

## SURFACE MOUNT ALUMINUM ELECTROLYTIC CAPACITORS

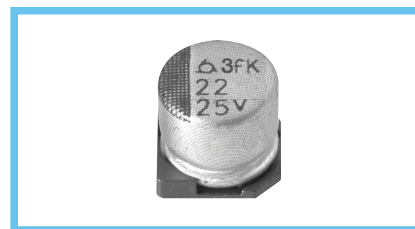


### BDS(MVK) Series

• 105°C 1,000~2,000Hrs assured.

- Vertical SMD type.
- Wide Temperature range.
- For CD/DVD-ROM, Navigation, LCD MT/TV
- RoHS compliant.
- Halogen-free capacitors are also available.

**Solvent-proof**  
WV ≤ 63V<sub>DC</sub>



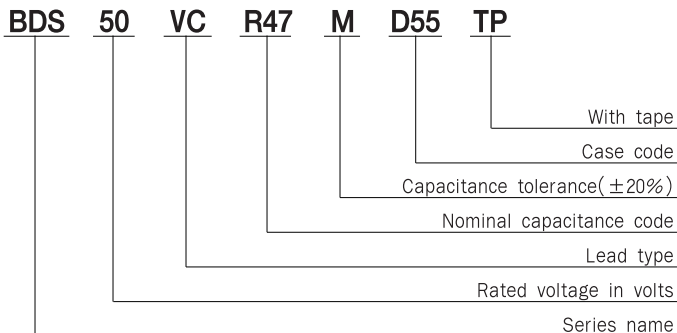
### SPECIFICATIONS

Wide Temp.

Item	Characteristics	
Rated Voltage Range	6.3 ~ 450 V <sub>DC</sub>	
Operating Temperature Range	-40 ~ +105°C	
Capacitance Tolerance	±20%(M) (at 20°C, 120Hz)	
Leakage Current	Rated Voltage(V <sub>DC</sub> )	6.3~100 160~450
	Max. Leakage current(μA)	0.01CV (μA) or 3μA, whichever is greater. (at 20°C, 2 minutes) 0.04CV+100(μA) (at 20°C, 1 minute)
Where, C:Nominal capacitance(μF), V:Rated voltage(V <sub>DC</sub> )		
Dissipation Factor Tanδ(Max.)	Rated voltage(V <sub>DC</sub> )	6.3 10 16 25 35 50~100 160~250 400~450
	φ4~φ6.3	0.30 0.24 0.20 0.16 0.14 0.12 - -
	φ8~φ18	0.40 0.30 0.26 0.16 0.14 0.12 0.15 0.20
(at 20°C, at 120Hz)		
Temperature Characteristics (Max. Impedance ratio)	Rated voltage(V <sub>DC</sub> )	6.3 10 16 25 35 50~100 160~250 400~450
	Z(-25°C)/Z(+20°C)	4 3 2 2 2 3 3 6
	Z(-40°C)/Z(+20°C)	10 8 6 4 3 4 6 10
(at 120Hz)		
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. φ4~φ6.3:105°C, 1,000 hours, φ8~φ18:105°C, 2,000 hours. Capacitance change φ4~φ6.3 ≤ ±30% of the initial value φ8~φ18 ≤ ±20% of the initial value Tanδ φ4~φ6.3 ≤ 300% of the initial specified value φ8~φ18 ≤ 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 for 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. φ4~φ6.3:105°C, 500 hours, φ8~φ18:105°C, 1,000 hours. Capacitance change φ4~φ6.3 ≤ ±25% of the initial value φ8~φ18 ≤ ±20% of the initial value Tanδ ≤ 200% of the initial specified value Leakage current ≤ The initial specified value	
Others	Satisfied characteristics KS C IEC 60384-4	

BDS(MVK) Series

### PART NUMBERING SYSTEM



Capacitance	Code
0.1μF	R1
0.47μF	R47
1.0μF	1
4.7μF	4R7
10μF	10
100μF	100



# SURFACE MOUNT ALUMINUM ELECTROLYTIC CAPACITORS

## DIMENSIONS OF BDS(MVK) Series(Type:VC)

Unit(mm)

### DIMENSIONS

● Vibration Resistance

<Size code: D55~M22>    <Size code: H10~M22>

■ : Dummy terminals

Recommended Solder land on PC board

■ : Solder land on PC board

### MARKING

<D55 ~ J10>    <K14 ~ M22>

Note 1 : L±0.5 for 8×6.3(H63) ~ 18×21.5(M22)  
 Note 2 : 4×5.2(D55), 5×5.2(E55) is excluded symbol mark  
 Note 3 : 6.3WV is marked by 6V

Case code	∅D	L	A	B	C	W	P	a	b	c	a	b	c
D55	4	5.2	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			
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			
H63	8	6.3	8.3	8.3	9.0	0.5-0.8	2.3	2.3	4.5	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
K14	12.5	13.5	13.0	13.0	13.7	1.0-1.3	4.2	4.0	5.7	2.5	3.4	6.3	9.3
L17	16	16.5	17.0	17.0	18.0	1.0-1.3	6.5	6.0	6.9	2.5	4.7	7.8	9.6
L22	16	21.5	17.0	17.0	18.0	1.0-1.3	6.5	6.0	6.9	2.5			
M17	18	16.5	19.0	19.0	20.0	1.0-1.3	6.5	6.0	7.9	2.5	4.7	8.8	9.6
M22	18	21.5	19.0	19.0	20.0	1.0-1.3	6.5	6.0	7.9	2.5			

● Vibration Resistance

## RATINGS OF BDS(MVK) Series

μF \ Vdc	6.3	10	16	25	35	50	63	100									
0.1						D55	1.3	D55	1.3								
0.22						D55	2.6	D55	3.0								
0.33						D55	3.2	D55	4.0								
0.47						D55	3.8	D55	5.0								
1						D55	5.6	D55	8.0								
2.2						D55	10	D55	12								
3.3						D55	14	E55	17								
4.7					D55	15	E55	19	E55	20							
10				D55	16	E55	25	E55	25	F55	29	F60	32	H63	48		
22	D55	21	E55	30	E55	30	F55	40	F55	40	H63	70	H10	80	H10	90	
33	E55	34	E55	34	F55	45	F55	45	H63	80	H10	140	H10	145	J10	150	
47	E55	36	F55	48	F55	48	F60/H63	52	80	H63	140	H10	170	H10	180	K14	250
100	F55/F60	56	F60/H63	90	F60/H10	110	180	F80/H63	135	H10	250	J10	310	K14	380	K14	380
220	H63	150	F80/H63	150	F80/H10	150	275	H10	275	J10	375	K14	420	K14	470	M17	750
330	F80/H10	127/290	J10	450	J10	450	J10	450	K14	480	K14	500	L17	700	M22	980	
470	J10	460	J10	460	J10	460	J10	460	K14	520	L17	700	M17	900			
1,000	J10	520	J10	540	K14	550	K14	550	L17	750	M22	1,200					
1,500	J10	550	K14	620													
2,200	K14	680	L17	850	M17	1,000	M22	1,300	M22	1,450							
3,300	M17	1,000	M17	1,100	M17	1,200											
4,700	L22	1,200	M22	1,350													
6,800	M22	1,350															

μF \ Vdc	160	200	250	400	450					
3.3				K14	30	K14	40			
4.7				K14	65	L17	60	L17	60	
10	J10	45	K14	80	L17	100	L17	85	L17	85
22	K14	85	K14	85	L17	180	M22	130	M22	130
33	K14	95	L17	220	M17	230				
47	L17	260	M17	270	M22	280				
68	M17	320	M22	330						
100	L22	380								

↑ ↑ Rated Ripple Current(mArms/105°C, 120Hz)  
Case code

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