

Radial Lead Type

Series: FC Type : A

Country of Origin

Japan
Malaysia
China

- Features
- Endurance : 105°C 1000 h to 5000 h
 - Low impedance
 - RoHS directive compliant

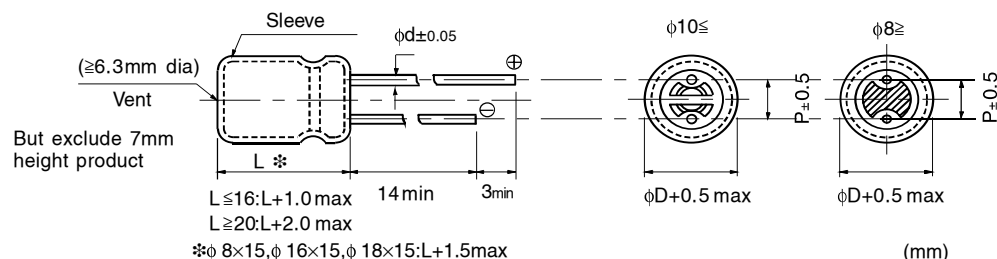
■ Specifications

Category temp. range	-55 to +105°C																										
Rated W.V. Range	6.3 to 100 V .DC																										
Nominal Cap. Range	1.0 to 15000 μ F																										
Capacitance Tolerance	±20 % (120Hz/+20°C)																										
DC Leakage Current	I ≤ 0.01 CV or 3(μ A) after 2 minues application of rated working voltage at +20°C (Whichever is greater)																										
tan δ	<table><tr><td>W.V.(V)</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>100</td></tr><tr><td>tan δ</td><td>0.22</td><td>0.19</td><td>0.16</td><td>0.14</td><td>0.12</td><td>0.10</td><td>0.08</td><td>0.07</td></tr></table>									W.V.(V)	6.3	10	16	25	35	50	63	100	tan δ	0.22	0.19	0.16	0.14	0.12	0.10	0.08	0.07
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	tan δ	0.22	0.19	0.16	0.14	0.12	0.10	0.08	0.07																		
For capacitance value > 1000μF, add 0.02 per every 1000 μF.																											
Endurance	After following life test with DC voltage and +105±2°C ripple current value applied (The sum of DC and ripple peak voltage shall not exceed the rated working voltage), the capacitors shall meet the limits specified bellow. Duration : 1000 hours (φ4 to 6.3), 2000hours (φ8), 3000 hours (φ10), 5000 hours (φ12.5 to 18) Post test requirement at +20 °C																										
	Capacitance change		±20% of initial measured value																								
	tan δ		≤ 200 % of initial specified value																								
	DC leakage current		≤ initial specified value																								
Shelf Life	After storage for 1000 hours at +105±2 °C with no voltage applied and then being stabilized at +20 °C, capacitor shall meet the limits specified in Endurance. (With voltage treatment)																										

■ Frequency correction factor for ripple current

W.V.(V.DC)	Capacitance (μF)	Frequency(Hz)				
		60	120	1k	10k	100k
6.3 to 100	1.0 to 330	0.55	0.65	0.85	0.90	1.0
	390 to 1000	0.70	0.75	0.90	0.95	1.0
	1200 to 2200	0.75	0.80	0.90	0.95	1.0
	2700 to 15000	0.80	0.85	0.95	1.00	1.0

■ Dimensions in mm (not to scale)



	L ≥ 11									L = 7		
Body Dia. φD	4	5	6.3	8	10	12.5	16	18		4	5	6.3
Body Length L						15 to 25	30 to 40					
Lead Dia. φd	0.45	0.5	0.5	0.6	0.6	0.6	0.8	0.8	0.8	0.45	0.45	0.45
Lead space P	1.5	2	2.5	3.5	5.0	5.0	5.0	7.5	7.5	1.5	2	2.5

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■ Case size/ Impedance/ Ripple Current

W.V(V.DC) Case size (φD×L)	6.3 V to 35V			50V			63V			100V		
	Impedance Ω/100kHz		Ripple Current mA r.m.s /100 kHz	Impedance Ω/100kHz		Ripple Current mA r.m.s /100 kHz	Impedance Ω/100kHz		Ripple Current mA r.m.s /100 kHz	Impedance Ω/100kHz		Ripple Current mA r.m.s /100 kHz
	20°C	-10°C		20°C	-10°C		20°C	-10°C		20°C	-10°C	
4 × 7	2.00	5.00	65									
5 × 7	0.950	2.40	120									
6.3 × 7	0.450	1.20	200									
4 × 11	1.30	2.60	120	2.50	5.00	90	3.50	7.00	80			
5 × 11	0.800	1.60	175	2.40 *1 *2,*3	4.80 *1 *2,*3	*3 *3	2.00	4.00	145	4.10	8.20	80
5 × 15	0.500	1.00	235	0.900	1.80	215	1.30	2.60	200	2.80	5.60	90
6.3 × 11.2	0.350	0.700	290	0.600	1.20	260	1.00	2.00	240	1.80	3.60	114
6.3 × 15	0.250	0.500	400	0.400	0.800	360	0.700	1.40	330	1.10	2.20	155
8 × 11.5	0.117	0.234	555	0.234	0.468	485	0.342	0.684	405	0.680	1.36	260
8 × 15	0.085	0.170	730	0.155	0.310	635	0.230	0.460	535	0.450	0.900	340
8 × 20	0.065	0.130	995	0.120	0.240	860	0.178	0.356	690	0.330	0.660	455
10 × 12.5	0.090	0.180	755	0.162	0.324	615	0.256	0.512	535	0.530	1.06	306
10 × 16	0.068	0.136	1050	0.119	0.238	850	0.194	0.388	600	0.360	0.720	400
10 × 20	0.052	0.104	1220	0.090	0.180	1030	0.147	0.294	885	0.240	0.480	463
10 × 25	0.045	0.090	1440	0.082	0.164	1200	0.130	0.260	1050	0.210	0.420	599
10 × 30	0.035	0.070	1815	0.060	0.120	1610	0.090	0.180	1300	0.150	0.300	698
12.5 × 15	0.065	0.130	1205	0.110	0.220	1150	0.150	0.300	1020	0.230	0.460	511
12.5 × 20	0.038	0.076	1655	0.063	0.126	1480	0.085	0.170	1285	0.180	0.360	671
12.5 × 25	0.030	0.060	1945	0.050	0.100	1832	0.070	0.140	1720	0.110	0.220	807
12.5 × 30	0.025	0.050	2310	0.040	0.080	2215	0.055	0.110	2090	0.098	0.196	937
12.5 × 35	0.022	0.044	2510	0.034	0.068	2285	0.047	0.094	2265	0.087	0.174	1040
12.5 × 40	0.018	0.036	2655	0.030	0.060	2590	0.042	0.084	2560	0.072	0.144	1130
16 × 15	0.043	0.086	1690	0.080	0.160	1610	0.090	0.180	1410	0.140	0.280	793
16 × 20	0.029	0.058	2205	0.048	0.096	1835	0.059	0.118	1765	0.110	0.220	995
16 × 25	0.022	0.044	2555	0.034	0.068	2235	0.050	0.100	2160	0.089	0.178	1170
16 × 31.5	0.018	0.036	3010	0.028	0.056	2700	0.043	0.086	2670	0.062	0.124	1520
16 × 35.5	0.016	0.032	3150	0.025	0.050	2790	0.036	0.072	2770	0.053	0.106	1730
16 × 40	0.015	0.030	3360	0.023	0.046	2845	0.030	0.060	2825	0.047	0.094	1920
18 × 15	0.038	0.076	2000	0.068	0.136	1900	0.086	0.172	1690	0.120	0.240	917
18 × 20	0.028	0.056	2490	0.042	0.084	2420	0.055	0.110	2290	0.080	0.160	1230
18 × 25	0.020	0.040	2740	0.029	0.058	2610	0.043	0.086	2585	0.070	0.140	1420
18 × 31.5	0.016	0.032	3635	0.025	0.050	3000	0.032	0.064	2950	0.062	0.124	1600
18 × 35.5	0.015	0.030	3680	0.023	0.046	3100	0.030	0.060	3095	0.041	0.082	1770
18 × 40	0.014	0.028	3735	-	-	-	0.025	0.050	3205	0.036	0.072	2300

*1; Apply to 1μF

*2; Apply to 2.2, 3.3, 4.7, 10L, 12, 18, and 22μF

*3

Case size φ D×L (mm)	Capacitance (μF)	Impedance Ω/100kHz		Ripple Current mA r.m.s /100 kHz
		20°C	-10°C	
5 × 11	1.0	2.40	4.80	20
	2.2	1.80	3.60	45
	3.3	1.30	2.60	65
	4.7	1.30	2.60	95
	10L	1.30	2.60	125
	12	1.30	2.60	135
	15	1.30	2.60	145
	18	1.30	2.60	155
	22	1.30	2.60	155

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■ Standard Products

W.V.	Cap. (±20%)	Case size		Specification			Lead Length				Part No.	Min.Packaging Q' ty	
		Dia.	Length	Ripple current (100kHz) (+105°C) (mA)	Imped- ance (100kHz) (+20°C) (Ω)	Endur- ance (hours)	Lead Dia.	Lead Space				Straight Leads	Taping
								Straight	Taping *B	Taping *H			
(V)	(μF)	(mm)	(mm)				(m m)	(mm)	(mm)	(mm)		(pcs)	(pcs)
35	6.8	4	7	65	2.000	1000	0.45	1.5	5.0	2.5	EEAFC1V6R8()	200	2000
	12	5	7	120	0.950	1000	0.45	2.0	5.0	2.5	EEAFC1V120()	200	2000
	18	4	11	120	1.300	1000	0.45	1.5	5.0	2.5	EEUFC1V180()	200	2000
	22	5	11	175	0.800	1000	0.50	2.0	5.0	2.5	EEUFC1V220()	200	2000
	27	5	11	175	0.800	1000	0.50	2.0	5.0	2.5	EEUFC1V270()	200	2000
		6.3	7	200	0.450	1000	0.45	2.5	5.0	2.5	EEAFC1V270()	200	2000
	33	5	11	175	0.080	1000	0.50	2.0	5.0	2.5	EEUFC1V330()	200	2000
	39	5	15	235	0.500	1000	0.50	2.0	5.0	2.5	EEUFC1V390()	200	2000
	47	6.3	11.2	290	0.350	1000	0.50	2.5	5.0	2.5	EEUFC1V470()	200	2000
	56	6.3	11.2	290	0.350	1000	0.50	2.5	5.0	2.5	EEUFC1V560()	200	2000
	68	6.3	11.2	290	0.350	1000	0.50	2.5	5.0	2.5	EEUFC1V680()	200	2000
	82	6.3	15	400	0.250	1000	0.50	2.5	5.0	2.5	EEUFC1V820()	200	2000
	100	8	11.5	555	0.117	2000	0.60	3.5	5.0		EEUFC1V101()	200	1000
	120	8	11.5	555	0.117	2000	0.60	3.5	5.0		EEUFC1V121()	200	1000
	150	8	11.5	555	0.117	2000	0.60	3.5	5.0		EEUFC1V151()	200	1000
	180	10	12.5	755	0.090	3000	0.60	5.0	5.0		EEUFC1V181()	200	500
	220	8	15	730	0.085	2000	0.60	3.5	5.0		EEUFC1V221L()	200	1000
		10	12.5	755	0.090	3000	0.60	5.0	5.0		EEUFC1V221()	200	500
	270	10	16	1050	0.068	3000	0.60	5.0	5.0		EEUFC1V271()	200	500
	330	8	20	995	0.065	2000	0.60	3.5	5.0		EEUFC1V331L()	200	1000
		10	16	1050	0.068	3000	0.60	5.0	5.0		EEUFC1V331()	200	500
	390	10	20	1220	0.052	3000	0.60	5.0	5.0		EEUFC1V391()	200	500
		12.5	15	1205	0.065	5000	0.60	5.0	5.0		EEUFC1V391S()	200	500
	470	10	20	1220	0.052	3000	0.60	5.0	5.0		EEUFC1V471()	200	500
	560	10	25	1440	0.045	3000	0.60	5.0	5.0		EEUFC1V561()	200	500
		12.5	20	1655	0.038	5000	0.60	5.0	5.0		EEUFC1V561S()	200	500
	680	10	30	1815	0.035	3000	0.60	5.0			EEUFC1V681L	100	
		12.5	20	1655	0.038	5000	0.60	5.0	5.0		EEUFC1V681()	200	500
		16	15	1690	0.043	5000	0.80	7.5	7.5		EEUFC1V681S()	100	250
	820	12.5	25	1945	0.030	5000	0.60	5.0	5.0		EEUFC1V821L()	200	500
		18	15	2000	0.038	5000	0.80	7.5	7.5		EEUFC1V821()	100	250
	1000	12.5	25	1945	0.030	5000	0.60	5.0	5.0		EEUFC1V102()	200	500
		16	20	2205	0.029	5000	0.80	7.5	7.5		EEUFC1V102S()	100	250
	1200	12.5	30	2310	0.025	5000	0.80	5.0			EEUFC1V122L	100	
		16	20	2205	0.029	5000	0.80	7.5	7.5		EEUFC1V122()	100	250
	1500	12.5	35	2510	0.022	5000	0.80	5.0			EEUFC1V152L	100	
		16	25	2555	0.022	5000	0.80	7.5	7.5		EEUFC1V152()	100	250
		18	20	2490	0.028	5000	0.80	7.5	7.5		EEUFC1V152S()	100	250
	1800	12.5	40	2655	0.018	5000	0.80	5.0			EEUFC1V182L	100	
		16	25	2555	0.022	5000	0.80	7.5	7.5		EEUFC1V182()	100	250
		18	20	2490	0.028	5000	0.80	7.5	7.5		EEUFC1V182S()	100	250
	2200	16	31.5	3010	0.018	5000	0.80	7.5			EEUFC1V222	100	
		18	25	2740	0.020	5000	0.80	7.5	7.5		EEUFC1V222S()	100	250

When requesting taped product, please put the letter "B" or "H" between the "()". Lead wire pitch B=5mm, 7.5mm, H=2.5mm. The taping dimensions are explained on p.196 of our Catalog. Please use it as a reference guide.

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