

Radial Lead Type

Series: FM   Type :A

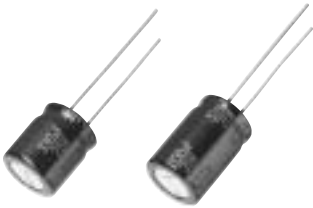
Country of Origin

- Features

Low impedance(40 to 70% less than FC Series)

Endurance : 2000 to 7000 hours at +105°C

Japan  
Malaysia  
China



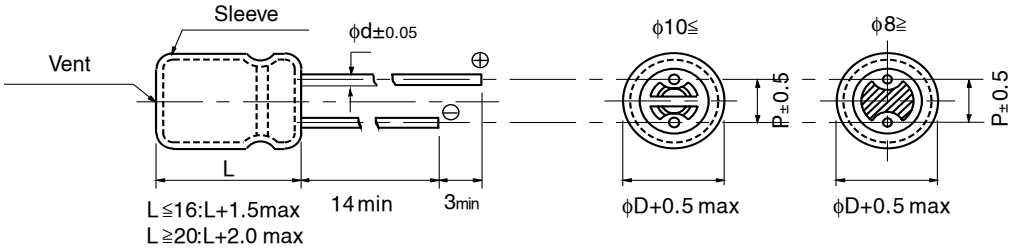
■ Specifications

Category temp. range	-40 to + 105°C						
Rated W.V. Range	6.3 to 50 V .DC						
Nominal Cap. Range	22 to 6800 μ F						
Capacitance Tolerance	±20 % (120Hz/+20°C)						
DC Leakage Current	I ≤ 0.01 CV (μA) after 2 minutes application of rated working voltage at +20°C						
tan δ	W.V.	6.3	10	16	25	35	50
	tan δ	0.22	0.19	0.16	0.14	0.12	0.10
	(max.) (120Hz/+20C°)						
	Add 0.02 per 1000μF for products of 1000μF or more.						
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 below.						
	Duration : 3000hours (φ8), 4000 hours (φ10), 5000 hours (φ12.5 to 18)						
	Post test requirement at +20 °C						
	Capacitance change		±25% of initial measured value (6.3V~10V:±30%)				
	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 corection factor for ripple current

W.V.(V.DC)	Capacitance (μF)	Frequency(Hz)				
		60	120	1k	10k	100k
6.3 to 50	22 to 33	0.45	0.55	0.75	0.90	1.00
	47 to 330	0.60	0.70	0.85	0.95	1.00
	390 to 1000	0.65	0.75	0.90	0.98	1.00
	1200 to 6800	0.75	0.80	0.95	1.00	1.00

■ Dimensions in mm (not to scale)



Body Dia. $\phi D$	5	6.3	8	10	12.5	16
Body Length L	—	—	—	—	12.5 to 25	30 to 35
Lead Dia. $\phi d$	0.5	0.5	0.6	0.6	0.6	0.8
Lead space P	2	2.5	3.5	5.0	5.0	7.5

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■ Case size VS Impedance

W.V.(V.DC)  Case size (φD×L)	6.3 to 35			50		
	Impedance (Ω /100kHz)		Ripple current (mA.rms./100kHz)	Impedance (Ω /100kHz)		Ripple current (mA.rms./100kHz)
	+20°C	-10°C	+105°C	+20°C	-10°C	+105°C
5 × 11	0.300	1.000	280	0.340	1.130	250
6.3 × 11.2	0.130	0.430	455	0.140	0.460	406
8 × 11.5	0.056	0.168	950	0.061	0.183	870
8 × 15	0.041	0.123	1240	0.045	0.135	1140
8 × 20	0.030	0.090	1560	0.033	0.099	1430
10 × 12.5	0.038	0.114	1290	0.042	0.126	1170
10 × 16	0.026	0.078	1790	0.030	0.090	1650
10 × 20	0.019	0.057	2180	0.023	0.069	1890
10 × 25	0.018	0.054	2470	0.022	0.066	2150
12.5 × 20	0.018	0.045	2600	0.022	0.055	2260
12.5 × 25	0.015	0.038	3190	0.018	0.045	2660
12.5 × 30	0.013	0.033	3630	0.016	0.040	3160
12.5 × 35	0.012	0.030	3750	0.014	0.035	3270
16 × 20	0.017	0.043	3300	0.019	0.048	2870
16 × 25	0.014	0.035	3820	0.016	0.040	3320

**NEW**

■ Standard Products

W.V.	Cap (±20%)	Case size		Specification			Lead size				Part No	Min.Packaging Q'ty	
		Dia.	Length	Ripple current (100kHz) (+105°C) (mA)	Impedance (100kHz) (+20°C) (Ω)	Endurance (hours)	Lead Dia. (mm)	Lead space		Long Lead (pcs)		Taping (pcs)	
								Straight	Taping				
(V)	(μF)	(mm)	(mm)					(mm)	* B (mm)	* H (mm)			
6.3	150	5	11	280	0.300	2000	0.5	2.0	5.0	2.5	EEUFM0J151	200	2000
	330	6	11.2	455	0.130	2000	0.5	2.5	5.0	2.5	EEUFM0J331	200	2000
	560	8	11.5	950	0.056	3000	0.6	3.5	5.0		EEUFM0J561	200	1000
	820	8	15	1240	0.041	3000	0.6	3.5	5.0		EEUFM0J821L	200	1000
	1200	8	20	1560	0.030	4000	0.6	3.5	5.0		EEUFM0J122L	200	1000
	1000	10	12.5	1290	0.038	4000	0.6	5.0	5.0		EEUFM0J102	200	500
	1200	10	16	1790	0.026	4000	0.6	5.0	5.0		EEUFM0J122	200	500
	1500	10	20	2180	0.019	5000	0.6	5.0	5.0		EEUFM0J152	200	500
	2200	10	25	2470	0.018	5000	0.6	5.0	5.0		EEUFM0J222L	200	500
	3300	12.5	20	2600	0.018	5000	0.6	5.0	5.0		EEUFM0J332	200	500
	3900	12.5	25	3190	0.015	7000	0.6	5.0	5.0		EEUFM0J392	200	500
	4700	12.5	30	3630	0.013	7000	0.8	5.0	5.0		EEUFM0J472L	100	
	5600	12.5	35	3750	0.012	7000	0.8	5.0	5.0		EEUFM0J562L	100	250
		16	20	3300	0.017	5000	0.8	7.5	7.5		EEUFM0J562S	100	250
	6800	16	25	3820	0.014	7000	0.8	7.5	7.5		EEUFM0J682	100	250
10	100	5	11	280	0.300	2000	0.5	2.0	5.0	2.5	EEUFM1A101	200	2000
	220	6	11.2	455	0.130	2000	0.5	2.5	5.0	2.5	EEUFM1A221	200	2000
	470	8	11.5	950	0.056	3000	0.6	3.5	5.0		EEUFM1A471	200	1000
	680	8	15	1240	0.041	3000	0.6	3.5	5.0		EEUFM1A681L	200	1000
	1000	8	20	1560	0.030	4000	0.6	3.5	5.0		EEUFM1A102L	200	1000
	680	10	12.5	1290	0.038	4000	0.6	5.0	5.0		EEUFM1A681	200	500
	1000	10	16	1790	0.026	4000	0.6	5.0	5.0		EEUFM1A102	200	500
	1200	10	20	2180	0.019	5000	0.6	5.0	5.0		EEUFM1A122	200	500
	1500	10	25	2470	0.018	5000	0.6	5.0	5.0		EEUFM1A152L	200	500
	2200	12.5	20	2600	0.018	5000	0.6	5.0	5.0		EEUFM1A222	200	500
	3300	12.5	25	3190	0.015	7000	0.6	5.0	5.0		EEUFM1A332	200	500
	3900	12.5	30	3630	0.013	7000	0.8	5.0	5.0		EEUFM1A392L	100	
	4700	12.5	35	3750	0.012	7000	0.8	5.0	5.0		EEUFM1A472L	100	250
	3900	16	20	3300	0.017	5000	0.8	7.5	7.5		EEUFM1A392S	100	250
	5600	16	25	3820	0.014	7000	0.8	7.5	7.5		EEUFM1A562	100	250
16	68	5	11	280	0.300	2000	0.5	2.0	5.0	2.5	EEUFM1C680	200	2000
	120	6	11.2	455	0.130	2000	0.5	2.5	5.0	2.5	EEUFM1C121	200	2000
	330	8	11.5	950	0.056	3000	0.6	3.5	5.0		EEUFM1C331	200	1000
	470	8	15	1240	0.041	3000	0.6	3.5	5.0		EEUFM1C471L	200	1000
	680	8	20	1560	0.030	4000	0.6	3.5	5.0		EEUFM1C681L	200	1000
	470	10	12.5	1290	0.038	4000	0.6	5.0	5.0		EEUFM1C471	200	500
	680	10	16	1790	0.026	4000	0.6	5.0	5.0		EEUFM1C681	200	500
	1000	10	20	2180	0.019	5000	0.6	5.0	5.0		EEUFM1C102	200	500
	1200	10	25	2470	0.018	5000	0.6	5.0	5.0		EEUFM1C122L	200	500
	1500	12.5	20	2600	0.018	5000	0.6	5.0	5.0		EEUFM1C152	200	500

When requesting taped product, please put the letter "B" between the "( )". Lead wire pitch B=5mm, 7.5mm.  
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■ Standard Products

W.V.  (V)	Cap (±20%)  (μF)	Case size		Specification			Lead size				Part No	Min.Packaging Q'ty	
		Dia.  (mm)	Length  (mm)	Ripple current (100kHz) (+105°C) (mA)	Impedance (100kHz) (+20°C) (Ω)	Endur- ance  (hours)	Lead Dia.  (m m)	Lead space				Long Lead  (pcs)	Taping  (pcs)
								Straight  (m m)	Taping				
							* B (mm)		* H (mm)				
16	2200	12.5	25	3190	0.015	7000	0.6	5.0	5.0		EEUFM1C222	200	500
	2700	12.5	30	3630	0.013	7000	0.8	5.0	5.0		EEUFM1C272L	100	
	3300	12.5	35	3750	0.012	7000	0.8	5.0	5.0		EEUFM1C332L	100	250
	2700	16	20	3300	0.017	5000	0.8	7.5	7.5		EEUFM1C272S	100	250
	3900	16	25	3820	0.014	7000	0.8	7.5	7.5		EEUFM1C392	100	250
25	47	5	11	280	0.300	2000	0.5	2.0	5.0	2.5	EEUFM1E470	200	2000
	100	6	11.2	455	0.130	2000	0.5	2.5	5.0	2.5	EEUFM1E101	200	2000
	220	8	11.5	950	0.056	3000	0.6	3.5	5.0		EEUFM1E221	200	1000
	330	8	15	1240	0.041	3000	0.6	3.5	5.0		EEUFM1E331L	200	1000
	470	8	20	1560	0.030	4000	0.6	3.5	5.0		EEUFM1E471L	200	1000
	330	10	12.5	1290	0.038	4000	0.6	5.0	5.0		EEUFM1E331	200	500
	470	10	16	1790	0.026	4000	0.6	5.0	5.0		EEUFM1E471	200	500
	680	10	20	2180	0.019	5000	0.6	5.0	5.0		EEUFM1E681	200	500
	820	10	25	2470	0.018	5000	0.6	5.0	5.0		EEUFM1E821L	200	500
	1000	12.5	20	2600	0.018	5000	0.6	5.0	5.0		EEUFM1E102	200	500
	1500	12.5	25	3190	0.015	7000	0.6	5.0	5.0		EEUFM1E152	200	500
	1800	12.5	30	3630	0.013	7000	0.8	5.0	5.0		EEUFM1E182L	100	
	2200	12.5	35	3750	0.012	7000	0.8	5.0	5.0		EEUFM1E222L	100	250
	1800	16	20	3300	0.017	5000	0.8	7.5	7.5		EEUFM1E182S	100	250
	2700	16	25	3820	0.014	7000	0.8	7.5	7.5		EEUFM1E272	100	250
35	33	5	11	280	0.300	2000	0.5	2.0	5.0	2.5	EEUFM1V330	200	2000
	68	6	11.2	455	0.130	2000	0.5	2.5	5.0	2.5	EEUFM1V680	200	2000
	150	8	11.5	950	0.056	3000	0.6	3.5	5.0		EEUFM1V151	200	1000
	220	8	15	1240	0.041	3000	0.6	3.5	5.0		EEUFM1V221L	200	1000
	330	8	20	1560	0.030	4000	0.6	3.5	5.0		EEUFM1V331L	200	1000
	220	10	12.5	1290	0.038	4000	0.6	5.0	5.0		EEUFM1V221	200	500
	330	10	16	1790	0.026	4000	0.6	5.0	5.0		EEUFM1V331	200	500
	470	10	20	2180	0.019	5000	0.6	5.0	5.0		EEUFM1V471	200	500
	560	10	25	2470	0.018	5000	0.6	5.0	5.0		EEUFM1V561L	200	500
	680	12.5	20	2600	0.018	5000	0.6	5.0	5.0		EEUFM1V681	200	500
	1000	12.5	25	3190	0.015	7000	0.6	5.0	5.0		EEUFM1V102	200	500
	1200	12.5	30	3630	0.013	7000	0.8	5.0	5.0		EEUFM1V122L	100	
	1500	12.5	35	3750	0.012	7000	0.8	5.0	5.0		EEUFM1V152L	100	250
	1200	16	20	3300	0.017	5000	0.8	7.5	7.5		EEUFM1V122S	100	250
	1800	16	25	3820	0.014	7000	0.8	7.5	7.5		EEUFM1V182	100	250
50	22	5	11	250	0.340	2000	0.5	2.0	5.0	2.5	EEUFM1H220	200	2000
	56	6	11.2	405	0.140	2000	0.5	2.5	5.0	2.5	EEUFM1H560	200	2000
	100	8	11.5	950	0.061	3000	0.6	3.5	5.0		EEUFM1H101	200	1000
	120	8	15	1240	0.045	3000	0.6	3.5	5.0		EEUFM1H121L	200	1000
	180	8	20	1560	0.033	4000	0.6	3.5	5.0		EEUFM1H181L	200	1000

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W.V.  (V)	Cap (±20%)  (μF)	Case size		Specification			Lead size				Part No	Min.Packaging Q'ty	
		Dia.	Length	Ripple current (100kHz) (+105°C) (mA)	Impedance (100kHz) (+20°C) (Ω)	Endur- ance (hours)	Lead Dia.  (mm)	Lead space				Long Lead  (pcs)	Taping  (pcs)
								Straight	Taping				
		(mm)	(mm)					(mm)	(mm)	(mm)			
50	150	10	12.5	1290	0.042	4000	0.6	5.0	5.0		EEUFM1H151	200	500
	220	10	16	1790	0.030	4000	0.6	5.0	5.0		EEUFM1H221	200	500
	270	10	20	2180	0.023	5000	0.6	5.0	5.0		EEUFM1H271	200	500
	330	10	25	2470	0.022	5000	0.6	5.0	5.0		EEUFM1H331L	200	500
	470	12.5	20	2600	0.022	5000	0.6	5.0	5.0		EEUFM1H471	200	500
	560	12.5	25	3190	0.018	7000	0.6	5.0	5.0		EEUFM1H561	200	500
	680	12.5	30	3630	0.016	7000	0.8	5.0	5.0		EEUFM1H681L	100	
	820	12.5	35	3750	0.014	7000	0.8	5.0	5.0		EEUFM1H821L	100	250
		16	20	3300	0.019	5000	0.8	7.5	7.5		EEUFM1H821S	100	250
1000	16	25	3820	0.016	7000	0.8	7.5	7.5		EEUFM1H102	100	250	

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