Radial Lead Type

Series : **EB** Type : **A**



⚠ **This Series is no longer available for purchase in the country of Japan.**

Features

- Endurance : +105 °C 5000 h to 10000 h
- Hight ripple hight frequency (Hight Voltage)
- RoHS compliant

Specifications

Category temperature range	–40 °C to +105 °C	–25 °C to +105 °C
Rated voltage range	10 V.DC to 63 V.DC	160 V.DC to 450 V.DC
Capacitance range	2.2 µF to 3300 µF	10 µF to 330 µF
Capacitance tolerance	±20 % (120 Hz/+20 °C)	
Leakage current	I ≦ 0.01 CV or 3 (µA) After 2 minutes application of rated working voltage at +20 °C (Whichever is greater)	
Dissipation factor (tan δ)	Please see the attached characteristics list	
Endurance	After following life test with DC voltage and +105 °C±2 °C ripple current value applied (The sum of DC and ripple peak voltage shall not exceed the rated working voltage), when the capacitors are restord to 20 °C, the capacitors shall meet the limits specified below. (10 V.DC to 63 V.DC) Duration : ϕ5×11 to ϕ8×11.5 : 5000 hours ϕ8×15 to ϕ12.5×25 : 10000 hours	
	Capacitance change	Within ±30 % of the initial value
	tan δ	≦ 300 % of the initial limit
	DC leakage current	Within the initial limit
	(160 V.DC to 450 V.DC) Duration : 5000 hours	
	Capacitance change	Within ±20 % of the initial value
	tan δ	≦ 200 % of the initial limit
	DC leakage current	Within the initial limit
Shelf life	After storage for 1000 hours at +105 °C±2 °C with no voltage applied and then being stabilized at +20 °C, capacitors shall meet the limits specified in Endurance. (With voltage treatment)	

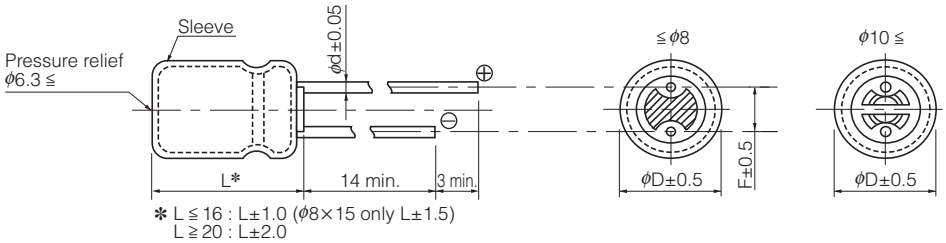
Frequency correction factor for ripple current

(10 V.DC ~ 63 V.DC)

Capacitance (µF)	Frequency (Hz)				
	60	120	1 k	10 k	100 k
2.2 to 10	0.75	1.00	1.40	1.55	1.65
22 to 470	0.85	1.00	1.20	1.25	1.30
1000 to 3300	0.95	1.00	1.05	1.10	1.15

Rated voltage (V.DC)	Frequency (Hz)			
	120	1 k	10 k to 30k	30 k to 100k
160 to 250	0.55	0.85	0.90	1.00
350 to 450	0.50	0.80	0.90	1.00

Dimensions



✻ L ≦ 16 : L±1.0 (ϕ8×15 only L±1.5)
L ≧ 20 : L±2.0

(Unit : mm)

ϕD	5	6.3	8	10	12.5	16	18
ϕd	0.5	0.5	0.6	0.6	0.6	0.8	0.8
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5

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Characteristics list

Endurance : 105 °C φ5×11 to φ8×11.5=5000 h, φ8×15 to φ12.5×25=10000 h

Rated voltage (V.DC)	Cap. (±20 %) (μF)	Case size (mm)		Specification			Lead length (mm)				Part No.	Min. Packaging Q'ty	
								Lead space					
		φD	L	Ripple current (120 Hz) (+105 °C) (mA r.m.s.)	tan δ (120 Hz) (+20 °C)	Endurance (hours)	Lead dia. φd	Straight	Taping ✻B	Taping ✻H		Straight leads (pcs)	Taping (pcs)
10	100	5	11	66	0.30	5000	0.5	2.0	5.0	2.5	EEUEB1A101S( )	200	2000
	220	6.3	11.2	100	0.30	5000	0.5	2.5	5.0	2.5	EEUEB1A221S( )	200	2000
	470	8	15	278	0.30	10000	0.6	3.5	5.0		EEUEB1A471( )	200	1000
		8	11.5	180	0.30	5000	0.6	3.5	5.0		EEUEB1A471S( )	200	1000
	2200	12.5	20	540	0.32	10000	0.6	5.0	5.0		EEUEB1A222( )	200	500
	3300	12.5	25	802	0.34	10000	0.6	5.0	5.0		EEUEB1A332( )	200	500
16	1000	10	20	430	0.25	10000	0.6	5.0	5.0		EEUEB1C102( )	200	500
	2200	12.5	25	706	0.27	10000	0.6	5.0	5.0		EEUEB1C222( )	200	500
25	47	5	11	55	0.22	5000	0.5	2.0	5.0	2.5	EEUEB1E470S( )	200	2000
	100	6.3	11.2	95	0.22	5000	0.5	2.5	5.0	2.5	EEUEB1E101S( )	200	2000
	220	8	11.5	125	0.22	5000	0.6	3.5	5.0		EEUEB1E221S( )	200	1000
	330	8	15	255	0.22	10000	0.6	3.5	5.0		EEUEB1E331( )	200	1000
	470	10	16	321	0.22	10000	0.6	5.0	5.0		EEUEB1E471( )	200	500
	1000	12.5	20	498	0.22	10000	0.6	5.0	5.0		EEUEB1E102( )	200	500
35	33	5	11	46	0.18	5000	0.5	2.0	5.0	2.5	EEUEB1V330S( )	200	2000
	220	8	15	197	0.18	10000	0.6	3.5	5.0		EEUEB1V221( )	200	1000
	330	10	16	278	0.18	10000	0.6	5.0	5.0		EEUEB1V331( )	200	500
	470	10	20	349	0.18	10000	0.6	5.0	5.0		EEUEB1V471( )	200	500
	1000	12.5	25	586	0.18	10000	0.6	5.0	5.0		EEUEB1V102( )	200	500
50	2.2	5	11	15	0.15	5000	0.5	2.0	5.0	2.5	EEUEB1H2R2S( )	200	2000
	3.3	5	11	18	0.15	5000	0.5	2.0	5.0	2.5	EEUEB1H3R3S( )	200	2000
	4.7	5	11	18	0.15	5000	0.5	2.0	5.0	2.5	EEUEB1H4R7S( )	200	2000
	10	5	11	27	0.15	5000	0.5	2.0	5.0	2.5	EEUEB1H100S( )	200	2000
	22	5	11	39	0.15	5000	0.5	2.0	5.0	2.5	EEUEB1H220S( )	200	2000
	47	6.3	11.2	61	0.15	5000	0.5	2.5	5.0	2.5	EEUEB1H470S( )	200	2000
	100	8	11.5	99	0.15	5000	0.6	3.5	5.0		EEUEB1H101S( )	200	1000
	220	10	16	234	0.15	10000	0.6	5.0	5.0		EEUEB1H221( )	200	500
	330	10	20	293	0.15	10000	0.6	5.0	5.0		EEUEB1H331( )	200	500
	470	12.5	20	370	0.15	10000	0.6	5.0	5.0		EEUEB1H471( )	200	500
63	2.2	5	11	16.5	0.12	5000	0.5	2.0	5.0	2.5	EEUEB1J2R2S( )	200	2000
	3.3	5	11	20	0.12	5000	0.5	2.0	5.0	2.5	EEUEB1J3R3S( )	200	2000
	4.7	5	11	23	0.12	5000	0.5	2.0	5.0	2.5	EEUEB1J4R7S( )	200	2000
	10	5	11	30	0.12	5000	0.5	2.0	5.0	2.5	EEUEB1J100S( )	200	2000
	22	6.3	11.2	40	0.12	5000	0.5	2.5	5.0	2.5	EEUEB1J220S( )	200	2000
	33	6.3	11.2	50	0.12	5000	0.5	2.5	5.0	2.5	EEUEB1J330S( )	200	2000
	47	8	15	94	0.12	10000	0.6	3.5	5.0		EEUEB1J470( )	200	1000
		8	11.5	80	0.12	5000	0.6	3.5	5.0		EEUEB1J470S( )	200	1000
	100	8	15	180	0.12	10000	0.6	3.5	5.0		EEUEB1J101( )	200	1000
	220	10	20	292	0.12	10000	0.6	5.0	5.0		EEUEB1J221( )	200	500
	330	12.5	20	381	0.12	10000	0.6	5.0	5.0		EEUEB1J331( )	200	500
	470	12.5	25	454	0.12	10000	0.6	5.0	5.0		EEUEB1J471( )	200	500

· When requesting taped product, please put the letter "B" or "H" between the "( )". Lead wire pitch ✻B=5 mm, 7.5 mm, H=2.5 mm.

· Please refer to the page of “Taping dimensions”.

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Characteristics list

Endurance : 105 °C 5000 h

Rated voltage (V.DC)	Cap. (±20 %) (μF)	Case size (mm)		Specification			Lead length (mm)			Part No.	Min. Packaging Q'ty	
								Lead space				
		φD	L	Ripple current (120 Hz) (+105 °C) (mA r.m.s.)	tan δ (120 Hz) (+20 °C)	Endurance (hours)	Lead dia. φd	Straight	Taping ✻B		Straight leads (pcs)	Taping (pcs)
160	22	10	20	470	0.15	5000	0.6	5.0	5.0	EEUEB2C220( )	200	500
	33	10	20	470	0.15	5000	0.6	5.0	5.0	EEUEB2C330( )	200	500
	47	12.5	20	600	0.15	5000	0.6	5.0	5.0	EEUEB2C470( )	200	500
	68	12.5	25	750	0.15	5000	0.6	5.0	5.0	EEUEB2C680( )	200	500
		16	20	750	0.15	5000	0.8	7.5	7.5	EEUEB2C680S( )	100	250
	100	16	25	1060	0.15	5000	0.8	7.5	7.5	EEUEB2C101( )	100	250
		18	20	1060	0.15	5000	0.8	7.5	7.5	EEUEB2C101S( )	100	250
	150	16	31.5	1280	0.15	5000	0.8	7.5	–	EEUEB2C151	100	–
		18	25	1280	0.15	5000	0.8	7.5	7.5	EEUEB2C151S( )	100	250
	220	16	31.5	1280	0.15	5000	0.8	7.5	–	EEUEB2C221	100	–
		18	25	1280	0.15	5000	0.8	7.5	7.5	EEUEB2C221S( )	100	250
	330	18	31.5	1690	0.15	5000	0.8	7.5	–	EEUEB2C331	50	–
200	22	10	20	470	0.15	5000	0.6	5.0	5.0	EEUEB2D220( )	200	500
	33	12.5	20	600	0.15	5000	0.6	5.0	5.0	EEUEB2D330( )	200	500
	47	12.5	20	600	0.15	5000	0.6	5.0	5.0	EEUEB2D470( )	200	500
	68	12.5	25	750	0.15	5000	0.6	5.0	5.0	EEUEB2D680( )	200	500
		16	20	750	0.15	5000	0.8	7.5	7.5	EEUEB2D680S( )	100	250
	100	16	25	1060	0.15	5000	0.8	7.5	7.5	EEUEB2D101( )	100	250
		18	20	1060	0.15	5000	0.8	7.5	7.5	EEUEB2D101S( )	100	250
	150	16	31.5	1280	0.15	5000	0.8	7.5	–	EEUEB2D151	100	–
		18	25	1280	0.15	5000	0.8	7.5	7.5	EEUEB2D151S( )	100	250
	220	18	31.5	1690	0.15	5000	0.8	7.5	–	EEUEB2D221	50	–
250	22	12.5	20	560	0.15	5000	0.6	5.0	5.0	EEUEB2E220( )	200	500
	33	12.5	20	560	0.15	5000	0.6	5.0	5.0	EEUEB2E330( )	200	500
	47	12.5	25	710	0.15	5000	0.6	5.0	5.0	EEUEB2E470( )	200	500
		16	20	710	0.15	5000	0.8	7.5	7.5	EEUEB2E470S( )	100	250
	68	16	25	990	0.15	5000	0.8	7.5	7.5	EEUEB2E680( )	100	250
		18	20	990	0.15	5000	0.8	7.5	7.5	EEUEB2E680S( )	100	250
	100	16	31.5	1200	0.15	5000	0.8	7.5	–	EEUEB2E101	100	–
		18	25	1200	0.15	5000	0.8	7.5	7.5	EEUEB2E101S( )	100	250
	150	18	31.5	1470	0.15	5000	0.8	7.5	–	EEUEB2E151	50	–
350	10	10	20	270	0.20	5000	0.6	5.0	5.0	EEUEB2V100( )	200	500
	22	12.5	20	350	0.20	5000	0.6	5.0	5.0	EEUEB2V220( )	200	500
	33	16	20	480	0.20	5000	0.8	7.5	7.5	EEUEB2V330S( )	100	250
	47	16	25	640	0.20	5000	0.8	7.5	7.5	EEUEB2V470( )	100	250
		18	20	640	0.20	5000	0.8	7.5	7.5	EEUEB2V470S( )	100	250
	68	16	31.5	780	0.20	5000	0.8	7.5	–	EEUEB2V680	100	–
		18	25	780	0.20	5000	0.8	7.5	7.5	EEUEB2V680S( )	100	250
	100	18	31.5	970	0.20	5000	0.8	7.5	–	EEUEB2V101	50	–
400	10	10	20	250	0.24	5000	0.6	5.0	5.0	EEUEB2G100( )	200	500
	22	12.5	25	410	0.24	5000	0.6	5.0	5.0	EEUEB2G220( )	200	500
		16	20	410	0.24	5000	0.8	7.5	7.5	EEUEB2G220S( )	100	250
	33	16	25	600	0.24	5000	0.8	7.5	7.5	EEUEB2G330( )	100	250
		18	20	600	0.24	5000	0.8	7.5	7.5	EEUEB2G330S( )	100	250
	47	16	31.5	730	0.24	5000	0.8	7.5	–	EEUEB2G470	100	–
		18	25	730	0.24	5000	0.8	7.5	7.5	EEUEB2G470S( )	100	250
450	10	12.5	20	310	0.24	5000	0.6	5.0	5.0	EEUEB2W100( )	200	500
	22	16	25	560	0.24	5000	0.8	7.5	7.5	EEUEB2W220( )	100	250
		18	20	560	0.24	5000	0.8	7.5	7.5	EEUEB2W220S( )	100	250
	33	16	31.5	680	0.24	5000	0.8	7.5	–	EEUEB2W330( )	100	–
		18	25	680	0.24	5000	0.8	7.5	7.5	EEUEB2W330S( )	100	250
	47	18	31.5	850	0.24	5000	0.8	7.5	–	EEUEB2W470	50	–

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· Please refer to the page of “Taping dimensions”.

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