BDS(MVK) Series

• 105℃ 1,000~2,000Hrs assured.

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

Solvent-proof

WV ≦ 63VDC

MV → BDS (MVK)

Wide Temp.



SPECIFICATIONS

Item	Characteristics		
Rated Voltage Range	6.3 ~ 450 VDC		
Operating Temperature Range	-40 ~ +105℃		
Capacitance Tolerance	±20%(M)		(at 20℃, 120Hz)
Leakage Current	Rated Voltage(VDC)	6.3~100	160~450
	Max. Leakage current(μA)	0.01CV (μA) or 3μA , whichever is greater. (at 20℃, 2 minutes)	0.04CV+100(μA) (at 20℃, 1 minute)
	Where, C:Nominal capacitance(μF), V:Rated voltage(VDC)		

Dissipation Factor(Tanδ)

Rated voltage(VDC)	6.3	10	16	25	35	50~100	160~250	400~450
ø4~ø6.3	0.30	0.24	0.20	0.16	0.14	0.12	-	-
ø8~ø18	0.40	0.30	0.26	0.16	0.14	0.12	0.15	0.20

(at 20℃, at 120Hz)

Temperature Characteristics (Max. Impedance ratio)

Rated voltage(VDC)	6.3	10	16	25	35	50~100	160~250	400~450
Z(-25℃)/Z(+20℃)	4	3	2	2	2	3	3	6
Z(-40℃)/Z(+20℃)	10	8	6	4	3	4	6	15

(at 120Hz)

Load Life

The following specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage is applied with the following conditions.

ø4~ø6.3:105℃, 1,000 hours, ø8~ø18:105℃, 2,000 hours.

Capacitance change
- ø4~ø6.3 ≦ ±30% of the initial value
- ø8~ø18 ≦ ±20% of the initial value

Tanδ
- ø4~ø6.3 ≦ 300% of the initial specified value
- ø8~ø18 ≦ 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℃ after exposing them for the specified time at 105℃ 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.

ø4~ø6.3:105℃, 500 hours, ø8~ø18:105℃, 1,000 hours.

Capacitance change
- ø4~ø6.3 ≦ ±25% of the initial value
- ø8~ø18 ≦ ±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

PART NUMBERING SYSTEM

BDS 50 VC R47 M D55 TP

- TP: With tape
- D55: Case code
- M: Capacitance tolerance(±20%)
- R47: Nominal capacitance code (ex. 0.1μF:R1, 1.0μF:1, 4.7μF:4R7, 10μF:10)
- VC: Lead type
- 50: Rated voltage
- BDS: Series name

RATED RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

Size code	Cap.(μF) \ Freq.(Hz)	120	1K	10K	100K
D55~J10	0.1 ~ 1.0	1.00	1.50	1.75	1.80
	2.2 ~ 10	1.00	1.30	1.40	1.50
	22 ~ 1,500	1.00	1.05	1.08	1.08
K14~M22	3.3 ~ 4.7	1.00	1.75	2.30	2.50
	10 ~ 68	1.00	1.50	1.75	1.80
	100 ~ 1,000	1.00	1.30	1.40	1.50
	1,500 ~ 6,800	1.00	1.05	1.08	1.08

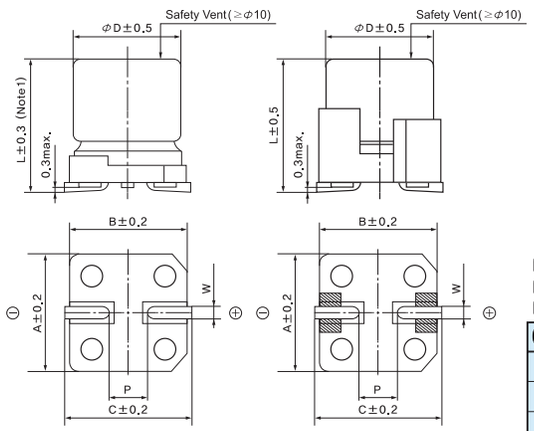
DIMENSIONS OF BDS(MVK) Series

Unit(mm)

DIMENSIONS

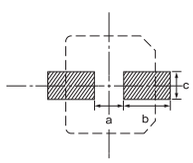
● Vibration Resistance

〈Size code:D55～M22〉 〈Size code:H10～M22〉



▩ : Dummy terminals

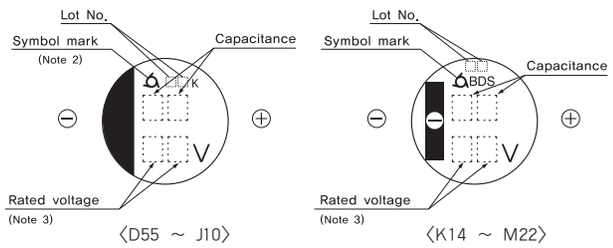
Recommended Solder land on PC board



▨ : Solder land on PC board

※Please inquire beforehand for 16, 18ø size

MARKING



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	ØD	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℃, 120Hz)
Case code

Unikeyic Electronics

Global Electronic Components Distributor

Click to view pricing, inventory, delivery, and lifecycle information:

Samyoung Electronics:

NXA50VB1000M16*25_LO MVK16VC220M6.3*8_6.3TP MVK16VC47M5*5_5.0TP
MVK25VC100M6.3*8_6.3TP NXA10VB220M6.3*11_5.0TP TDA200VS1000M25.4*50_VS
TDC450VS470M35*35_VS NFA200VB22M10*20_5.0TP NXA50VB220M10*12.5_LO
NXA50VB47M6.3*11_2.5TP NXH50VB100M8*11.5_LO NXA16VB1000M10*16_LO
TDC400VS680M35*40_VS BXA35VC47M6.3*6_6.3TP CLZ50VC330M12.5*13.5_12.5TP
MVK25VC10M4*5_4.0TP NXA63VB470M12.5*20_5.0TP NFA450VB10M10*20_5.0TP
NXA100VB330M16*25_LO NXA10VB220M6.3*11_2.5TP NXA50VB330M10*16_LO
NXB16VB10M5*11_2.5TP NXB16VB47M5*11_2.5TP TLC315VS1000M35*50_VS MVK50VC10M5*5_5.0TP
NFC450VB120M18*31.5_LO NXA25VB1000M10*20_LO NXA25VB100M6.3*11_2.5TP
NXA50VB22M5*11_LO TLS450VS680M35*50_VS