6(2) |
| 2000 | 700 | 0.001                  | AG        | 4                    | 9      | 13     | 10               | 10,000       | F463AG102(1)2K0(2) |
| 2000 | 700 | 0.0012                 | AG        | 4                    | 9      | 13     | 10               | 10,000       | F463AG122(1)2K0(2) |
| 2000 | 700 | 0.0015                 | AG        | 4                    | 9      | 13     | 10               | 10,000       | F463AG152(1)2K0(2) |
| 2000 | 700 | 0.0018                 | AG        | 4                    | 9      | 13     | 10               | 10,000       | F463AG182(1)2K0(2) |
| 2000 | 700 | 0.0022                 | AK        | 5                    | 11     | 13     | 10               | 10,000       | F463AK222(1)2K0(2) |
| 2000 | 700 | 0.0027                 | AK        | 5                    | 11     | 13     | 10               | 10,000       | F463AK272(1)2K0(2) |
| 2000 | 700 | 0.0033                 | AK        | 5                    | 11     | 13     | 10               | 10,000       | F463AK332(1)2K0(2) |
| 2000 | 700 | 0.0039                 | AP        | 6                    | 12     | 13     | 10               | 10,000       | F463AP392(1)2K0(2) |
| 2000 | 700 | 0.0047                 | AP        | 6                    | 12     | 13     | 10               | 10,000       | F463AP472(1)2K0(2) |
| 2000 | 700 | 0.0056                 | AP        | 6                    | 12     | 13     | 10               | 10,000       | F463AP562(1)2K0(2) |
| 2000 | 700 | 0.001                  | BB        | 4                    | 10     | 18     | 15               | 9,500        | F463BB102(1)2K0(2) |
| 2000 | 700 | 0.0012                 | BB        | 4                    | 10     | 18     | 15               | 9,500        | F463BB122(1)2K0(2) |
| VDC  | VAC | Capacitance Value (μF) | Size Code | T (mm)               | H (mm) | L (mm) | Lead Spacing (S) | dV/dt (V/μs) | Part Number        |

(1) J = 5%, K = 10%

(2) Insert lead and packaging code. See Ordering Options Table for available options.

(3) K = ±10% (only available tolerance).

**Table 1 – Ratings & Part Number Reference cont.**

| VDC  | VAC | Capacitance Value (μF) | Size Code | Max Dimensions in mm |        |        | Lead Spacing (S) | dV/dt (V/μs) | Part Number        |
|------|-----|------------------------|-----------|----------------------|--------|--------|------------------|--------------|--------------------|
|      |     |                        |           | T                    | H      | L      |                  |              |                    |
| 2000 | 700 | 0.0015                 | BB        | 4                    | 10     | 18     | 15               | 9,500        | F463BB152(1)2K0(2) |
| 2000 | 700 | 0.0018                 | BB        | 4                    | 10     | 18     | 15               | 9,500        | F463BB182(1)2K0(2) |
| 2000 | 700 | 0.0022                 | BB        | 4                    | 10     | 18     | 15               | 9,500        | F463BB222(1)2K0(2) |
| 2000 | 700 | 0.0027                 | BC        | 5                    | 11     | 18     | 15               | 9,500        | F463BC272(1)2K0(2) |
| 2000 | 700 | 0.0033                 | BC        | 5                    | 11     | 18     | 15               | 9,500        | F463BC332(1)2K0(2) |
| 2000 | 700 | 0.0039                 | BC        | 5                    | 11     | 18     | 15               | 9,500        | F463BC392(1)2K0(2) |
| 2000 | 700 | 0.0047                 | BE        | 5.5                  | 12.5   | 18     | 15               | 9,500        | F463BE472(1)2K0(2) |
| 2000 | 700 | 0.0056                 | BE        | 5.5                  | 12.5   | 18     | 15               | 9,500        | F463BE562(1)2K0(2) |
| 2000 | 700 | 0.0068                 | BK        | 7.5                  | 13.5   | 18     | 15               | 9,500        | F463BK682(1)2K0(2) |
| 2000 | 700 | 0.0082                 | BK        | 7.5                  | 13.5   | 18     | 15               | 9,500        | F463BK822(1)2K0(2) |
| 2000 | 700 | 0.01                   | BK        | 7.5                  | 13.5   | 18     | 15               | 9,500        | F463BK103(1)2K0(2) |
| 2000 | 700 | 0.012                  | BP        | 8.5                  | 14.5   | 18     | 15               | 9,500        | F463BP123(1)2K0(2) |
| 2000 | 700 | 0.015                  | BS        | 10                   | 16     | 18     | 15               | 9,500        | F463BS153(1)2K0(2) |
| 2000 | 700 | 0.018                  | BY        | 11                   | 19     | 18     | 15               | 9,500        | F463BY183(1)2K0(2) |
| 2000 | 700 | 0.022                  | BY        | 11                   | 19     | 18     | 15               | 9,500        | F463BY223(1)2K0(2) |
| 2000 | 700 | 0.027                  | BY        | 11                   | 19     | 18     | 15               | 9,500        | F463BY273(1)2K0(2) |
| 2000 | 700 | 0.01                   | DB        | 6                    | 14.5   | 26     | 22.5             | 4,500        | F463DB103(1)2K0(2) |
| 2000 | 700 | 0.012                  | DB        | 6                    | 14.5   | 26     | 22.5             | 4,500        | F463DB123(1)2K0(2) |
| 2000 | 700 | 0.015                  | DI        | 7                    | 16     | 26     | 22.5             | 4,500        | F463DI153(1)2K0(2) |
| 2000 | 700 | 0.018                  | DI        | 7                    | 16     | 26     | 22.5             | 4,500        | F463DI183(1)2K0(2) |
| 2000 | 700 | 0.022                  | DH        | 8                    | 16     | 26     | 22.5             | 4,500        | F463DH223(1)2K0(2) |
| 2000 | 700 | 0.027                  | DJ        | 8.5                  | 17     | 26     | 22.5             | 4,500        | F463DJ273(1)2K0(2) |
| 2000 | 700 | 0.033                  | DO        | 10                   | 18.5   | 26     | 22.5             | 4,500        | F463DO333(1)2K0(2) |
| 2000 | 700 | 0.039                  | DO        | 10                   | 18.5   | 26     | 22.5             | 4,500        | F463DO393(1)2K0(2) |
| 2000 | 700 | 0.047                  | DP        | 11                   | 20     | 26     | 22.5             | 4,500        | F463DP473(1)2K0(2) |
| 2000 | 700 | 0.056                  | DU        | 13                   | 22     | 26     | 22.5             | 4,500        | F463DU563(1)2K0(2) |
| 2000 | 700 | 0.068                  | DU        | 13                   | 22     | 26     | 22.5             | 4,500        | F463DU683(1)2K0(2) |
| 2000 | 700 | 0.082                  | DY        | 15.5                 | 24.5   | 26     | 22.5             | 4,500        | F463DY823(1)2K0(2) |
| 2000 | 700 | 0.1                    | DY        | 15.5                 | 24.5   | 26     | 22.5             | 4,500        | F463DY104(1)2K0(2) |
| 2000 | 700 | 0.022                  | FB        | 9                    | 17     | 31.5   | 27.5             | 1,000        | F463FB223(1)2K0(2) |
| 2000 | 700 | 0.027                  | FB        | 9                    | 17     | 31.5   | 27.5             | 1,000        | F463FB273(1)2K0(2) |
| 2000 | 700 | 0.033                  | FB        | 9                    | 17     | 31.5   | 27.5             | 1,000        | F463FB333(1)2K0(2) |
| 2000 | 700 | 0.039                  | FB        | 9                    | 17     | 31.5   | 27.5             | 1,000        | F463FB393(1)2K0(2) |
| 2000 | 700 | 0.047                  | FC        | 11                   | 20     | 31.5   | 27.5             | 1,000        | F463FC473(1)2K0(2) |
| 2000 | 700 | 0.056                  | FC        | 11                   | 20     | 31.5   | 27.5             | 1,000        | F463FC563(1)2K0(2) |
| 2000 | 700 | 0.068                  | FC        | 11                   | 20     | 31.5   | 27.5             | 1,000        | F463FC683(1)2K0(2) |
| 2000 | 700 | 0.082                  | FI        | 13                   | 25     | 31.5   | 27.5             | 1,000        | F463FI823(1)2K0(2) |
| 2000 | 700 | 0.1                    | FI        | 13                   | 25     | 31.5   | 27.5             | 1,000        | F463FI104(1)2K0(2) |
| 2000 | 700 | 0.12                   | FN        | 14                   | 28     | 31.5   | 27.5             | 1,000        | F463FN124(1)2K0(2) |
| 2000 | 700 | 0.15                   | FR        | 17.5                 | 28     | 31.5   | 27.5             | 1,000        | F463FR154(1)2K0(2) |
| 2000 | 700 | 0.18                   | FS        | 19                   | 29     | 31.5   | 27.5             | 1,000        | F463FS184(1)2K0(2) |
| 2000 | 700 | 0.22                   | FY        | 22                   | 37     | 31.5   | 27.5             | 1,000        | F463FY224(1)2K0(2) |
| 2000 | 700 | 0.27                   | FY        | 22                   | 37     | 31.5   | 27.5             | 1,000        | F463FY274(1)2K0(2) |
| 2000 | 700 | 0.33                   | FY        | 22                   | 37     | 31.5   | 27.5             | 1,000        | F463FY334(1)2K0(2) |
| 2000 | 700 | 0.068                  | RB        | 11                   | 22     | 41     | 37.5             | 500          | F463RB683(1)2K0(2) |
| 2000 | 700 | 0.082                  | RB        | 11                   | 22     | 41     | 37.5             | 500          | F463RB823(1)2K0(2) |
| 2000 | 700 | 0.1                    | RB        | 11                   | 22     | 41     | 37.5             | 500          | F463RB104(1)2K0(2) |
| 2000 | 700 | 0.12                   | RB        | 11                   | 22     | 41     | 37.5             | 500          | F463RB124(1)2K0(2) |
| 2000 | 700 | 0.15                   | RF        | 13                   | 24     | 41     | 37.5             | 500          | F463RF154(1)2K0(2) |
| 2000 | 700 | 0.18                   | RH        | 15                   | 26     | 41     | 37.5             | 500          | F463RH184(1)2K0(2) |
| 2000 | 700 | 0.22                   | RC        | 16                   | 28.5   | 41     | 37.5             | 500          | F463RC224(1)2K0(2) |
| 2000 | 700 | 0.27                   | RD        | 19                   | 32     | 41     | 37.5             | 500          | F463RD274(1)2K0(2) |
| 2000 | 700 | 0.33                   | RD        | 19                   | 32     | 41     | 37.5             | 500          | F463RD334(1)2K0(2) |
| 2000 | 700 | 0.39                   | RP        | 21                   | 38     | 41     | 37.5             | 500          | F463RP394(1)2K0(2) |
| 2000 | 700 | 0.47                   | RP        | 21                   | 38     | 41     | 37.5             | 500          | F463RP474(1)2K0(2) |
| 2000 | 700 | 0.56                   | RO        | 24                   | 44     | 41     | 37.5             | 500          | F463RO564(1)2K0(2) |
| 2000 | 700 | 0.68                   | RU        | 30                   | 45     | 41     | 37.5             | 500          | F463RU684(1)2K0(2) |
| 2000 | 700 | 0.82                   | RU        | 30                   | 45     | 41     | 37.5             | 500          | F463RU824(1)2K0(2) |
| 2500 | 900 | 0.001                  | BB        | 4                    | 10     | 18     | 15               | 4,500        | F464BB102(1)2K5(2) |
| 2500 | 900 | 0.0012                 | BB        | 4                    | 10     | 18     | 15               | 4,500        | F464BB122(1)2K5(2) |
| VDC  | VAC | Capacitance Value (μF) | Size Code | T (mm)               | H (mm) | L (mm) | Lead Spacing (S) | dV/dt (V/μs) | Part Number        |

(1) J = 5%, K = 10%

(2) Insert lead and packaging code. See Ordering Options Table for available options.

(3) K = ±10% (only available tolerance).

**Table 1 – Ratings & Part Number Reference cont.**

| VDC  | VAC | Capacitance Value (µF) | Size Code | Max Dimensions in mm |        |        | Lead Spacing (S) | dV/dt (V/µs) | Part Number        |
|------|-----|------------------------|-----------|----------------------|--------|--------|------------------|--------------|--------------------|
|      |     |                        |           | T                    | H      | L      |                  |              |                    |
| 2500 | 900 | 0.0015                 | BB        | 4                    | 10     | 18     | 15               | 4,500        | F464BB152(1)2K5(2) |
| 2500 | 900 | 0.0018                 | BB        | 4                    | 10     | 18     | 15               | 4,500        | F464BB182(1)2K5(2) |
| 2500 | 900 | 0.0022                 | BB        | 4                    | 10     | 18     | 15               | 4,500        | F464BB222(1)2K5(2) |
| 2500 | 900 | 0.0027                 | BC        | 5                    | 11     | 18     | 15               | 4,500        | F464BC272(1)2K5(2) |
| 2500 | 900 | 0.0033                 | BC        | 5                    | 11     | 18     | 15               | 4,500        | F464BC332(1)2K5(2) |
| 2500 | 900 | 0.0039                 | BE        | 5.5                  | 12.5   | 18     | 15               | 4,500        | F464BE392(1)2K5(2) |
| 2500 | 900 | 0.0047                 | BE        | 5.5                  | 12.5   | 18     | 15               | 4,500        | F464BE472(1)2K5(2) |
| 2500 | 900 | 0.0056                 | BK        | 7.5                  | 13.5   | 18     | 15               | 4,500        | F464BK562(1)2K5(2) |
| 2500 | 900 | 0.0068                 | BK        | 7.5                  | 13.5   | 18     | 15               | 4,500        | F464BK682(1)2K5(2) |
| 2500 | 900 | 0.0082                 | BK        | 7.5                  | 13.5   | 18     | 15               | 4,500        | F464BK822(1)2K5(2) |
| 2500 | 900 | 0.01                   | BP        | 8.5                  | 14.5   | 18     | 15               | 4,500        | F464BP103(1)2K5(2) |
| 2500 | 900 | 0.012                  | BS        | 10                   | 16     | 18     | 15               | 4,500        | F464BS123(1)2K5(2) |
| 2500 | 900 | 0.015                  | BS        | 10                   | 16     | 18     | 15               | 4,500        | F464BS153(1)2K5(2) |
| 2500 | 900 | 0.018                  | BY        | 11                   | 19     | 18     | 15               | 4,500        | F464BY183(1)2K5(2) |
| 2500 | 900 | 0.022                  | BY        | 11                   | 19     | 18     | 15               | 4,500        | F464BY223(1)2K5(2) |
| 2500 | 900 | 0.0047                 | DB        | 6                    | 14.5   | 26     | 22.5             | 2,500        | F464DB472(1)2K5(2) |
| 2500 | 900 | 0.0056                 | DB        | 6                    | 14.5   | 26     | 22.5             | 2,500        | F464DB562(1)2K5(2) |
| 2500 | 900 | 0.0068                 | DB        | 6                    | 14.5   | 26     | 22.5             | 2,500        | F464DB682(1)2K5(2) |
| 2500 | 900 | 0.0082                 | DB        | 6                    | 14.5   | 26     | 22.5             | 2,500        | F464DB822(1)2K5(2) |
| 2500 | 900 | 0.01                   | DI        | 7                    | 16     | 26     | 22.5             | 2,500        | F464DI103(1)2K5(2) |
| 2500 | 900 | 0.012                  | DI        | 7                    | 16     | 26     | 22.5             | 2,500        | F464DI123(1)2K5(2) |
| 2500 | 900 | 0.015                  | DJ        | 8.5                  | 17     | 26     | 22.5             | 2,500        | F464DJ153(1)2K5(2) |
| 2500 | 900 | 0.018                  | DM        | 9                    | 18.5   | 26     | 22.5             | 2,500        | F464DM183(1)2K5(2) |
| 2500 | 900 | 0.022                  | DO        | 10                   | 18.5   | 26     | 22.5             | 2,500        | F464DO223(1)2K5(2) |
| 2500 | 900 | 0.027                  | DP        | 11                   | 20     | 26     | 22.5             | 2,500        | F464DP273(1)2K5(2) |
| 2500 | 900 | 0.033                  | DU        | 13                   | 22     | 26     | 22.5             | 2,500        | F464DU333(1)2K5(2) |
| 2500 | 900 | 0.039                  | DY        | 15.5                 | 24.5   | 26     | 22.5             | 2,500        | F464DY393(1)2K5(2) |
| 2500 | 900 | 0.047                  | DY        | 15.5                 | 24.5   | 26     | 22.5             | 2,500        | F464DY473(1)2K5(2) |
| 2500 | 900 | 0.056                  | DY        | 15.5                 | 24.5   | 26     | 22.5             | 2,500        | F464DY563(1)2K5(2) |
| 2500 | 900 | 0.015                  | FB        | 9                    | 17     | 31.5   | 27.5             | 1,500        | F464FB153(1)2K5(2) |
| 2500 | 900 | 0.018                  | FB        | 9                    | 17     | 31.5   | 27.5             | 1,500        | F464FB183(1)2K5(2) |
| 2500 | 900 | 0.022                  | FB        | 9                    | 17     | 31.5   | 27.5             | 1,500        | F464FB223(1)2K5(2) |
| 2500 | 900 | 0.027                  | FB        | 9                    | 17     | 31.5   | 27.5             | 1,500        | F464FB273(1)2K5(2) |
| 2500 | 900 | 0.033                  | FC        | 11                   | 20     | 31.5   | 27.5             | 1,500        | F464FC333(1)2K5(2) |
| 2500 | 900 | 0.039                  | FC        | 11                   | 20     | 31.5   | 27.5             | 1,500        | F464FC393(1)2K5(2) |
| 2500 | 900 | 0.047                  | FI        | 13                   | 25     | 31.5   | 27.5             | 1,500        | F464FI473(1)2K5(2) |
| 2500 | 900 | 0.056                  | FI        | 13                   | 25     | 31.5   | 27.5             | 1,500        | F464FI563(1)2K5(2) |
| 2500 | 900 | 0.068                  | FI        | 13                   | 25     | 31.5   | 27.5             | 1,500        | F464FI683(1)2K5(2) |
| 2500 | 900 | 0.082                  | FN        | 14                   | 28     | 31.5   | 27.5             | 1,500        | F464FN823(1)2K5(2) |
| 2500 | 900 | 0.1                    | FR        | 17.5                 | 28     | 31.5   | 27.5             | 1,500        | F464FR104(1)2K5(2) |
| 2500 | 900 | 0.12                   | FS        | 19                   | 29     | 31.5   | 27.5             | 1,500        | F464FS124(1)2K5(2) |
| 2500 | 900 | 0.15                   | FY        | 22                   | 37     | 31.5   | 27.5             | 1,500        | F464FY154(1)2K5(2) |
| 2500 | 900 | 0.18                   | FY        | 22                   | 37     | 31.5   | 27.5             | 1,500        | F464FY184(1)2K5(2) |
| 2500 | 900 | 0.047                  | RB        | 11                   | 22     | 41     | 37.5             | 900          | F464RB473(1)2K5(2) |
| 2500 | 900 | 0.056                  | RB        | 11                   | 22     | 41     | 37.5             | 900          | F464RB563(1)2K5(2) |
| 2500 | 900 | 0.068                  | RB        | 11                   | 22     | 41     | 37.5             | 900          | F464RB683(1)2K5(2) |
| 2500 | 900 | 0.082                  | RF        | 13                   | 24     | 41     | 37.5             | 900          | F464RF823(1)2K5(2) |
| 2500 | 900 | 0.1                    | RF        | 13                   | 24     | 41     | 37.5             | 900          | F464RF104(1)2K5(2) |
| 2500 | 900 | 0.12                   | RH        | 15                   | 26     | 41     | 37.5             | 900          | F464RH124(1)2K5(2) |
| 2500 | 900 | 0.15                   | RC        | 16                   | 28.5   | 41     | 37.5             | 900          | F464RC154(1)2K5(2) |
| 2500 | 900 | 0.18                   | RD        | 19                   | 32     | 41     | 37.5             | 900          | F464RD184(1)2K5(2) |
| 2500 | 900 | 0.22                   | RD        | 19                   | 32     | 41     | 37.5             | 900          | F464RD224(1)2K5(2) |
| 2500 | 900 | 0.27                   | RP        | 21                   | 38     | 41     | 37.5             | 900          | F464RP274(1)2K5(2) |
| 2500 | 900 | 0.33                   | RO        | 24                   | 44     | 41     | 37.5             | 900          | F464RO334(1)2K5(2) |
| 2500 | 900 | 0.39                   | RO        | 24                   | 44     | 41     | 37.5             | 900          | F464RO394(1)2K5(2) |
| 2500 | 900 | 0.47                   | RU        | 30                   | 45     | 41     | 37.5             | 900          | F464RU474(1)2K5(2) |
| 2500 | 900 | 0.56                   | RU        | 30                   | 45     | 41     | 37.5             | 900          | F464RU564(1)2K5(2) |
| VDC  | VAC | Capacitance Value (µF) | Size Code | T (mm)               | H (mm) | L (mm) | Lead Spacing (S) | dV/dt (V/µs) | Part Number        |

(1) J = 5%, K = 10%

(2) Insert lead and packaging code. See Ordering Options Table for available options.

(3) K = ±10% (only available tolerance).

## Soldering Process

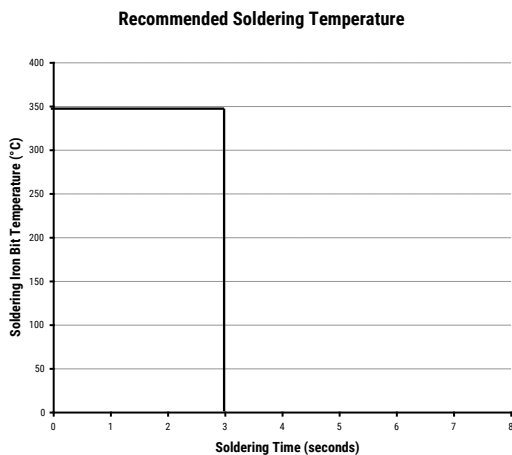
The implementation of the RoHS directive has resulted in the selection of SnAgCu (SAC) alloys or SnCu alloys as primary solder. This has increased the liquidus temperature from that of 183°C for SnPb eutectic alloy to 217 – 221°C for the new alloys. As a result, the heat stress to the components, even in wave soldering, has increased considerably due to higher pre-heat and wave temperatures. Polypropylene capacitors are especially sensitive to heat (the melting point of polypropylene is 160 – 170°C). Wave soldering can be destructive, especially for mechanically small polypropylene capacitors (with lead spacing of 5 – 15 mm), and great care has to be taken during soldering. The recommended solder profiles from KEMET should be used. Please consult KEMET with any questions. In general, the wave soldering curve from IEC Publication 61760–1 Edition 2 serves as a solid guideline for successful soldering. Please see Figure 1.

Reflow soldering is not recommended for through-hole film capacitors. Exposing capacitors to a soldering profile in excess of the above the recommended limits may result to degradation or permanent damage to the capacitors.

Do not place the polypropylene capacitor through an adhesive curing oven to cure resin for surface mount components. Insert through-hole parts after the curing of surface mount parts. Consult KEMET to discuss the actual temperature profile in the oven, if through-hole components must pass through the adhesive curing process. A maximum two soldering cycles is recommended. Please allow time for the capacitor surface temperature to return to a normal temperature before the second soldering cycle.

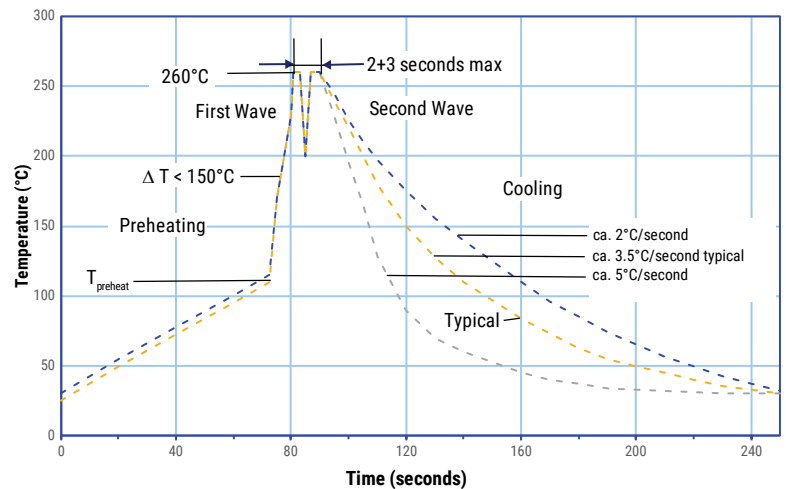
### Manual Soldering Recommendations

Following is the recommendation for manual soldering with a soldering iron.



The soldering iron tip temperature should be set at 350°C (+10°C maximum) with the soldering duration not to exceed more than 3 seconds.

### Wave Soldering Recommendations



## Soldering Process cont.

### Wave Soldering Recommendations cont.

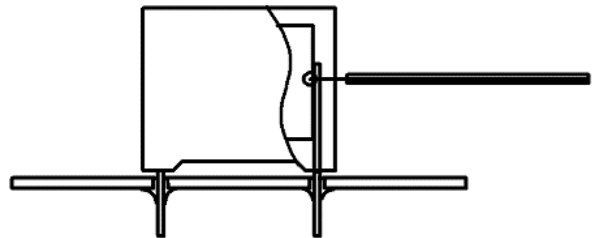
1. The table indicates the maximum set-up temperature of the soldering process  
Figure 1

| Dielectric Film Material | Maximum Preheat Temperature |                         |                         | Maximum Peak Soldering Temperature |                         |
|--------------------------|-----------------------------|-------------------------|-------------------------|------------------------------------|-------------------------|
|                          | Capacitor Pitch ≤ 10 mm     | Capacitor Pitch = 15 mm | Capacitor Pitch > 15 mm | Capacitor Pitch ≤ 15 mm            | Capacitor Pitch > 15 mm |
| Polyester                | 130°C                       | 130°C                   | 130°C                   | 270°C                              | 270°C                   |
| Polypropylene            | 100°C                       | 110°C                   | 130°C                   | 260°C                              | 270°C                   |
| Paper                    | 130°C                       | 130°C                   | 140°C                   | 270°C                              | 270°C                   |
| Polyphenylene Sulphide   | 150°C                       | 150°C                   | 160°C                   | 270°C                              | 270°C                   |

2. The maximum temperature measured inside the capacitor:  
Set the temperature so that inside the element the maximum temperature is below the limit:

| Dielectric Film Material | Maximum temperature measured inside the element |
|--------------------------|-------------------------------------------------|
| Polyester                | 160°C                                           |
| Polypropylene            | 110°C                                           |
| Paper                    | 160°C                                           |
| Polyphenylene Sulphide   | 160°C                                           |

*Temperature monitored inside the capacitor.*

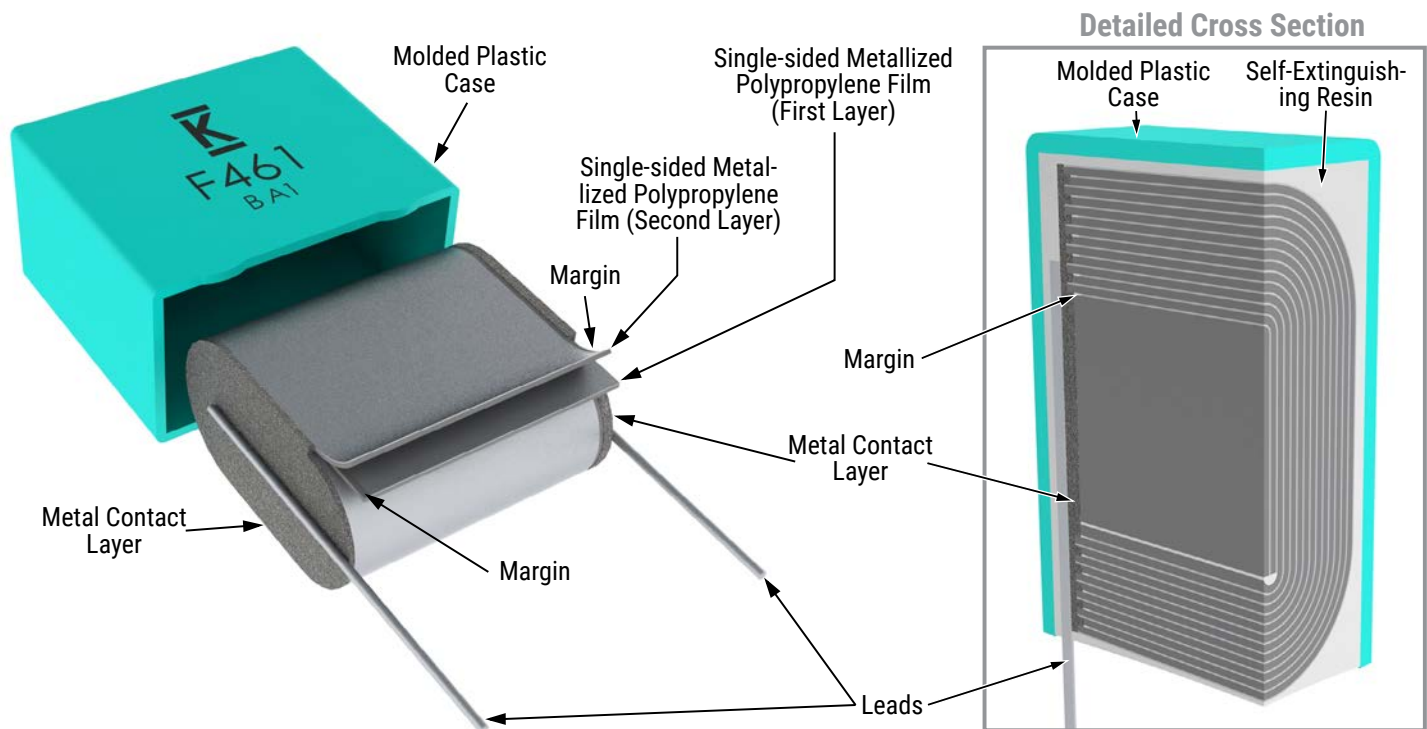


### Selective Soldering Recommendations

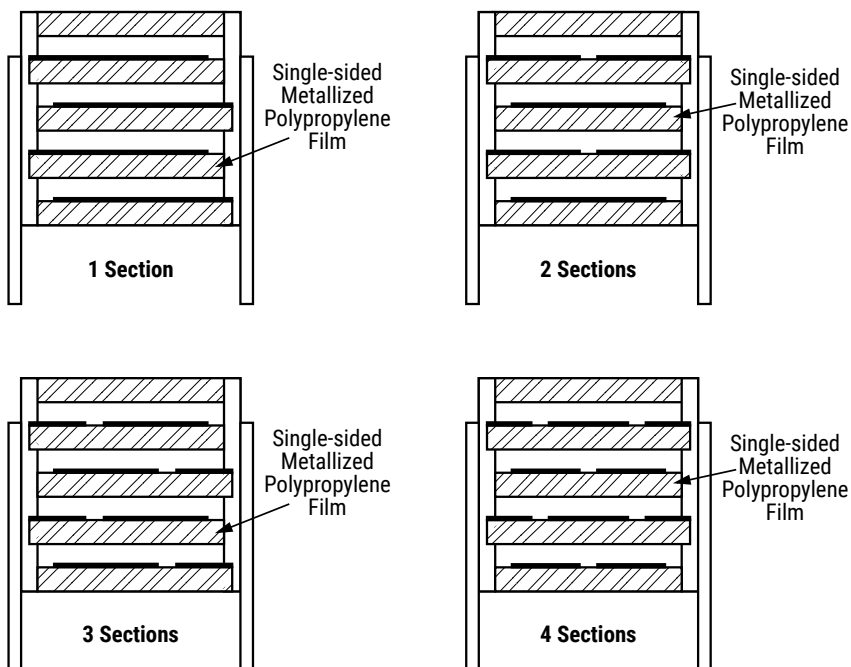
Selective dip soldering is a variation of reflow soldering. In this method, the printed circuit board with through-hole components to be soldered is preheated and transported over the solder bath as in normal flow soldering without touching the solder. When the board is over the bath, it is stopped and pre-designed solder pots are lifted from the bath with molten solder only at the places of the selected components, and pressed against the lower surface of the board to solder the components.

The temperature profile for selective soldering is similar to the double wave flow soldering outlined in this document, **however, instead of two baths, there is only one bath with a time from 3 to 10 seconds.** In selective soldering, the risk of overheating is greater than in double wave flow soldering, and great care must be taken so that the parts are not overheated.

## Construction

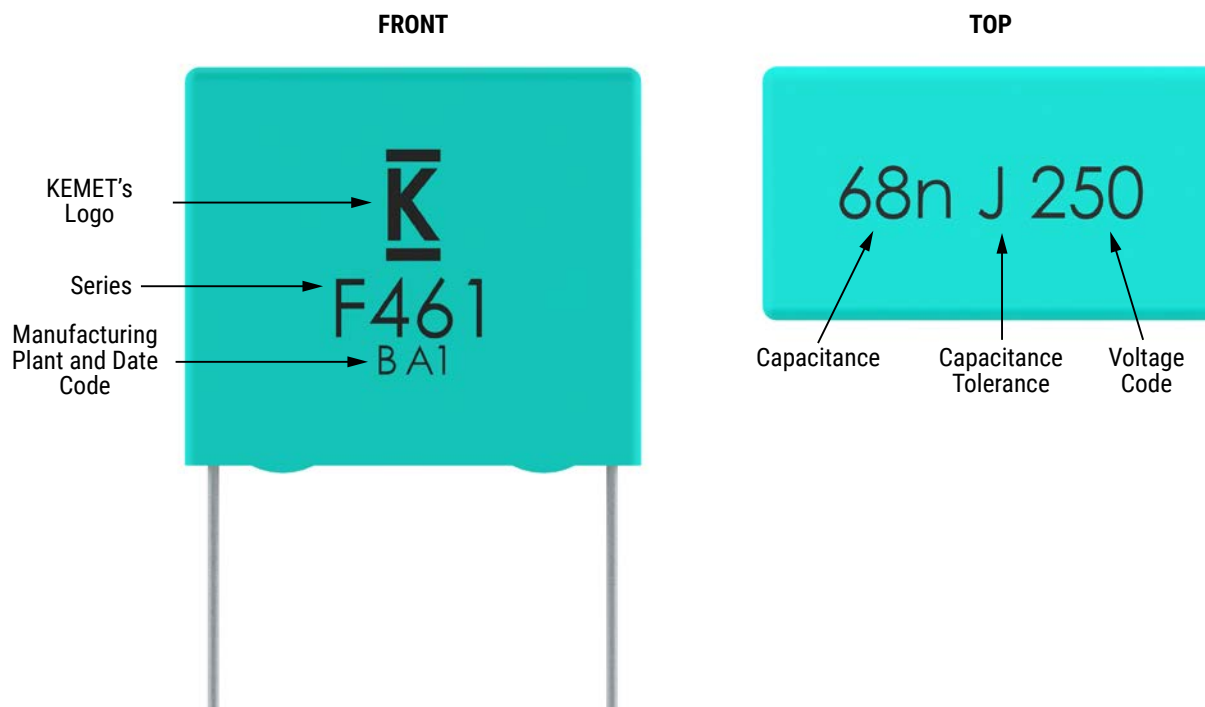


## Winding Schemes

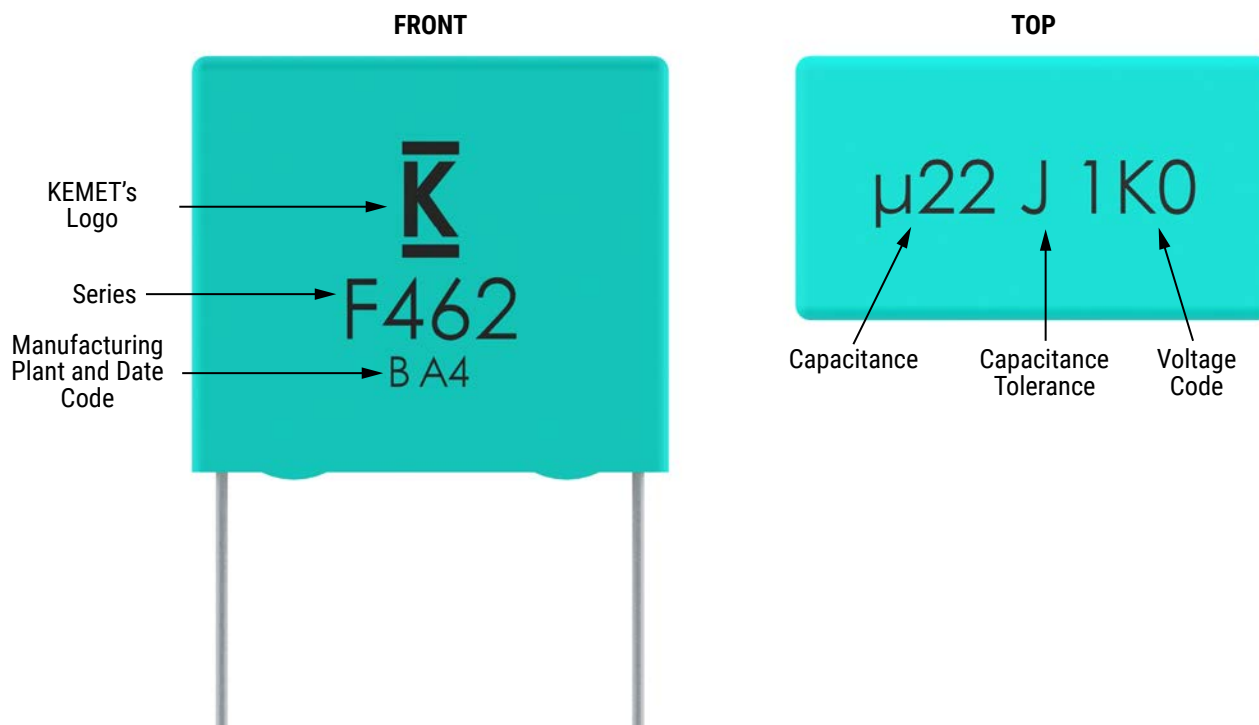


## Marking

F461

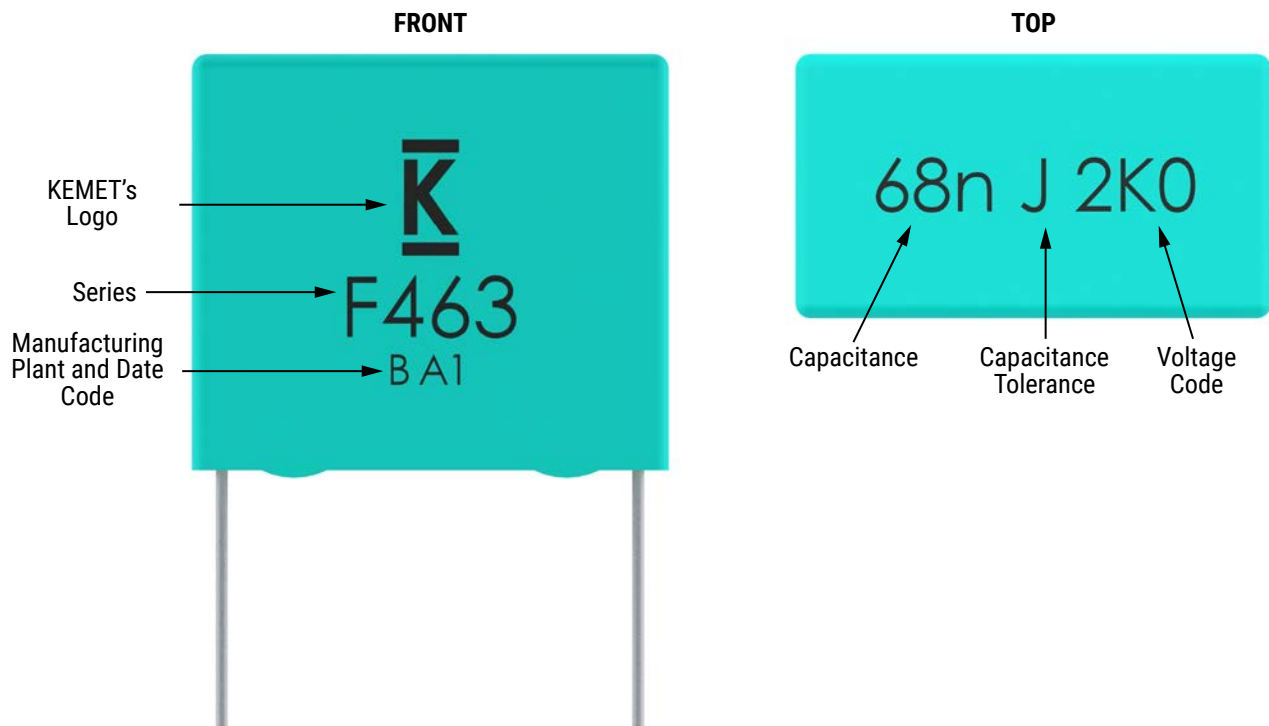


F462

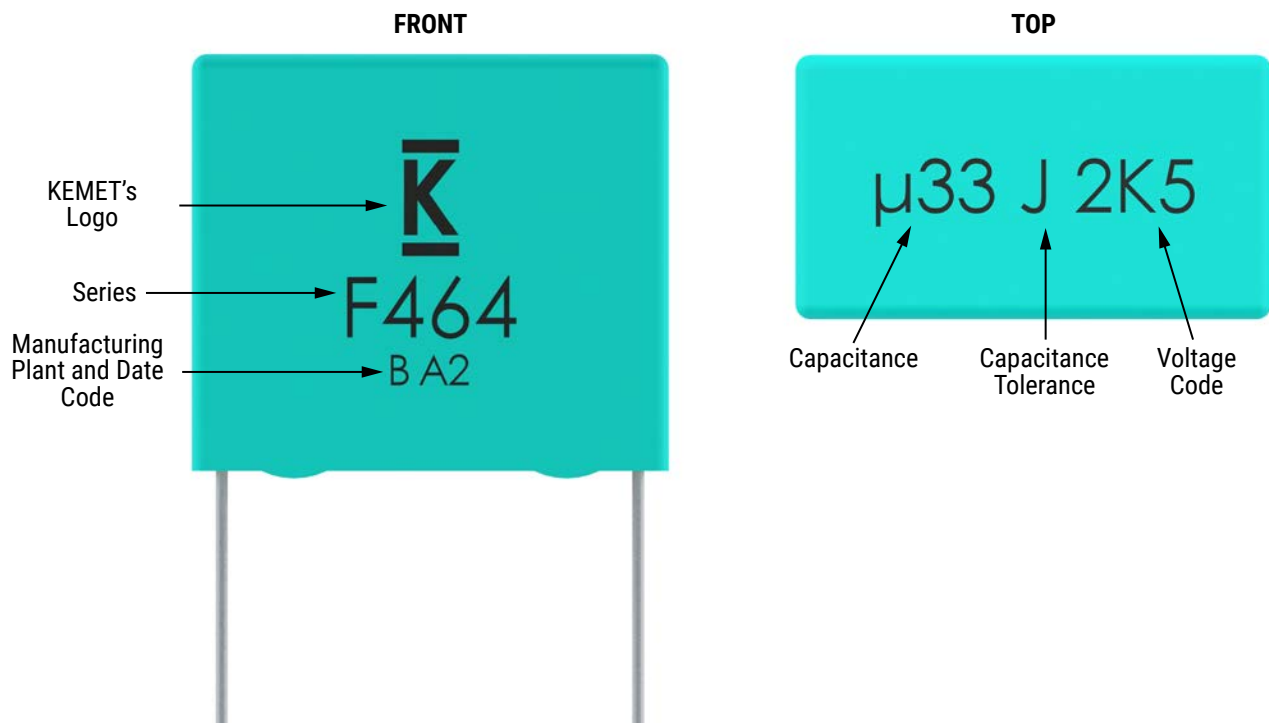


## Marking cont.

F463



F464



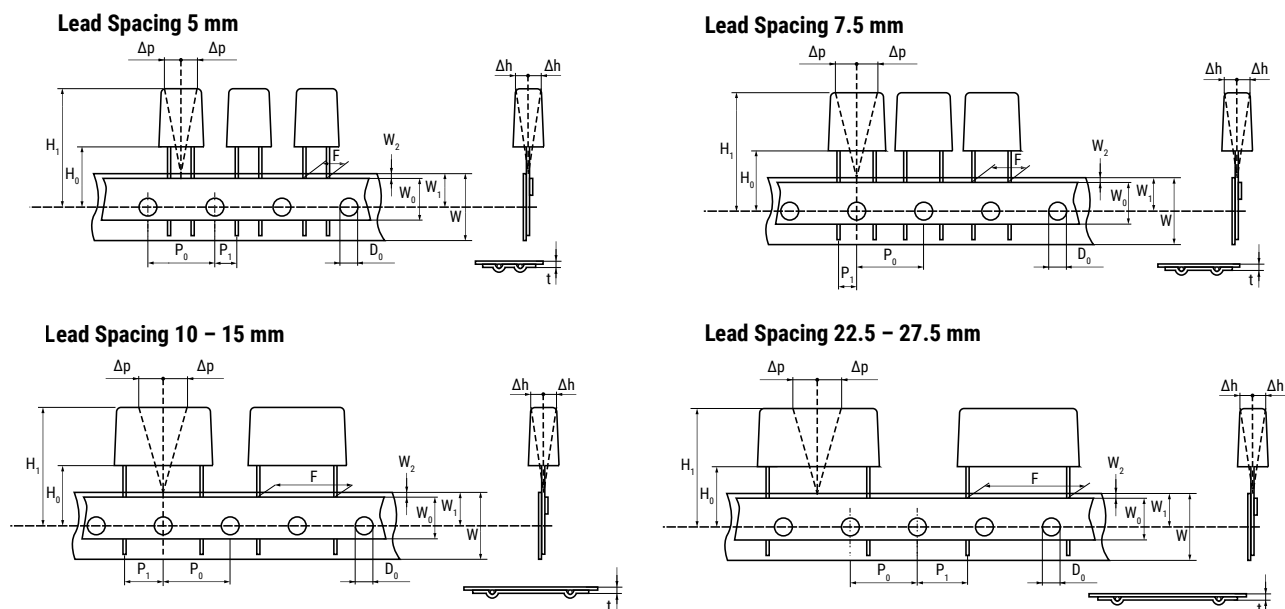
## Packaging Quantities

| Size Code | Lead Spacing | Thickness (mm) | Height (mm) | Length (mm) | Bulk Short Leads | Bulk Long Leads | Standard Reel<br>ø 355 mm | Large Reel<br>ø 500 mm | Ammo  | Pizza |
|-----------|--------------|----------------|-------------|-------------|------------------|-----------------|---------------------------|------------------------|-------|-------|
| JF        | 5            | 2.5            | 6.5         | 7.2         | 3,000            | 4,000           | 2,500                     |                        | 3,500 |       |
| JG        |              | 3.5            | 7.5         | 7.2         | 2,000            | 3,000           | 1,800                     |                        | 2,500 |       |
| JM        |              | 4.5            | 9.5         | 7.2         | 1,500            | 2,000           | 1,400                     |                        | 1,900 |       |
| JQ        |              | 5.0            | 10.0        | 7.2         | 1,000            | 1,500           | 1,200                     |                        | 1,700 |       |
| JT        |              | 6              | 11          | 7.2         | 2,000            | 1,000           | 1,000                     |                        | 1,400 |       |
| JU        |              | 7.2            | 13          | 7.2         | 1,500            | 750             | 800                       |                        | 1,150 |       |
| KE        | 7.5          | 2.5            | 6           | 10          | 2,000            | 3,000           | 2,500                     |                        | 3,500 |       |
| KF        |              | 3              | 8           | 10          | 1,500            | 1,750           | 2,100                     |                        | 2,800 |       |
| KG        |              | 4              | 8           | 10          | 2,000            | 1,500           | 1,500                     |                        | 2,100 |       |
| KJ        |              | 5              | 10.5        | 10          | 1,500            | 1,000           | 1,200                     |                        | 1,600 |       |
| KM        |              | 6              | 12          | 10.5        | 1,000            | 800             | 1,000                     |                        | 1,350 |       |
| KH        |              | 4              | 9           | 10          | 2,000            | 1,500           | 1,500                     |                        | 2,100 |       |
| AN        | 10           | 3.5            | 9           | 13          | 2,200            | 3,200           | 850                       | 1,700                  | 1,150 |       |
| AG        |              | 4              | 9           | 13          | 2,000            | 2,200           | 750                       | 1,500                  | 1,000 |       |
| AK        |              | 5              | 11          | 13          | 1,300            | 2,000           | 600                       | 1,250                  | 800   |       |
| AP        |              | 6              | 12          | 13          | 1,000            | 1,800           | 500                       | 1,000                  | 680   |       |
| AO        |              | 7              | 17          | 13          | 600              | 900             | 450                       | 900                    | 580   |       |
| AL        |              | 9.5            | 7.5         | 13          | 1,100            | 2,000           | 300                       | 600                    | 430   |       |
| AE        |              | 4              | 8           | 13          | 2,000            | 2,200           | 750                       | 1,500                  | 1,000 |       |
| BB        | 15           | 4              | 10          | 18          | 1,300            | 1,500           | 750                       | 1,500                  | 1,000 | 1,411 |
| BC        |              | 5              | 11          | 18          | 1,000            | 1,250           | 600                       | 1,250                  | 800   | 1,139 |
| BE        |              | 5.5            | 12.5        | 18          | 800              | 1,100           | 550                       | 1,100                  | 750   | 1,020 |
| BG        |              | 6              | 12          | 18          | 1,750            | 1,000           | 500                       | 1,000                  | 680   | 935   |
| BK        |              | 7.5            | 13.5        | 18          | 1,000            | 800             | 350                       | 800                    | 500   | 748   |
| BI        |              | 6              | 17.5        | 18          | 1,000            | 800             | 500                       | 1,000                  | 680   | 935   |
| BP        |              | 8.5            | 14.5        | 18          | 1,000            | 650             | 300                       | 700                    | 440   | 663   |
| BT        |              | 9              | 12.5        | 18          | 1,000            | 700             | 270                       | 650                    | 410   | 629   |
| BO        |              | 7.5            | 18.5        | 18          | 900              | 600             | 350                       | 800                    | 500   | 748   |
| BS        |              | 10             | 16          | 18          | 750              | 550             | 300                       | 600                    | 380   | 561   |
| BR        |              | 13             | 12          | 18          | 750              | 520             | 200                       | 480                    | 280   | 425   |
| BY        |              | 11             | 19          | 18          | 450              | 400             | 250                       | 500                    | 340   | 510   |
| BA        |              | 8.5            | 12.5        | 18          | 1,000            | 650             | 300                       | 700                    | 440   | 663   |
| BZ        |              | 12             | 20          | 18          | 350              | 300             | 220                       | 450                    | 330   | 459   |

## Packaging Quantities cont.

| Size Code | Lead Spacing | Thickness (mm) | Height (mm) | Length (mm) | Bulk Short Leads | Bulk Long Leads | Standard Reel<br>ø 355 mm | Large Reel<br>ø 500 mm | Ammo | Pizza |
|-----------|--------------|----------------|-------------|-------------|------------------|-----------------|---------------------------|------------------------|------|-------|
| DB        | 22.5         | 6              | 14.5        | 26          | 1,638            | 702             | 300                       | 700                    | 464  | 660   |
| DI        |              | 7              | 16          | 26          | 1,188            | 594             | 250                       | 550                    | 380  | 564   |
| DH        |              | 8.0            | 16.0        | 26          | 1,026            | 513             | 240                       | 500                    | 330  | 492   |
| DJ        |              | 8.5            | 17          | 26          | 972              | 486             | 250                       | 450                    | 280  | 468   |
| DM        |              | 9              | 18.5        | 26          | 918              | 459             | 200                       | 400                    | 300  | 444   |
| DO        |              | 10             | 18.5        | 26          | 810              | 405             | 160                       | 350                    | 235  | 396   |
| DP        |              | 11             | 20          | 26          | 756              | 378             | 190                       | 350                    | 217  | 360   |
| DU        |              | 13             | 22          | 26          | 540              | 324             | 150                       | 300                    | 200  | 300   |
| DY        |              | 15.5           | 24.5        | 26          | 450              | 270             | 120                       | 250                    | 170  | 252   |
| FB        | 27.5         | 9.0            | 17.0        | 31.5        | 816              | 408             |                           |                        |      | 370   |
| FC        |              | 11.0           | 20.0        | 31.5        | 672              | 336             |                           |                        |      | 300   |
| FI        |              | 13.0           | 25.0        | 31.5        | 480              | 288             |                           |                        |      | 250   |
| FN        |              | 14.0           | 28.0        | 31.5        | 352              | 176             |                           |                        |      | 230   |
| FO        |              | 17.0           | 40.0        | 31.5        | 216              | 144             |                           |                        |      | 190   |
| FR        |              | 17.5           | 28.0        | 31.5        | 256              | 128             |                           |                        |      | 190   |
| FS        |              | 19.0           | 29.0        | 31.5        | 256              | 128             |                           |                        |      | 170   |
| FY        |              | 22.0           | 37.0        | 31.5        | 168              | 112             |                           |                        |      | 150   |
| FH        |              | 21.0           | 12.5        | 31.5        | 392              | 168             |                           |                        |      | 150   |
| FQ        |              | 27.5           | 16.0        | 31.5        | 280              | 120             |                           |                        |      | 120   |
| FT        |              | 31.0           | 19.0        | 31.5        | 240              | 120             |                           |                        |      | 100   |
| RB        | 37.5         | 11.0           | 22.0        | 41.0        | 420              | 252             |                           |                        |      | 210   |
| RF        |              | 13.0           | 24.0        | 41.0        | 360              | 216             |                           |                        |      | 175   |
| RH        |              | 15.0           | 26.0        | 41.0        | 300              | 180             |                           |                        |      | 154   |
| RC        |              | 16.0           | 28.5        | 41.0        | 216              | 108             |                           |                        |      | 140   |
| RD        |              | 19.0           | 32.0        | 41.0        | 192              | 96              |                           |                        |      | 119   |
| RP        |              | 21.0           | 38.0        | 41.0        | 126              | 84              |                           |                        |      | 105   |
| RO        |              | 24.0           | 44.0        | 41.0        | 108              | 72              |                           |                        |      | 91    |
| RU        |              | 30.0           | 45.0        | 41.0        | 90               | 60              |                           |                        |      | 77    |
| RV        |              | 24.0           | 15.0        | 41.0        | 252              | 108             |                           |                        |      | 91    |
| RW        |              | 24.0           | 19.0        | 41.0        | 216              | 108             |                           |                        |      | 91    |

## Lead Taping & Packaging (IEC 60286-2)



## Taping Specification

| Dimensions in mm          |                     |                               |                      |                      |                      |                      |                      |                      | Standard IEC 60286-2    |
|---------------------------|---------------------|-------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-------------------------|
| Lead Spacing              | +0.6/-0.1           | F                             | 5                    | 7.5                  | 10                   | 15                   | 22.5                 | 27.5                 | F                       |
| Carrier Tape Width        | +1/-0.5             | W                             | 18                   | 18                   | 18                   | 18                   | 18                   | 18                   | 18 <sup>+1/-0.5</sup>   |
| Hold-down Tape Width      | Minimum             | W <sub>0</sub>                | 6                    | 6                    | 9                    | 10                   | 10                   | 10                   |                         |
| Position of Sprocket Hole | ±0.5                | W <sub>1</sub>                | 9                    | 9                    | 9                    | 9                    | 9                    | 9                    | 9 <sup>+0.75/-0.5</sup> |
| Distance Between Tapes    | Maximum             | W <sub>2</sub>                | 3                    | 3                    | 3                    | 3                    | 3                    | 3                    | 3                       |
| Sprocket Hole Diameter    | ±0.2                | D <sub>0</sub>                | 4                    | 4                    | 4                    | 4                    | 4                    | 4                    | 4                       |
| Feed Hole Lead Spacing    | ±0.2 <sup>(1)</sup> | P <sub>0</sub> <sup>(3)</sup> | 12.7                 | 12.7                 | 12.7                 | 12.7                 | 12.7                 | 12.7                 | 12.7                    |
| Distance Lead – Feed Hole | ±0.7                | P <sub>1</sub>                | 3.85                 | 3.75                 | 7.7                  | 5.2                  | 7.8                  | 5.3                  | P <sup>1</sup>          |
| Deviation Tape – Plane    | Maximum             | Δp                            | 1.3                  | 1.3                  | 1.3                  | 1.3                  | 1.3                  | 1.3                  | 1.3                     |
| Lateral Deviation         | ±2                  | Δh                            | 2                    | 2                    | 2                    | 2                    | 2                    | 2                    | 2                       |
| Total Thickness           | ±0.2                | t                             | 0.7                  | 0.7                  | 0.7                  | 0.7                  | 0.9 <sup>MAX</sup>   | 0.9 <sup>MAX</sup>   | 0.9 <sup>MAX</sup>      |
| Sprocket Hole/Cap Body    | ±0.5                | H <sub>0</sub> <sup>(2)</sup> | 18.5 <sup>±0.5</sup> | 18.5 <sup>±0.5</sup> | 18.5 <sup>±0.5</sup> | 18.5 <sup>±0.5</sup> | 18.5 <sup>±0.5</sup> | 18.5 <sup>±0.5</sup> | 18 <sup>+2/-0</sup>     |

(1) Maximum cumulative feed hole error, 1 mm per 20 parts.

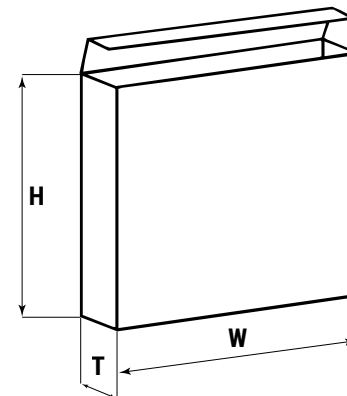
(2) 16.5 mm available on request.

(3) 15 mm available on request (F ≥ 10 mm).

## Lead Taping & Packaging (IEC 60286–2) cont.

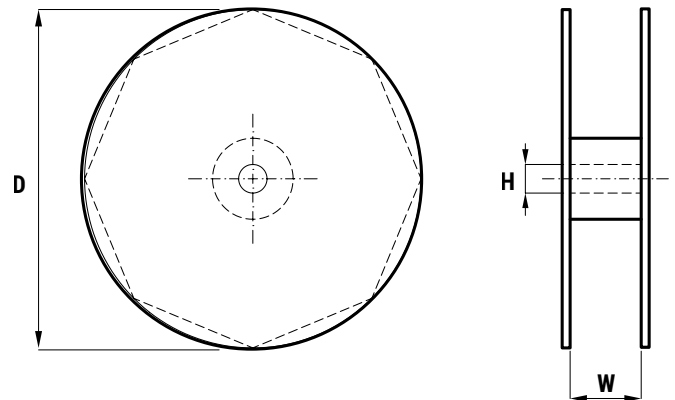
### Ammo Specifications

| Series                 | Dimensions (mm) |     |    |
|------------------------|-----------------|-----|----|
|                        | H               | W   | T  |
| R4x, R4x+R, R7x, RSB   | 360             | 340 | 59 |
| F5A, F5B, F5D          |                 |     |    |
| F6xx, F8xx             |                 |     |    |
| PHExxx, PMExxx, PMRxxx | 330             | 330 | 50 |



### Reel Specifications

| Series                 | Dimensions (mm) |    |                 |
|------------------------|-----------------|----|-----------------|
|                        | D               | H  | W               |
| R4x, R4x+R, R7x, RSB   | 355<br>500      | 30 | 55              |
| F5A, F5B, F5D          |                 | 25 | (maximum)       |
| F6xx, F8xx             |                 |    |                 |
| PHExxx, PMExxx, PMRxxx | 360<br>500      | 30 | 46<br>(maximum) |



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