

## 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.

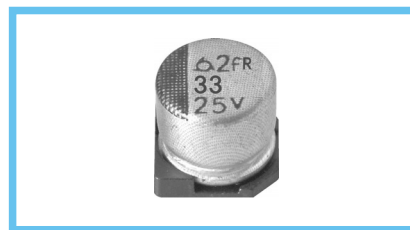
Solvent-proof

WV ≤ 63V<sub>DC</sub>

MVK  
(BDS)

Downsized

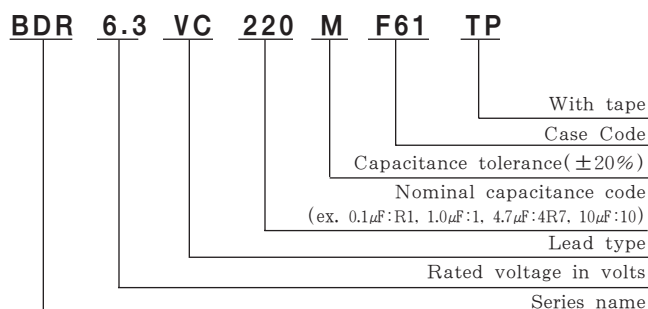
BDR



## SPECIFICATIONS

Item	Characteristics																					
Rated Voltage Range	6.3 ~ 100 V <sub>DC</sub>																					
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 <sub>DC</sub> ) (at 20°C, 2 minutes)																					
Dissipation Factor(Tan δ)	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td>Rated Voltage(V<sub>DC</sub>)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50~100</td> </tr> <tr> <td>∅ 4 ~ ∅ 6.3</td> <td>0.30</td> <td>0.24</td> <td>0.20</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> </table> (at 20°C, 120Hz)	Rated Voltage(V <sub>DC</sub> )	6.3	10	16	25	35	50~100	∅ 4 ~ ∅ 6.3	0.30	0.24	0.20	0.16	0.14	-	∅ 8 ~ ∅ 10	0.40	0.30	0.26	0.16	0.14	0.12
Rated Voltage(V <sub>DC</sub> )	6.3	10	16	25	35	50~100																
∅ 4 ~ ∅ 6.3	0.30	0.24	0.20	0.16	0.14	-																
∅ 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;"> <tr> <td>Rated voltage(V<sub>DC</sub>)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50~100</td> </tr> <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> </table> (at 120Hz)	Rated voltage(V <sub>DC</sub> )	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 <sub>DC</sub> )	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																
Load Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied with the following conditions. ∅ 4 ~ ∅ 6.3 : 105°C, 1,000 hours, ∅ 8 ~ ∅ 10 : 105°C, 2,000 hours. Capacitance change ∅ 4 ~ ∅ 6.3 ≤ ±30 % of the initial value ∅ 8 ~ ∅ 10 ≤ ±20 % of the initial value Tan δ ∅ 4 ~ ∅ 6.3 ≤ 300 % of the initial specified value ∅ 8 ~ ∅ 10 ≤ 200 % of the initial specified value Leakage current ≤ The initial specified value																					
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them of the specific 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. ∅ 4 ~ ∅ 6.3:105°C, 500hours. ∅ 8 ~ ∅ 10:105°C, 1,000 hours. Capacitance change ∅ 4 ~ ∅ 6.3 ≤ ±25 % of the initial value ∅ 8 ~ ∅ 10 ≤ ±20 % of the initial value Tan δ ≤ 200 % of the initial specified value Leakage current ≤ The initial specified value																					
Others	Satisfied characteristics KS C IEC 60384-4																					

## 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±0.5 for 8×10(H10)~10×10(J10)  
 Note 2 : 4x5.3(D56), 5x5.2(E55), 5x5.3(E56), 5x5.8(E61) is excluded symbol mark.  
 Note 3 : 6.3WV is marked by 6V.

Case code	Ø D	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			
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			
E61	5	5.8	5.3	5.3	5.9	0.5~0.8	1.4	1.4	3.0	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			
F60	6.3	5.7	6.6	6.6	7.2	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	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

Vdc	Cap.(µF)	Case Code	Rated Ripple Current (mArms/105°C, 120Hz)
6.3	33	D56	21
	100	E56	55
	220	F60	85
	470	H10	340
	1,000	H10	430
10	33	D56	21
	47	E55	47
	68	E61	60
	100	F60	92
	220	F80	150
	330	H10	290
	470	H10	400
1,200	J10	592	
16	22	D56	21
	33	E56	44
	47	E61	40
	100	F60	113
	330	H10	290
25	470	H10	300
	22	E56	39
	33	E61	46
	47	F60	54
	150	F80	165
330	H10	290	

Vdc	Cap.(µF)	Case Code	Rated Ripple Current (mArms/105°C, 120Hz)
35	10	D56	15
	22	E61	36
	33	F60	40
	47	F60	52
	100	F80	135
	220	H10	275
	330	J10	450
50	10	E56	21
	22	F55	44
	33	F80	80
	47	F80	84
	100	H10	210
63	220	J10	360
	4.7	E55	20
	10	F60	34
	22	F80	48
	56	H10	196
100	100	J10	320
	22	H10	90
	33	J10	150
47	J10	160	