

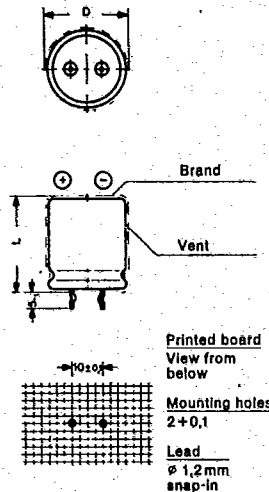


## High-Capacitive Electrolytic Capacitors with Solder Pins, Insulated, Polarized, Etched Electrodes, Pulse-Proof

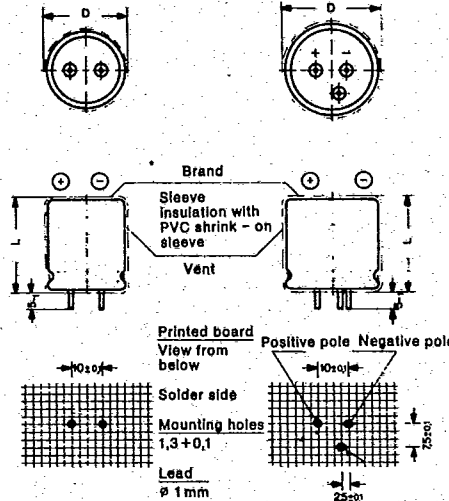
**EYF 00**  
**EYF 06**

The EYF type belongs to the high-capacitive electrolytic capacitors that are noted for the small design, wide temperature range, high operational reliability and constancy of the electric values. This type has been especially developed for equipment of the entertainment and industrial electronics (switch-mode power supplies), the concept of which allows only very small capacitor dimensions.

**EYF 06**  
D - 25 - 30 - 35



**EYF 00**  
D - 25



**EYF 00**  
D - 30 - 35

\* (Full insulation possible on request)

**Mechanical design:**

Cylindrical aluminium case with excess pressure relief, sleeve insulation, radial leads with ∅ 1 or 1.2 mm. EYF ∅ 25-2 leads, ∅ 30 and 35-3 leads, ∅ 1 mm. EYF 06 ∅ 25/30 and 35-2 leads, snap-in, leads with ∅ 1.2 mm. Mounting holes: 2 mm

**Technical specifications:**

**Electric values:**

DIN 41332, type II A

**Generic specifications:**

DIN 45910 (≅ CECC 30.000) however, without quality certificate

**Sectional specifications:**

The electric values and test criteria comply with DIN 45910 part 12 and CECC 30.300, however, without quality certificate IEC 384-4 („long life grade“)

**Climatic category:**

40 / 085 / 56 (type I)

**Operating temperature range:**

-40 ... 85°C (105°C)

**Application class:**

in acc. with DIN 40040, GPF

**Capacitance tolerance:**

-10 ... 30 % of the rated value (± 20 % on request)

**Service life:**

**for  $U_R \leq 100$  V:**  
min. 100,000 h at  $\leq 40^\circ\text{C}$   
min. 4,000 h at  $85^\circ\text{C}$   
min. 1,000 h at  $105^\circ\text{C}$

**for  $U_R > 100$  V:**  
min. 100,000 h at  $\leq 40^\circ\text{C}$   
min. 15,000 h at  $70^\circ\text{C}$   
min. 2,000 h at  $85^\circ\text{C}$   
min. 500 h at  $105^\circ\text{C}$

For reference reliability and service life, see also "General Information".

**Table of dimensions:**  
(insulation included)

Nominal cap. dim. (mm)	D max.(mm)	L max.(mm)
25 x 25	25.5	25.5
25 x 35	25.5	35.5
25 x 40	25.5	40.5
25 x 50	25.5	50.5
30 x 25	30.5	27
30 x 30	30.5	32
30 x 40	30.5	42
30 x 50	30.5	52
35 x 30	35.5	32
35 x 40	35.5	42
35 x 50	35.5	52

## High-Capacitive Electrolytic Capacitors with Solder Pins, Insulated, Polarized, Etched Electrodes, Pulse-Proof

EYF 00  
EYF 06

### Leakage current:

$$I_{ra} \leq 0.002 \cdot C_R \cdot U_R + 3 \mu A$$

(C in  $\mu F$ , U in V) for  $\leq 100$  V

$$I_{ra} \leq 0.015 \cdot C_R \cdot U_R + 10 \mu A$$

(C in  $\mu F$ , U in V) for  $> 100$  V

measured at  $U_R$  and  $20^\circ C$  after 5 min.

For leakage current, see also "General Information".

### Vibration:

DIN 40046, sheet 8, section 2, FC test, oscillation (sine-shaped), (5 g for EYF 06 style –  $L \geq 40$  mm).

### Dielectric strength of insulation:

$\geq 1000$  VDC

### Peak voltage:

$1.15 \cdot U_R$  for  $\leq 250$  VDC

$1.10 \cdot U_R$  for  $\geq 350$  VDC

### Overview of dimensions (max. dimensions, sleeve insulation included) mm

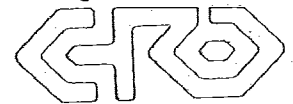
Rated cap. ( $\mu$ )	Rated voltage (VDC)						
	16	25	35 (*40)	50	63	200 (*250)	385 (*400)
47							
100							25.5 x 25.5
220						25.5 x 25.5	25.5 x 40.5
330						25.5 x 40.5	30.5 x 52
470						30.5 x 27	
680						25.5 x 50.5	
1000						30.5 x 32	
2200						30.5 x 42	
3300						35.5 x 32	
4700						30.5 x 52	
6800							
10000							
15000							

Special values / dimensions on request.  $\varnothing 22$  (max. 22.5) in preparation.

\*  $U_R$  40 V / 100 V / 250 V / 400 V on request.



# Roederstein



## High-Capacitive Electrolytic Capacitors with Solder Pins, Insulated, Polarized, Etched Electrodes, Pulse-Proof

EYF 00  
EYF 06

Impedance in  $Z \Omega$  (limit values):<sup>1) 2)</sup>

(for  $U_R$  200 VDC / 385 VDC on request, for Z-10 kHz/20°C see table with individual values)

Capaci- tance ( $\mu$ )	Tempera- ture ( $^{\circ}$ C)	Rated voltage (VDC)										
		16		25		35		50		63		
		1 kHz	10 kHz	1 kHz	10 kHz	1 kHz	10 kHz	1 kHz	10 kHz	1 kHz	10 kHz	
1000	20										0.22	0.08
	-25										0.47	0.80
	-40										1.18	1.06
2200	20					0.11	0.04	0.11	0.04	0.11	0.04	
	-25					0.23	0.15	0.23	0.15	0.23	0.15	
	-40					0.56	0.50	0.56	0.50	0.56	0.50	
3300	20			0.08	0.04	0.07	0.03	0.07	0.03	0.07	0.03	
	-25			0.21	0.14	0.16	0.11	0.16	0.11	0.16	0.11	
	-40			0.53	0.48	0.40	0.36	0.40	0.36	0.40	0.36	
4700	20	0.07	0.05	0.06	0.03	0.06	<0.03	0.06	<0.03			
	-25	0.22	0.16	0.16	0.11	0.12	0.09	0.12	0.09			
	-40	0.55	0.50	0.40	0.36	0.30	0.27	0.30	0.27			
6800	20	0.05	0.03	<0.05	<0.03	<0.05	<0.03					
	-25	0.17	0.13	0.12	0.09	0.09	0.07					
	-40	0.42	0.39	0.30	0.27	0.20	0.18					
10000	20	<0.05	<0.03	<0.05	<0.03							
	-25	0.13	0.11	0.09	0.07							
	-40	0.32	0.29	0.23	0.21							
15000	20	<0.05	<0.03									
	-25	0.10	0.09									
	-40	0.25	0.23									

### Equivalent series resistance $R_{ESR}$ ( $\Omega$ ):

For limit values<sup>1)</sup> at 100 Hz and 20°C, see table with individual values.

### Dissipation factor $\tan \delta$ :

For limit values at 100 Hz and 20°C, see table with individual values.

<sup>1)</sup> The practically achievable series resistance and impedance are limited downwards by the ohmic share of the connections and the foil resistances. For this reason, calculated values below 0.03  $\Omega$  cannot be achieved in any case.

<sup>2)</sup> Due to the admissible C-tolerance, the given limit values may be exceeded by max. 10 %.

## High-Capacitive Electrolytic Capacitors with Solder Pins, Insulated, Polarized, Etched Electrodes, Pulse-Proof

EYF 00  
EYF 06

Technical specifications: (Individual values)

Rated capacitance ( $\mu\text{F}$ )	Rated voltage (VDC)	Dimensions D x L (mm) (nominal dimensions)	$\tan \delta$ (100 Hz; 20°C) (limit values)	ESR ( $\Omega$ ) (100 Hz; 20°C) (limit values 1)	Z ( $\Omega$ ) (10 kHz; 20°C) (limit values 1)	Admissible ripple current (mA/100 Hz; 85°C 2)	Weight (g)	Order no.
4700	16	25 x 25	0.25	0.085	0.05	1.65	18	EYF 06 AU 447 D 01
6800	16	30 x 25	0.25	0.059	0.04	2.15	25	EYF 06 BU 468 D 01
10000	16	25 x 40	0.25	0.040	<0.03	2.79	28	EYF 06 AB 510 D 01
10000	16	30 x 30	0.25	0.040	<0.03	2.76	30	EYF 06 BV 510 D 01
15000	16	25 x 50	0.25	0.027	<0.03	3.33	37	EYF 06 AD 515 D 01
15000	16	35 x 30	0.25	0.027	<0.03	3.26	37	EYF 06 CV 515 D 01
3300	25	25 x 25	0.20	0.097	0.04	1.60	18	EYF 06 AU 433 E 01
4700	25	25 x 40	0.20	0.068	0.03	2.21	28	EYF 06 AB 447 E 01
4700	25	30 x 25	0.20	0.068	0.03	2.06	25	EYF 06 BU 447 E 01
6800	25	25 x 40	0.20	0.047	<0.03	2.66	28	EYF 06 AB 468 E 01
6800	25	30 x 30	0.20	0.047	<0.03	2.63	30	EYF 06 BV 468 E 01
10000	25	25 x 50	0.20	0.032	<0.03	3.21	37	EYF 06 AD 510 E 01
10000	25	35 x 30	0.20	0.032	<0.03	3.14	37	EYF 06 CV 510 E 01
15000	25	30 x 50	0.20	0.021	<0.03	4.1	50	EYF 06 BD 515 E 01
2200	35	25 x 25	0.18	0.130	0.04	1.31	18	EYF 06 AU 422 F 01
3300	35	30 x 25	0.18	0.087	0.03	1.73	25	EYF 06 BU 433 F 01
4700	35	25 x 40	0.18	0.061	<0.03	2.21	28	EYF 06 AB 447 F 01
4700	35	30 x 25	0.18	0.061	<0.03	2.10	25	EYF 06 BU 447 F 01
6800	35	25 x 50	0.18	0.042	<0.03	2.3	37	EYF 06 AD 468 F 01
6800	35	35 x 30	0.18	0.042	<0.03	2.84	37	EYF 06 CV 468 F 01
2200	50	30 x 25	0.15	0.108	0.04	1.72	25	EYF 06 BU 422 H 01
3300	50	25 x 35	0.15	0.072	0.03	2.20	25	EYF 06 AA 433 H 01
3300	50	30 x 30	0.15	0.072	0.03	2.24	30	EYF 06 BV 433 H 01
4700	50	25 x 50	0.15	0.051	<0.03	2.95	37	EYF 06 AD 447 H 01
4700	50	35 x 30	0.15	0.051	<0.03	2.89	37	EYF 06 CV 447 H 01
6800	50	30 x 50	0.15	0.035	<0.03	3.2	50	EYF 06 BD 468 H 01
1000	63	25 x 25	0.10	0.159	0.08	1.21	18	EYF 06 AU 410 J 01
2200	63	25 x 40	0.10	0.072	0.04	2.07	28	EYF 06 AB 422 J 01
2200	63	30 x 30	0.10	0.072	0.04	2.04	30	EYF 06 BV 422 J 01
3300	63	25 x 50	0.10	0.048	0.03	2.76	37	EYF 06 AD 433 J 01
3300	63	35 x 30	0.10	0.048	0.03	2.70	37	EYF 06 CV 433 J 01
4700	63	30 x 50	0.10	0.034	<0.03	3.4	50	EYF 00 BD 447 J 01

Styles with 3 leads ( $\varnothing$  30/35) or 2 leads ( $\varnothing$  25), solder pin  $\varnothing$  1 mm, 5th digit of the order no. 00 = EYF 00.

# Roederstein



## High-Capacitive Electrolytic Capacitors with Solder Pins, Insulated, Polarized, Etched Electrodes, Pulse-Proof

EYF 00  
EYF 06

Technical specifications: (individual values)

Rated capacitance ( $\mu\text{F}$ )	Rated voltage (VDC)	Dimensions D x L (mm) (nominal dimensions)	$\tan \delta$ (100 Hz; 20°C) (limit values)	ESR ( $\Omega$ ) (100 Hz; 20°C) (limit values) <sup>1)</sup>	Z ( $\Omega$ ) (10 kHz; 20°C) (limit values) <sup>1)</sup>	Admissible ripple current (mA/100 Hz) 85°C <sup>2)</sup>	Weight (g)	Order no.
100	200	25 x 25	0.09	1.43	1.0	0.7	18	EYF 06 AU 310 S 01
220	200	25 x 40	0.09	0.65	0.45	1.3	28	EYF 06 AB 322 S 01
220	200	30 x 25	0.09	0.65	0.45	1.2	25	EYF 06 BU 322 S 01
330	200	25 x 50	0.09	0.43	0.30	1.6	37	EYF 06 AD 333 S 01
330	200	30 x 30	0.09	0.43	0.30	1.5	30	EYF 06 BV 333 S 01
470	200	30 x 40	0.09	0.31	0.21	1.9	40	EYF 06 BB 347 S 01
470	200	35 x 30	0.09	0.31	0.21	1.8	37	EYF 06 CV 347 S 01
680	200	30 x 50	0.09	0.21	0.15	2.3	50	EYF 06 BD 368 S 01
1000	200	35 x 50	0.09	0.14	0.09	3.0	55	EYF 06 CD 410 S 01
47	385	25 x 25	0.09	3.05	2.11	0.5	18	EYF 06 AU 247 R 01
100	385	25 x 40	0.09	1.43	0.99	0.8	28	EYF 06 AB 310 R 01
220	385	30 x 50	0.09	0.65	0.45	1.4	40	EYF 06 BD 322 R 01

Special values / dimensions on request.

The capacitors are delivered with sleeve insulation. (Full insulation possible, if required – final digit 02)

### Ordering example:

2 leads, snap-in(680  $\mu\text{F}$ , 200 VDC, dim. 30 x 50 – sleeve insulation): EYF 06 **BD** 368 S 01  
full insulation: EYF 06 **BD** 368 S 02

1) The practically achievable series resistance and impedance are limited downwards by the ohmic share of the connection and the foil resistances. For this reason, calculated values below 0.03  $\Omega$  cannot be achieved in any case.

2) For deviating temperature and frequencies, the admissible superimposed ripple current has to be corrected with the respective conversion factors (see "General Information").