

Radial Lead Type

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



■ Features

- Endurance : +105 °C 5000 h to 10000 h
- High ripple high frequency (High Voltage)
- RoHS directive compliant

■ Specifications

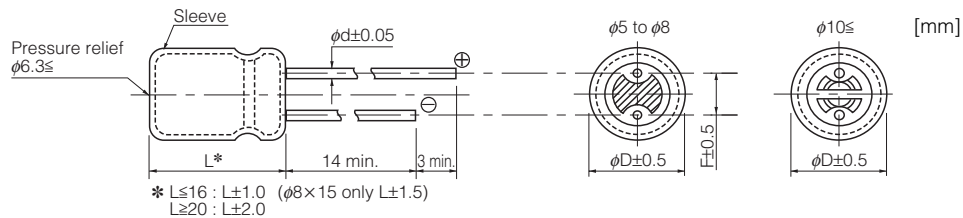
Category Temp. Range	-40 °C to +105 °C	-25 °C to +105 °C
Rated W.V. Range	10 V.DC to 63 V.DC	160 V.DC to 450 V.DC
Nominal Cap. Range	0.47 μF to 3300 μF	10 μF to 330 μF
Capacitance Tolerance	±20 % (120 Hz/+20 °C)	
DC Leakage Current	I ≤ 0.01 CV or 3 (μA) After 2 minutes application of rated working voltage at +20 °C (Whichever is greater)	
tan δ	Please see the attached standard products 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 restored to 20 °C, the capacitors shall meet the limits specified below.	
	(10 to 63 V.DC) Duration : φ5×11 to φ8×11.5 : 5000 hours φ5×15 to φ6.3×15 : 7000 hours φ8×15 to φ12.5×25 : 10000 hours	
	Capacitance change	±30 % of initial measured value
	tan δ	≤ 300 % of initial specified value
	DC leakage current	≤ initial specified value
	(160 to 450 V.DC) Duration : 5000 hours	
	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 °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 ~ 63 V.DC)

Capacitance (μF)	Frequency (Hz)				
	60	120	1 k	10 k	100 k
0.47 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

W. V. (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 in mm (not to scale)



Body Dia. ϕD	5	6.3	8	10	12.5	16	18
Lead Dia. ϕd	0.5	0.5	0.6	0.6	0.6	0.8	0.8
Lead space F	2.0	2.5	3.5	5.0	5.0	7.5	7.5

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00 Sep. 2010

■ Standard Products

W.V.	Cap. (±20 %)	Case size		Specification			Lead Length				Part No.	Min. Packaging Q'ty	
		Dia.	Length	Ripple Current (120 Hz) (+105 °C) (mA r.m.s.)	tan δ (120 Hz) (+20 °C)	Endurance	Lead Dia.	Lead Space				Straight Leads	Taping
								Straight	Taping *B	Taping *H			
(V)	(μF)	(mm)	(mm)			(hours)	(mm)	(mm)	(mm)	(mm)		(pcs)	(pcs)
10	100	5	15	105	0.30	7000	0.5	2.0	5.0	2.5	EEUEB1A101()	200	2000
		5	11	66	0.30	5000	0.5	2.0	5.0	2.5	EEUEB1A101S()	200	2000
	220	6.3	15	152	0.30	7000	0.5	2.5	5.0	2.5	EEUEB1A221()	200	2000
		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
16	3300	12.5	25	802	0.34	10000	0.6	5.0	5.0		EEUEB1A332()	200	500
	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	15	78	0.22	7000	0.5	2.0	5.0	2.5	EEUEB1E470()	200	2000
		5	11	55	0.22	5000	0.5	2.0	5.0	2.5	EEUEB1E470S()	200	2000
	100	6.3	15	135	0.22	7000	0.5	2.5	5.0	2.5	EEUEB1E101()	200	2000
		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	15	66	0.18	7000	0.5	2.0	5.0	2.5	EEUEB1V330()	200	2000
		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	0.47	5	11	4	0.15	5000	0.5	2.0	5.0	2.5	EEUEB1HR47S()	200	2000
	1	5	11	8	0.15	5000	0.5	2.0	5.0	2.5	EEUEB1H1R0S()	200	2000
	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	15	55	0.15	7000	0.5	2.0	5.0	2.5	EEUEB1H220()	200	2000
		5	11	39	0.15	5000	0.5	2.0	5.0	2.5	EEUEB1H220S()	200	2000
	47	6.3	15	87	0.15	7000	0.5	2.5	5.0	2.5	EEUEB1H470()	200	2000
		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	0.47	5	15	6	0.12	7000	0.5	2.0	5.0	2.5	EEUEB1JR47()	200	2000
		5	11	4.5	0.12	5000	0.5	2.0	5.0	2.5	EEUEB1JR47S()	200	2000
	1	5	15	12	0.12	7000	0.5	2.0	5.0	2.5	EEUEB1J1R0()	200	2000
		5	11	9	0.12	5000	0.5	2.0	5.0	2.5	EEUEB1J1R0S()	200	2000
	2.2	5	15	22	0.12	7000	0.5	2.0	5.0	2.5	EEUEB1J2R2()	200	2000
		5	11	16.5	0.12	5000	0.5	2.0	5.0	2.5	EEUEB1J2R2S()	200	2000
	3.3	5	15	30	0.12	7000	0.5	2.0	5.0	2.5	EEUEB1J3R3()	200	2000
		5	11	20	0.12	5000	0.5	2.0	5.0	2.5	EEUEB1J3R3S()	200	2000
	4.7	5	15	30	0.12	7000	0.5	2.0	5.0	2.5	EEUEB1J4R7()	200	2000
		5	11	23	0.12	5000	0.5	2.0	5.0	2.5	EEUEB1J4R7S()	200	2000
	10	5	15	46	0.12	7000	0.5	2.0	5.0	2.5	EEUEB1J100()	200	2000
		5	11	30	0.12	5000	0.5	2.0	5.0	2.5	EEUEB1J100S()	200	2000
	22	6.3	15	55	0.12	7000	0.5	2.5	5.0	2.5	EEUEB1J220()	200	2000
		6.3	11.2	40	0.12	5000	0.5	2.5	5.0	2.5	EEUEB1J220S()	200	2000
	33	6.3	15	71	0.12	7000	0.5	2.5	5.0	2.5	EEUEB1J330()	200	2000
		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	

Endurance : 105 °C $\phi 5 \times 11$ to $\phi 8 \times 11.5 = 5000$ h, $\phi 5 \times 15$ to $\phi 6.3 \times 15 = 7000$ h, $\phi 8 \times 15$ to $\phi 12.5 \times 25 = 10000$ h

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.

The taping dimensions are explained on EE189 of our Catalog. Please use it as a reference guide.

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00 Sep. 2010

■ Standard Products

W.V.	Cap. (±20 %)	Case size		Specification			Lead Length			Part No.	Min. Packaging Q'ty		
		Dia.	Length	Ripple Current (100 kHz) (+105 °C) (mA r.m.s.)	tan δ (120 Hz) (+20 °C)	Endurance (hours)	Lead Dia. (mm)	Lead Space			Straight Leads (pcs)	Taping (pcs)	
								Straight (mm)	Taping *B (mm)				
(V)	(μF)	(mm)	(mm)										
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	100	—	
	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	
		16	25	640	0.20	5000	0.8	7.5	7.5	EEUEB2V470()	100	250	
	47	18	20	640	0.20	5000	0.8	7.5	7.5	EEUEB2V470S()	100	250	
		16	31.5	780	0.20	5000	0.8	7.5	—	EEUEB2V680	100	—	
	68	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	—	

Endurance : 105 °C 5000 h

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01 Dec. 2010