

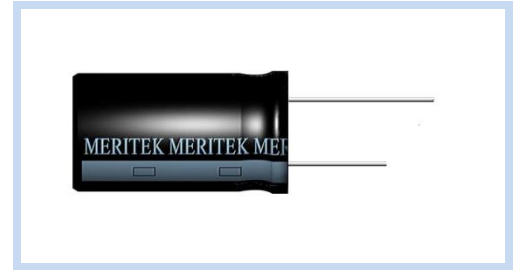
Aluminum Electrolytic Capacitors 2000Hrs 85°C General Purpose

RB Series

MERITEK

FEATURE

- Operating Temperature: -40°C ~ +85°C
- Load Life of 2000 Hours at +85°C
- High Value of CV for General Purposes



SPECIFICATIONS

Item	Characteristic								
Operation Temperature Range	-40°C ~ + 85°C		-40°C ~ + 85°C			-25°C ~ + 85°C			
Rated Working Voltage	6.3 ~ 100VDC		160 ~ 400VDC			450VDC			
Capacitance Tolerance	±20% (M) at 120Hz 20°C								
Leakage Current at 20°C	6.3~100 VDC I ≤ 0.01CV or 4 (μA) 160~450 VDC I ≤ 0.03CV + 40 (μA) , max *Whichever is greater after 3 minutes					I: Leakage Current (μA) C: Capacitance (μF) V: Working Voltage (V)			
Surge Voltage at 20°C	Rated Voltage (V)	6.3	10	16	25	35	50	63	
	Surge Voltage (V)	8	13	20	32	44	63	79	
	Rated Voltage (V)	100	160	200	250	350	400	450	
	Surge Voltage (V)	125	200	250	300	400	450	500	
Dissipation Factor-tan δ	Add 0.02 per 1000 μF for more than 1000 μF; at 120Hz 20°C								
	Rated Voltage (V)	6.3	10	16	25	35	50	63	
	tan δ max	0.22	0.19	0.16	0.14	0.12	0.10	0.10	
	Rated Voltage (V)	100	160	200	250	350	400	450	
	tan δ max	0.08	0.15	0.15	0.15	0.20	0.20	0.20	
Low Temperature Stability	Impedance ratio at 120Hz								
	Rated Voltage (V)	6.3	10	16	25	35~100	160~250	350~400	450
	-25°C / +20°C	4	3	2	2	2	3	6	15
	-40°C / +20°C	8	6	4	3	3	6	6	--
Load Life	After 2000 hours application of W.V. and +85°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)								
	Capacitance Change	≤ ±20% of initial value							
	Dissipation Factor	≤ 150% of initial specified value							
	Leakage current	≤ initial specified value							
Shelf Life	At + 85°C no voltage application after 1000 hours the capacitor shall meet the limits (with voltage treatment)								
	Capacitance Change	≤ ±20% of initial value							
	Dissipation Factor	≤ 200% of initial specified value							
	Leakage current	≤ 200% of initial specified value							

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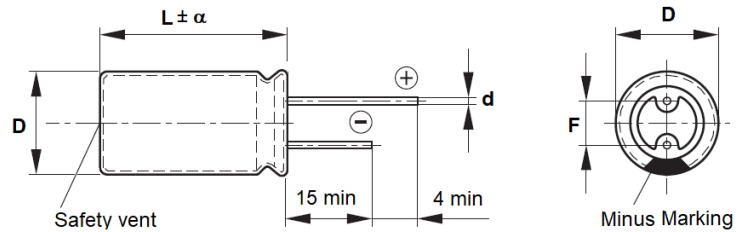
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DIMENSION

Unit: mm

D+0.5(max)	5	6.3	8	10	12.5	16	18	22	25
F±0.5	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10.0	12.5
d±0.05	0.5	0.5	0.6	0.6	0.6	0.8	0.8	1.0	1.0
α	1.5	1.5	1.5	1.5	2.0	2.0	2.0	2.0	2.0



RIPPLE CURRENT COEFFICIENTS

Working Voltage	Frequency Coefficient			
	60Hz	120Hz	1KHz	≥ 10KHz
6.3~25V	0.85	1.00	1.10	1.20
35~100V	0.80	1.00	1.15	1.25
160~250V	0.75	1.00	1.25	1.40
350~450V	0.70	1.00	1.30	1.50

Temperature	Coefficient
65°C	1.25
75°C	1.14
85°C	1.00

CASE SIZE AND MAX RIPPLE CURRENT

Capacitance		6.3VDC (0J)		10VDC (1A)		16VDC (1C)	
		DxL	RC	DxL	RC	DxL	RC
μF	Code	(mm)	mA(rms)	(mm)	mA(rms)	(mm)	mA(rms)
47	470				→	5x11	130
100	101	5x11	160	5x11	170	6.3x11	210
220	221	5x11	240	5x11	250	6.3x11	310
		6.3x11	270	6.3x11	290	8x11	370
330	331	6.3x11	330	6.3x11	350	8x11	450
		8x11	380	8x11	410	10x12.5	470
470	471	6.3x11	390	6.3x11	420	8x11	540
		8x11	460	8x11	490	10x12.5	560
1000	102	8x11	670	10x12.5	760	10x16	920
		10x12.5	700	10x16	840	10x20	1010
2200	222	10x16	1110	10x20	1310	12.5x20	1510
		10x20	1220	12.5x20	1390	12.5x25	1660
3300	332	10x20	1440	12.5x20	1630	12.5x25	1930
		12.5x20	1530	12.5x25	1800	16x25	1940
4700	472	12.5x20	1730	12.5x25	2020	16x25	2160
		12.5x25	1910	16x25	2030	16x32	2390

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CASE SIZE AND MAX RIPPLE CURRENT

Capacitance		6.3VDC (0J)		10VDC (1A)		16VDC (1C)	
		DxL	RC	DxL	RC	DxL	RC
μF	Code	(mm)	mA(rms)	(mm)	mA(rms)	(mm)	mA(rms)
6800	682	12.5x25	2160	16x25	2270	16x32	2650
		16x25	2170	16x32	2510	18x36	2980
8200	822	16x25	2280	16x32	2630	16x36	2910
		16x32	2520	18x36	2960	18x40	3280
10000	103	16x25	2390	16x36	2900	18x36	3230
		16x32	2640	18x36	3090	18x40	3400
15000	153	16x36	3050	18x36	3360	22x40	4090
		18x36	3260	18x40	3540	22x50	4520
22000	223	18x40	3680	22x50	4650	25x50	5120

Capacitance		25VDC (1E)		35VDC (1V)		50VDC (1H)	
		DxL	RC	DxL	RC	DxL	RC
μF	Code	(mm)	mA(rms)	(mm)	mA(rms)	(mm)	mA(rms)
10	100	5x11	60	5x11	70	5x11	75
22	220	5x11	95	5x11	100	5x11	110
33	330	5x11	110	5x11	120	5x11	140
		6.3x11	130	6.3x11	140	6.3x11	150
47	470	5x11	140	5x11	150	6.3x11	180
		6.3x11	160	6.3x11	170	8x11	210
100	101	6.3x11	230	6.3x11	240	8x11	310
		8x11	260	8x11	290	10x12.5	330
220	221	8x11	390	8x11	420	10x12.5	490
		10x12.5	410	10x12.5	450	10x16	540
330	331	8x11	480	10x12.5	550	10x16	670
		10x12.5	510	10x16	610	10x20	730
470	471	10x12.5	600	10x16	720	10x20	820
		10x16	670	10x20	800	12.5x20	930
1000	102	10x20	1080	12.5x20	1240	12.5x25	1500
		12.5x20	1150	12.5x25	1370	16x25	1510
2200	222	12.5x25	1760	16x25	1890	16x36	2390
		16x25	1770	16x32	2090	18x36	2550
3300	332	16x25	2040	16x36	2530	18x36	2890
		16x32	2260	18x36	2700	18x40	3050

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CASE SIZE AND MAX RIPPLE CURRENT

Capacitance		25VDC (1E)		35VDC (1V)		50VDC (1H)	
		DxL	RC	DxL	RC	DxL	RC
μF	Code	(mm)	mA(rms)	(mm)	mA(rms)	(mm)	mA(rms)
4700	472	16x32	2500	18x36	2960	22x45	3880
		18x36	2810	18x40	3120		
6800	682	18x36	3100	22x45	4020	25x50	4730
		18x40	3270				
8200	822	22x45	4000	22x50	4350		
10000	103	22x50	4330	25x50	4800		
15000	153	25x50	4970				

Capacitance		63VDC (1J)		100VDC (2A)	
		DxL	RC	DxL	RC
μF	Code	(mm)	mA(rms)	(mm)	mA(rms)
10	100	5x11	75	6.3x11	95
22	220	5x11	110	6.3x11	140
		6.3x11	130	8x11	160
33	330	6.3x11	150	8x11	200
		8x11	180	10x12.5	210
47	470	6.3x11	180	10x12.5	250
		8x11	210	10x16	280
100	101	10x12.5	330	10x20	450
		10x16	370	12.5x20	480
220	221	10x16	540	12.5x25	790
		10x20	600	16x25	790
330	331	10x20	730	12.5x25	960
		12.5x20	780	16x25	970
470	471	12.5x20	930	16x25	1160
		12.5x25	1030	16x32	1280
1000	102	16x25	1510	18x40	2220
		16x32	1670	22x35	2340
2200	222	22x35	2830	25x50	3900
3300	332	22x50	3760		
4700	472	25x50	4370		

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CASE SIZE AND MAX RIPPLE CURRENT

Capacitance		160VDC (2C)		200VDC (2D)		250VDC (2E)	
		DxL	RC	DxL	RC	DxL	RC
μF	Code	(mm)	mA(rms)	(mm)	mA(rms)	(mm)	mA(rms)
1	1R0	6.3x11	25	6.3x11	27	6.3x11	29
2.2	2R2	6.3x11	37	6.3x11	39	6.3x11	43
3.3	3R3	6.3x11	45	6.3x11	48	8x11	60
4.7	4R7	6.3x11	55	8x11	65	8x11	75
10	100	8x11	90	10x12.5	100	10x16	120
22	220	10x16	160	10x20	190	12.5x20	220
33	330	10x20	210	12.5x20	250	12.5x20	270
47	470	12.5x20	270	12.5x20	290	12.5x25	350
100	101	12.5x25	440	16x25	470	16x32	570
220	221	16x36	760	18x40	920		
		22x30	850	22x30	910	22x35	1060
330	331	18x40	1050				
		22x30	1040	22x40	1260	22x45	1450
470	471	22x40	1400	22x45	1590	25x45	1850
560	561	22x45	1610	22x50	1820	25x50	2120
680	681	22x50	1860	25x50	2150		
820	821	25x50	2200				

Capacitance		350VDC (2V)		400VDC (2G)		450VDC (2W)	
		DxL	RC	DxL	RC	DxL	RC
μF	Code	(mm)	mA(rms)	(mm)	mA(rms)	(mm)	mA(rms)
1	1R0	8x11	29	8x11	30	8x11	29
2.2	2R2	8x11	43	8x11	44	10x12.5	45
3.3	3R3	10x12.5	55	10x12.5	55	10x16	60
4.7	4R7	10x12.5	65	10x16	75	10x18	75
10	100	10x20	120	12.5x20	130	12.5x20	130
22	220	12.5x20	190	12.5x25	210	16x25	210
33	330	12.5x25	250	16x25	260	16x32	280
47	470	16x25	300	16x32	350	18x36	380
				22x30	410		
100	101	18x36	550	18x36	570	18x36	550
		22x35	610	22x40	670		
150	151	22x40	790	25x50	970		
220	221	22x50	1060				

Note:

1. Max ripple current :mA(rms) at 85°C. 120Hz
2. All blank voltage on sleeve marking is the same voltage as " →"point to.

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PART NUMBERING SYSTEM

RB 1H 220 M E 110 A B
(1) (2) (3) (4) (5) (6) (7) (8)

No	Item	Code	Description	Series Reference
(1)	Meritek Series	RB	Aluminum Electrolytic Capacitors	General Purpose, 2000Hrs 85°C
(2)	Rated Voltage Code	1H	50V:50V	DC working voltage, See Table Below
(3)	Capacitance	220	220:22µF	First two digit: significant, Third: Multiplier
(4)	Tolerance	M	M: ± 20%	-20% ~ +20%
(5)	Case Diameter Code	E	E: 5 mm	See Table Below
(6)	Case Height	110	110: 11 mm	Third digit denotes the first decimal place
(7)	Package	A	A: Tape & Ammo	R: Tape & Reel, Blank : Bulk
(8)	Taping Pitch Code	B	B: 2.0 mm	See Table Below, Blank: Bulk

Voltage	4	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450	500
Code	0G	0J	1A	1C	1E	1V	1H	1J	2A	2C	2D	2E	2V	2G	2W	2H

Diameter	4	5	6.3	8	10	12.5	14.5	16	18	20	22	25
Code	D	E	F	H	J	K	U	L	M	N	P	Q

Pitch	1.5	2	2.5	3.5	5	7.5
Code	A	B	C	D	E	F

LEGACY PART NUMBERING SYSTEM

RB 50V 220 M TA 511
(1) (2) (3) (4) (5) (6)

No	(1)	(2)	(3)	(4)	(5)	(6)
Item	Meritek Series	Rated Voltage	Capacitance	Tolerance	Package	Case Size

*Specifications subject to change without notice.