Panasonic
INDUSTRY

Aluminum Electrolytic Capacitors

Radial Lead Type

FP-A series

Features

- Endurance : 105 ℃ 4000 h to 5000 h
- High ripple current (2 to 2.5 times as high as FC series)
- Large capacitance (Up to 60 % larger than FC series)
- AEC-Q200 compliant
- RoHS compliant

Country of origin

- Malaysia

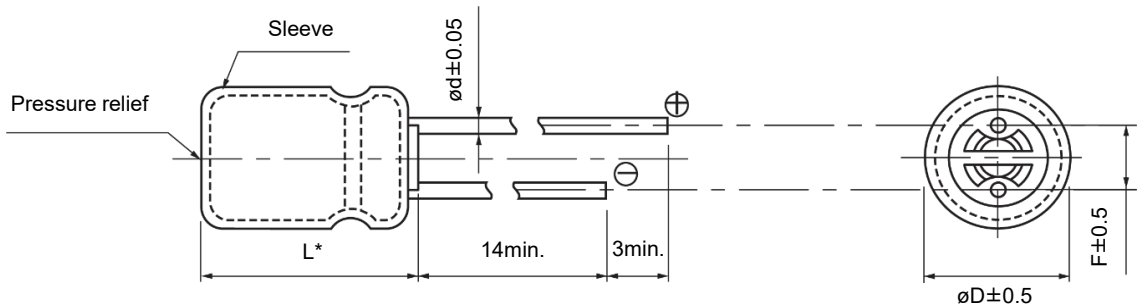
Specifications

Category temp. range	–55 ℃ to +105 ℃			
Rated voltage range	25 V to 35 V			
Capacitance range	510 µF to 2000 µF			
Capacitance tolerance	±20 % (120 Hz / +20℃)			
Leakage current	I ≦ 0.01 CV (µA) After 2 minutes			
Dissipation factor (tan δ)	Rated voltage (V)	25	35	(120 Hz /+20℃)
	Dissipation factor (tan δ)	0.14	0.12	
	For capacitance value ≧ 1000 µF, add 0.02 per every 1000 µF.			
Endurance	After following life test with DC voltage and +105 ℃±2 ℃ ripple current value applied (The sum of DC and ripple peak voltage shall not exceed the rated working voltage)when the capacitors are restored to 20 ℃, the capacitors shall meet the limits specified bellow. Duration ø10 : 4000 h, ø12.5 : 5000 h			
	Capacitance change	Within ±30 % of the initial value		
	Dissipation factor (tan δ)	≦ 300 % of the initial limit		
	DC leakage current	Within the initial limit		
Shelf life	After storage for 1000 h at +105 ℃±2 ℃ with no voltage applied and then being stabilized at +20 ℃, capacitors shall meet the limits specified in endurance. (With voltage treatment)			

Frequency correction factor for ripple current

Cap. (µF) \ Freq. (Hz)	120	1 k	10 k	100 k to
510 to 1000	0.65	0.75	0.95	1.00
1200 to 2000	0.75	0.80	1.00	1.00

Dimensions



* L ≦ 16 : L±1.5
  L ≧ 20 : L±2.0

Unit : mm

øD	10.0	12.5
L	16 to 20	20 to 25
ød	0.6	0.6
F	5.0	5.0

Case size / Impedance / Ripple current

R. voltage / Case size (mm) (øD×L)	25 V to 35 V		
	ESR (Ω) (100 kHz)		Ripple current (mA rms) (100 kHz)
	+20 ℃	-10 ℃	+105 ℃
10 × 16	0.068	0.136	2500
10 × 20	0.052	0.104	3000
12.5 × 20	0.038	0.076	3250
12.5 × 25	0.030	0..060	4000

Characteristics list

Rated voltage (V)	Capacitance (±20 %) (μF)	Case size (mm)		Specification			Lead length (mm)			Part No.	Min. Packaging Q'ty (PCS)	
		øD	L	Ripple current*1 (mA rms)	ESR*2 (Ω)	Endu-rance (h)	Lead dia. (ød)	Lead space			Straight leads	Taping
								Straight	Taping ✻B			
25	680	10.0	16.0	2500	0.068	4000	0.6	5.0	5.0	EEUFP1E681( )	200	500
	1000	10.0	20.0	3000	0.052	4000	0.6	5.0	5.0	EEUFP1E102( )	200	500
	1500	12.5	20.0	3250	0.038	5000	0.6	5.0	5.0	EEUFP1E152( )	200	500
	2000	12.5	25.0	4000	0.030	5000	0.6	5.0	5.0	EEUFP1E202( )	200	500
35	510	10.0	16.0	2500	0.068	4000	0.6	5.0	5.0	EEUFP1V511( )	200	500
	750	10.0	20.0	3000	0.052	4000	0.6	5.0	5.0	EEUFP1V751( )	200	500
	1000	12.5	20.0	3250	0.038	5000	0.6	5.0	5.0	EEUFP1V102( )	200	500
	1300	12.5	25.0	4000	0.030	5000	0.6	5.0	5.0	EEUFP1V132( )	200	500

*1: Ripple current (100 kHz / +105 ℃)
*2: ESR (100 kHz / +20 ℃)
・When requesting taped product, please put the letter "B". Lead wire pitch ✻B=5 mm.
・Please refer to the page of “Taping dimensions”.