

## Radial Lead Type

Series: FB Type : A

- Features Endurance: 105°C 1000 h( $\phi 5$  to  $\phi 8$ )  
105°C 2000 h( $\phi 10$  to  $\phi 18$ )  
Low impedance

Japan  
Malaysia  
China



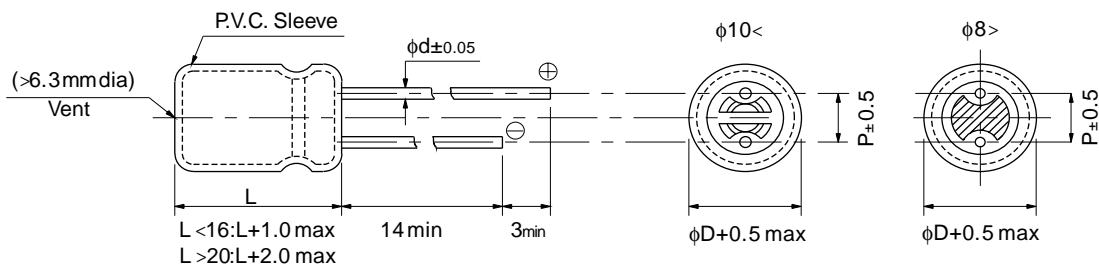
### ■ Specifications

Category temp. range	-55 to +105°C
Rated W.V. Range	10 to 50 V .DC
Nominal Cap. Range	0.47 to 10000 $\mu$ F
Capacitance Tolerance	$\pm 20$ % (120Hz/+20°C)
DC Leakage Current	$I < 0.01 CV$ or $3(\mu A)$ after 2 minutes
Dissipation Factor	Please see the attached standard products list
Endurance	After following life test with DC voltage and +105 $\pm$ 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 ( $\phi 5$ to 8), 2000hours ( $\phi 10$ to 18) Post test requirementat +20 °C
	Capacitance change $\pm 20$ % of initial measured value
	D.F. < 200 % of initial specified value DC leakage current < initial specified value
Shelf Life	After storage for 1000hours at +105 $\pm$ 2 °C with no voltage applied and then being stabilized at +20 °C, capacitors shall meet the limits specified in "Endurance".(With voltage treatment)

### ■ Frequency correction factor for ripple current

W.V. (V.DC)	Cap. ( $\mu$ F)	Frequency(Hz)				
		60	120	1k	10k	100k
10 to 50	0.47 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 10000	0.80	0.85	0.95	1.00	1.0

### ■ Dimensions in mm (not to scale)



Body Dia. $\phi D$	5	6.3	8	10	12.5	16	18
Body Length L					20 to 25	30 to 40	
Lead Dia. $\phi d$	0.5	0.5	0.6	0.6	0.6	0.8	0.8
Lead space P	2.0	2.5	3.5	5.0	5.0	7.5	7.5

■ Standard Products

W.V.	Cap. (±20%)  (μF)	Case size		Specification			Lead Length				Part No.	Min. Packaging Qty	
		Dia. (mm)	Length (mm)	Ripple current (100kHz (+105°C) (mA)	Impedance (100kHz (+20°C) (Ω)	Endurance (hours)	Lead Dia. (mm)	Lead Space				Straight Leads (pcs)	Taping (pcs)
								Straight (mm)	Taping *B (mm)	Taping *H (mm)			
10	82	5	11	160	1.30	1000	0.5	2.0	5.0	2.5	EEUFB1A820( )	200	2000
	120	5	15	210	0.920	1000	0.5	2.0	5.0	2.5	EEUFB1A121( )	200	2000
	180	6.3	11.2	260	0.590	1000	0.5	2.5	5.0	2.5	EEUFB1A181( )	200	2000
	270	6.3	15	350	0.40	1000	0.5	2.5	5.0	2.5	EEUFB1A271( )	200	2000
	330	8	11.5	400	0.330	1000	0.6	3.5	5.0		EEUFB1A331( )	200	1000
	390	10	12.5	520	0.260	2000	0.6	5.0	5.0		EEUFB1A391( )	200	500
	470	8	15	500	0.240	1000	0.6	3.5	5.0		EEUFB1A471( )	200	1000
	560	8	20	650	0.180	1000	0.6	3.5	5.0		EEUFB1A561L( )	200	1000
		10	16	640	0.210	2000	0.6	5.0	5.0		EEUFB1A561( )	200	500
	820	10	20	860	0.130	2000	0.6	5.0	5.0		EEUFB1A821( )	200	500
	1200	10	25	1000	0.110	2000	0.6	5.0	5.0		EEUFB1A122	200	
	1500	10	30	1150	0.090	2000	0.6	5.0			EEUFB1A152L	100	
	1800	12.5	20	1120	0.086	2000	0.6	5.0	5.0		EEUFB1A182( )	200	500
	2200	12.5	25	1350	0.070	2000	0.6	5.0	5.0		EEUFB1A222( )	200	500
	2700	12.5	30	1560	0.062	2000	0.8	5.0			EEUFB1A272	100	
	3300	12.5	35	1780	0.050	2000	0.8	5.0			EEUFB1A332L	100	
		16	20	1380	0.072	2000	0.8	7.5	7.5		EEUFB1A332( )	100	250
	3900	12.5	40	1980	0.043	2000	0.8	5.0			EEUFB1A392L	100	
		16	25	1600	0.060	2000	0.8	7.5	7.5		EEUFB1A392( )	100	250
		18	20	1600	0.062	2000	0.8	7.5	7.5		EEUFB1A392S( )	100	250
4700	16	31.5	1850	0.052	2000	0.8	7.5			EEUFB1A472	100		
	18	25	1860	0.052	2000	0.8	7.5	7.5		EEUFB1A472S( )	100	250	
6800	16	35.5	2040	0.044	2000	0.8	7.5			EEUFB1A682L	100		
	18	31.5	2050	0.046	2000	0.8	7.5			EEUFB1A682	50		
8200	16	40	2320	0.036	2000	0.8	7.5			EEUFB1A822L	100		
	18	35.5	2250	0.040	2000	0.8	7.5			EEUFB1A822	50		
10000	18	40	2470	0.036	2000	0.8	7.5			EEUFB1A103	50		
16	56	5	11	160	1.30	1000	0.5	2.0	5.0	2.5	EEUFB1C560( )	200	2000
	82	5	15	210	0.920	1000	0.5	2.0	5.0	2.5	EEUFB1C820( )	200	2000
	120	6.3	11.2	260	0.590	1000	0.5	2.5	5.0	2.5	EEUFB1C121( )	200	2000
	180	6.3	15.0	350	0.40	1000	0.5	2.5	5.0	2.5	EEUFB1C181( )	200	2000
	220	8	11.5	400	0.330	1000	0.6	3.5	5.0		EEUFB1C221( )	200	1000
	270	10	12.5	520	0.260	2000	0.6	5.0	5.0		EEUFB1C271( )	200	500
	330	8	15	500	0.240	1000	0.6	3.5	5.0		EEUFB1C331L( )	200	1000
	390	10	16	640	0.210	2000	0.6	5.0	5.0		EEUFB1C391( )	200	500
	470	8	20	650	0.180	1000	0.6	3.5	5.0		EEUFB1C471( )	200	1000
	680	10	20	860	0.130	2000	0.6	5.0	5.0		EEUFB1C681L( )	200	500
	820	10	25	1000	0.110	2000	0.6	5.0	5.0		EEUFB1C821	200	
	1000	10	30	1150	0.090	2000	0.6	5.0			EEUFB1C102	100	
	1200	12.5	20	1120	0.086	2000	0.6	5.0	5.0		EEUFB1C122( )	200	500
	1500	12.5	25	1350	0.070	2000	0.6	5.0	5.0		EEUFB1C152( )	200	500
	2200	12.5	30	1560	0.062	2000	0.8	5.0			EEUFB1C222L	100	

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.25 of our Catalog. Please use it as a reference guide.

Design, Specifications are subject to change without notice. Ask factory for technical specifications before purchase and/or use. Whenever a doubt about safety arises from this product, please inform us immediately for technical consultation without fail.

■ Standard Products

W.V. (V)	Cap. (±20%) (µF)	Case size		Specification			Lead Length				Part No.	Min. Packaging Qty	
		Dia. (mm)	Length (mm)	Ripple current (100kHz) (+105°C) (mA)	Impedance (100kHz) (+20°C) (Ω)	Endurance (hours)	Lead Dia. (mm)	Lead Space				Straight Leads (pcs)	Taping (pcs)
								Straight (mm)	Taping *B (mm)	Taping *H (mm)			
16	2200	16	20	1380	0.072	2000	0.8	7.5	7.5		EEUFB1C222( )	100	250
	2700	12.5	35	1780	0.050	2000	0.8	5.0			EEUFB1C272L	100	
		16	25	1600	0.060	2000	0.8	7.5	7.5		EEUFB1C272( )	100	250
	3300	12.5	40	1980	0.043	2000	0.8	5.0			EEUFB1C332L	100	500
		18	20	1600	0.062	2000	0.8	7.5	7.5		EEUFB1C332( )	100	250
	3900	16	31.5	1850	0.052	2000	0.8	7.5			EEUFB1C392	100	
		18	25	1860	0.052	2000	0.8	7.5	7.5		EEUFB1C392S( )	100	250
	4700	16	35.5	2040	0.044	2000	0.8	7.5			EEUFB1C472L	100	
		18	31.5	2050	0.046	2000	0.8	7.5			EEUFB1C472	50	
	5600	16	40	2320	0.036	2000	0.8	7.5			EEUFB1C562	100	
6800	18	35.5	2250	0.040	2000	0.8	7.5			EEUFB1C682	50		
8200	18	40	2470	0.036	2000	0.8	7.5			EEUFB1C822	50		
25	39	5	11	160	1.30	1000	0.5	2.0	5.0	2.5	EEUFB1E390( )	200	2000
	56	5	15	210	0.920	1000	0.5	2.0	5.0	2.5	EEUFB1E560( )	200	2000
	82	6.3	11.2	260	0.590	1000	0.5	2.5	5.0	2.5	EEUFB1E820( )	200	2000
	120	6.3	15	350	0.40	1000	0.5	2.5	5.0	2.5	EEUFB1E121( )	200	2000
	150	8	11.5	400	0.330	1000	0.6	3.5	5.0		EEUFB1E151( )	200	1000
	180	10	12.5	520	0.260	2000	0.6	5.0	5.0		EEUFB1E181( )	200	500
	220	8	15	500	0.240	1000	0.6	3.5	5.0		EEUFB1E221( )	200	1000
	270	8	20	650	0.180	1000	0.6	3.5	5.0		EEUFB1E271L( )	200	1000
		10	16	640	0.210	2000	0.6	5.0	5.0		EEUFB1E271( )	200	500
	470	10	20	860	0.130	2000	0.6	5.0	5.0		EEUFB1E471L( )	200	500
	560	10	25	1000	0.110	2000	0.6	5.0	5.0		EEUFB1E561	200	
	680	10	30	1150	0.090	2000	0.6	5.0			EEUFB1E681	100	
	820	12.5	20	1120	0.086	2000	0.6	5.0	5.0		EEUFB1E821( )	200	500
	1000	12.5	25	1350	0.070	2000	0.6	5.0	5.0		EEUFB1E102( )	200	500
	1500	12.5	30	1560	0.062	2000	0.8	5.0			EEUFB1E152L	100	
		16	20	1380	0.072	2000	0.8	7.5	7.5		EEUFB1E152( )	100	250
	1800	12.5	35	1780	0.050	2000	0.8	5.0			EEUFB1E182L	100	
		16	25	1600	0.060	2000	0.8	7.5	7.5		EEUFB1E182( )	100	250
	2200	12.5	40	1980	0.043	2000	0.8	5.0			EEUFB1E222L	100	
		18	20	1600	0.062	2000	0.8	7.5	7.5		EEUFB1E222( )	100	250
2700	16	31.5	1850	0.052	2000	0.8	7.5			EEUFB1E272	100		
	18	25	1860	0.052	2000	0.8	7.5	7.5		EEUFB1E272S( )	100	250	
3300	16	35.5	2040	0.044	2000	0.8	7.5			EEUFB1E332L	100		
	18	31.5	2050	0.046	2000	0.8	7.5			EEUFB1E332	50		
3900	16	40	2320	0.036	2000	0.8	7.5			EEUFB1E392L	100		
	18	35.5	2250	0.040	2000	0.8	7.5			EEUFB1E392	50		
4700	18	40	2470	0.036	2000	0.8	7.5			EEUFB1E472	50		
35	27	5	11	160	1.30	1000	0.5	2.0	5.0	2.5	EEUFB1V270( )	200	2000
	39	5	15	210	0.920	1000	0.5	2.0	5.0	2.5	EEUFB1V390( )	200	2000
	56	6.3	11.2	260	0.590	1000	0.5	2.5	5.0	2.5	EEUFB1V560( )	200	2000

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### ■ Standard Products

W.V.	Cap. (±20%)  (μF)	Case size		Specification			Lead Length				Part No.	Min. Packaging Qty	
		Dia. (mm)	Length (mm)	Ripple current (100kHz) (+105°C) (mA)	Imped- ance (100kHz) (+20°C) (Ω)	Endur- ance (hours)	Lead Dia. (mm)	Lead Space				Straight Leads (pcs)	Taping (pcs)
								Straight (mm)	Taping *B (mm)	Taping *H			
35	82	6.3	15	350	0.40	1000	0.5	2.5	5.0	2.5	EEUFB1V820( )	200	2000
	100	8	11.5	400	0.330	1000	0.6	3.5	5.0		EEUFB1V101( )	200	1000
	120	10	12.5	520	0.260	2000	0.6	5.0	5.0		EEUFB1V121( )	200	500
	150	8	15	500	0.240	1000	0.6	3.5	5.0		EEUFB1V151( )	200	1000
	180	10	16	640	0.210	2000	0.6	5.0	5.0		EEUFB1V181( )	200	500
	220	8	20	650	0.180	1000	0.6	3.5	5.0		EEUFB1V221( )	200	1000
	330	10	20	860	0.130	2000	0.6	5.0	5.0		EEUFB1V331L( )	200	500
	390	10	25	1000	0.110	2000	0.6	5.0	5.0		EEUFB1V391	200	
	470	10	30	1150	0.090	2000	0.6	5.0			EEUFB1V471	100	
	560	12.5	20	1120	0.086	2000	0.6	5.0	5.0		EEUFB1V561( )	200	500
	680	12.5	25	1350	0.070	2000	0.6	5.0	5.0		EEUFB1V681( )	200	500
	1000	12.5	30	1560	0.062	2000	0.8	5.0			EEUFB1V102L	100	
		16	20	1380	0.072	2000	0.8	7.5	7.5		EEUFB1V102( )	100	250
	1200	12.5	35	1780	0.050	2000	0.8	5.0			EEUFB1V122L	100	
		16	25	1600	0.060	2000	0.8	7.5	7.5		EEUFB1V122( )	100	250
	1500	12.5	40	1980	0.043	2000	0.8	5.0			EEUFB1V152L	100	500
		18	20	1600	0.062	2000	0.8	7.5	7.5		EEUFB1V152( )	100	250
	1800	16	31.5	1850	0.052	2000	0.8	7.5			EEUFB1V182	100	
		18	25	1860	0.052	2000	0.8	7.5	7.5		EEUFB1V182S( )	100	250
	2200	16	35.5	2040	0.044	2000	0.8	7.5			EEUFB1V222L	100	
18		31.5	2050	0.046	2000	0.8	7.5			EEUFB1V222	50		
2700	16	40	2320	0.036	2000	0.8	7.5			EEUFB1V272L	100		
	18	35.5	2250	0.040	2000	0.8	7.5			EEUFB1V272	50		
3300	18	40	2470	0.036	2000	0.8	7.5			EEUFB1V332	50		
50	047	5	11	18	47.0	1000	0.5	2.0	5.0	2.5	EEUFB1HR47( )	200	2000
	1	5	11	30	22.0	1000	0.5	2.0	5.0	2.5	EEUFB1H1R0( )	200	2000
	2.2	5	11	45	10.0	1000	0.5	2.0	5.0	2.5	EEUFB1H2R2( )	200	2000
	3.3	5	11	55	6.70	1000	0.5	2.0	5.0	2.5	EEUFB1H3R3( )	200	2000
	4.7	5	11	70	4.70	1000	0.5	2.0	5.0	2.5	EEUFB1H4R7( )	200	2000
	6.8	5	11	80	3.20	1000	0.5	2.0	5.0	2.5	EEUFB1H6R8( )	200	2000
	10	5	11	100	2.20	1000	0.5	2.0	5.0	2.5	EEUFB1H100( )	200	2000
	18	5	11	160	1.30	1000	0.5	2.0	5.0	2.5	EEUFB1H180( )	200	2000
	27	5	15	210	0.920	1000	0.5	2.0	5.0	2.5	EEUFB1H270( )	200	2000
	39	6.3	11.2	260	0.590	1000	0.5	2.5	5.0	2.5	EEUFB1H390( )	200	2000
	56	6.3	15	350	0.40	1000	0.5	2.5	5.0	2.5	EEUFB1H560( )	200	2000
	68	8	11.5	400	0.330	1000	0.6	3.5	5.0		EEUFB1H680( )	200	1000
	82	8	15	500	0.240	1000	0.6	3.5	5.0		EEUFB1H820L( )	200	1000
		10	12.5	520	0.260	2000	0.6	5.0	5.0		EEUFB1H820( )	200	500
	100	10	16	640	0.210	2000	0.6	5.0	5.0		EEUFB1H101( )	200	500
	120	8	20	650	0.180	1000	0.6	3.5	5.0		EEUFB1H121( )	200	1000
180	10	20	860	0.130	2000	0.6	5.0	5.0		EEUFB1H181L( )	200	500	
220	10	25	1000	0.110	2000	0.6	5.0	5.0		EEUFB1H221	200		

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W.V.	Cap. (±20%) (μF)	Case size		Specification			Lead Length			Part No.	Min.PackagingQty		
		Dia. (mm)	Length (mm)	Ripple current (100kHz) (+105°C) (mA)	Impedance (100kHz) (+20°C) (Ω)	Endurance (hours)	Lead Dia. (mm)	Lead Space			Straight Leads (pcs)	Taping (pcs)	
								Straight (mm)	Taping *B (mm)				Taping *H (mm)
50	330	10	30	1150	0.090	2000	0.6	5.0			EEUFB1H331L	100	
		12.5	20	1120	0.086	2000	0.6	5.0	5.0		EEUFB1H331( )	200	500
	470	12.5	25	1350	0.070	2000	0.6	5.0	5.0		EEUFB1H471( )	200	500
	560	12.5	30	1560	0.062	2000	0.8	5.0			EEUFB1H561	100	
	680	12.5	35	1780	0.050	2000	0.8	5.0			EEUFB1H681L	100	
		16	20	1380	0.072	2000	0.8	7.5	7.5		EEUFB1H681( )	100	250
	820	12.5	40	1980	0.043	2000	0.8	5.0			EEUFB1H821L	100	
		16	25	1600	0.060	2000	0.8	7.5	7.5		EEUFB1H821( )	100	250
		18	20	1600	0.062	2000	0.8	7.5	7.5		EEUFB1H821S( )	100	250
	1000	16	31.5	1850	0.052	2000	0.8	7.5			EEUFB1H102	100	
		18	25	1860	0.052	2000	0.8	7.5	7.5		EEUFB1H102S( )	100	250
	1200	16	35.5	2040	0.044	2000	0.8	7.5			EEUFB1H122	100	
	1500	16	40	2320	0.036	2000	0.8	7.5			EEUFB1H152L	100	
		18	31.5	2050	0.046	2000	0.8	7.5			EEUFB1H152	50	
1800	18	35.5	2250	0.040	2000	0.8	7.5			EEUFB1H182	50		
2200	18	40	2470	0.036	2000	0.8	7.5			EEUFB1H222	50		

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H=2.5mm.

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