

SURFACE MOUNT ALUMINUM ELECTROLYTIC CAPACITORS



BDR Series

• 105°C 1,000~2,000Hrs assured.

- Vertical SMD type.
- For STB, Satellite Radio, Computer Server.
- RoHS compliant.
- Halogen-free capacitors are also available.

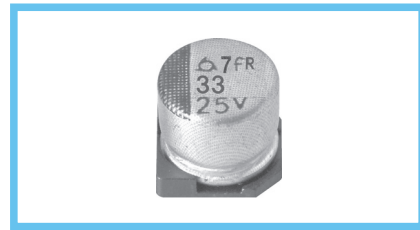
Solvent-proof

WV ≤ 63V_{DC}

MVK
(BDS)

Downsized

BDR

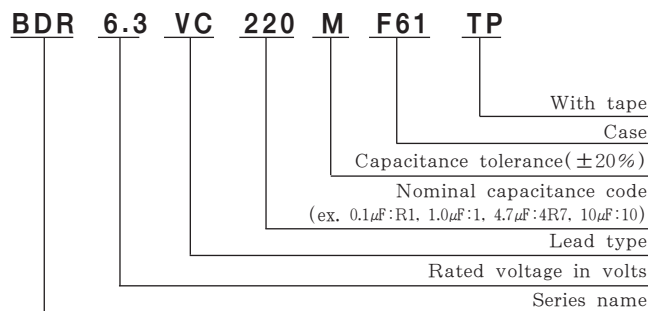


SPECIFICATIONS

Item	Characteristics																					
Rated Voltage Range	6.3 ~ 100 V _{DC}																					
Operating Temperature Range	-40 ~ +105°C																					
Capacitance Tolerance	±20%(M) (at 20°C, 120Hz)																					
Leakage Current	I=0.01CV(μA) or 3μA, whichever is greater. Where, I:Max. Leakage current(μA), C:Nominal capacitance(μF), V:Rated voltage(V _{DC}) (at 20°C, 2 minutes)																					
Dissipation Factor (Tanδ)	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Rated Voltage(V_{DC})</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50~100</th> </tr> </thead> <tbody> <tr> <td>∅ 4 ~ ∅ 6.3</td> <td>0.3</td> <td>0.24</td> <td>0.2</td> <td>0.16</td> <td>0.14</td> <td>-</td> </tr> <tr> <td>∅ 8 ~ ∅ 10</td> <td>0.40</td> <td>0.30</td> <td>0.26</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> </tr> </tbody> </table> (at 20°C, 120Hz)	Rated Voltage(V _{DC})	6.3	10	16	25	35	50~100	∅ 4 ~ ∅ 6.3	0.3	0.24	0.2	0.16	0.14	-	∅ 8 ~ ∅ 10	0.40	0.30	0.26	0.16	0.14	0.12
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∅ 8 ~ ∅ 10	0.40	0.30	0.26	0.16	0.14	0.12																
Temperature Characteristics (Max. Impedance ratio)	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Rated voltage(V_{DC})</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50~100</th> </tr> </thead> <tbody> <tr> <td>Z(-25°C)/Z(+20°C)</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>3</td> </tr> <tr> <td>Z(-40°C)/Z(+20°C)</td> <td>10</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> <td>4</td> </tr> </tbody> </table> (at 120Hz)	Rated voltage(V _{DC})	6.3	10	16	25	35	50~100	Z(-25°C)/Z(+20°C)	4	3	2	2	2	3	Z(-40°C)/Z(+20°C)	10	8	6	4	3	4
Rated voltage(V _{DC})	6.3	10	16	25	35	50~100																
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Z(-40°C)/Z(+20°C)	10	8	6	4	3	4																
Load Life	<p>The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied with the following conditions.</p> <p>∅ 4 ~ ∅ 6.3 : 105°C, 1,000 hours, ∅ 8 ~ ∅ 10 : 105°C, 2,000 hours.</p> <p>Capacitance change</p> <p style="margin-left: 20px;">∅ 4 ~ ∅ 6.3 ≤ ±30 % of the initial value</p> <p style="margin-left: 20px;">∅ 8 ~ ∅ 10 ≤ ±20 % of the initial value</p> <p>Tanδ</p> <p style="margin-left: 20px;">∅ 4 ~ ∅ 6.3 ≤ 300 % of the initial specified value</p> <p style="margin-left: 20px;">∅ 8 ~ ∅ 10 ≤ 200 % of the initial specified value</p> <p>Leakage current ≤ The initial specified value</p>																					
Shelf Life	<p>The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them of the specified time at 105°C without voltage applied. The rated voltage shall be applied to the capacitors for a minimum of 30 minutes, at least 24 hours and not more than 48 hours before the measurements.</p> <p>Capacitance change</p> <p style="margin-left: 20px;">∅ 4 ~ ∅ 6.3 ≤ ±25 % of the initial value</p> <p style="margin-left: 20px;">∅ 8 ~ ∅ 10 ≤ ±20 % of the initial value</p> <p>Tanδ ≤ 200 % of the initial specified value</p> <p>Leakage current ≤ The initial specified value</p>																					
Others	Satisfied characteristics KS C IEC 60384-4																					

BDR Series

PART NUMBERING SYSTEM



RATED RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

Cap.(μF)	Freq.(Hz)			
	120	1K	10K	100K
4.7 ~ 10	1.00	1.30	1.40	1.50
22 ~ 1200	1.00	1.05	1.08	1.08

DIMENSIONS OF BDR Series

Unit(mm)

DIMENSIONS

● Vibration Resistance

<Size code: D56~J10> <Size code: H10~J10>

■ : Dummy terminals

Recommended Solder land on PC board

■ : Solder land on PC board

MARKING

Note 1 : $L \pm 0.5$ for 8×10 (H10)~ 10×10 (J10)
 Note 2 : 4×5.2 (D55), 4×5.8 (D61), 5×5.2 (E55), 5×5.8 (E61) is excluded symbol mark.
 Note 3 : 6.3WV is marked by 6V.

Case code	ØD	L	A	B	C	W	P	a	b	c	a	b	c
D56	4	5.3	4.3	4.3	5.1	0.5~0.8	1.0	1.0	2.6	1.6			
D61	4	5.8	4.3	4.3	5.1	0.5~0.8	1.0	1.0	2.6	1.6			
E55	5	5.2	5.3	5.3	5.9	0.5~0.8	1.4	1.4	3.0	1.6			
E56	5	5.3	5.3	5.3	5.9	0.5~0.8	1.4	1.4	3.0	1.6			
F61	5	5.8	5.3	5.3	5.9	0.5~0.8	1.4	1.4	3	1.6			
F55	6.3	5.2	6.6	6.6	7.2	0.5~0.8	1.9	1.9	3.5	1.6			
F61	6	5.8	6.6	6.6	7.3	0.5~0.8	1.9	1.9	3.5	1.6			
F80	6.3	7.7	6.6	6.6	7.2	0.5~0.8	1.9	1.9	3.5	1.6			
H10	8	10	8.3	8.3	9.0	0.7~1.1	3.1	3.1	4.2	2.2	3.1	4.2	3.5
J10	10	10	10.3	10.3	11	0.7~1.1	4.5	4.5	4.4	2.2	4.5	4.4	3.5

● Vibration Resistance →

RATINGS OF BDR Series Size Table

WV(V)	Cap.(µF)	Size Code	Rated Ripple Current (mArms/105°C, 120Hz)
6.3	33	D56	21
	47	D61	32
	100	E56	55
	220	F61	85
	470	H10	340
	1000	H10	430
10	33	D56	21
	47	E55	47
	68	E61	60
	100	F61	92
	220	F80	150
	330	H10	290
	470	H10	400
	1200	J10	592
16	22	D56	21
	27	D61	31
	33	E56	44
	47	E61	40
	100	F61	113
	330	H10	290
	470	H10	300
25	10	D61	25
	22	E56	39
	33	E61	46
	47	F61	54
	150	F80	165
	330	H10	290

WV(V)	Cap.(µF)	Size Code	Rated Ripple Current (mArms/105°C, 120Hz)	
35	10	D56	15	
	22	E61	36	
	33	F61	40	
	47	F61	52	
	100	F80	135	
	220	H10	275	
	330	J10	450	
	50	4.7	D61	14
10		E56	21	
22		F55	44	
27		F61	61	
33		F80	80	
47		F80	84	
100		H10	210	
220		J10	360	
63		4.7	E55	20
		10	F61	34
	22	F80	48	
	56	H10	196	
	100	J10	320	
	100	22	H10	90
33		J10	150	
47		J10	160	