Alchip™-MV-BP / MVK-BP Series

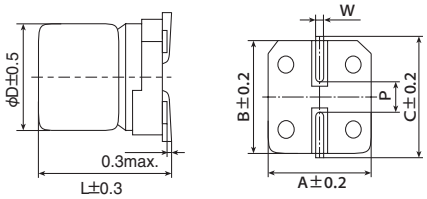
- Bi-polar chip type for the circuit, of which polarity is frequently reversed
- Solvent resistant type
- RoHS Compliant

◆ SPECIFICATIONS

Items		Characteristics							
Category Temperature Range		−40 to +85℃ (MV-BP)、−40 to +105℃ (MVK-BP)							
Rated Voltage Range		6.3 to 50Vdc							
Capacitance Tolerance		±20% (M)							(at 20℃、120Hz)
Leakage Current		I=0.05CV or 10μA,whichever is greater. Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V)							(at 20℃ after 2 minutes)
Dissipation Factor (tanδ Max.)		Rated voltage (Vdc)	6.3V	10V	16V	25V	35V	50V	
		MV-BP	0.32	0.26	0.24	0.22	0.20	0.20	
		MVK-BP	0.35	0.26	0.24	0.20	0.18	0.18	(at 20℃、120Hz)
Low Temperature Characteristics (Max. Impedance Ratio)		Rated voltage (Vdc)	6.3V	10V	16V	25V	35V	50V	
		Z (−25℃) / Z (+20℃)	4	3	2	2	2	2	
		Z (−40℃) / Z (+20℃)	10	8	6	4	3	3	(at 120Hz)
Endurance	MV-BP	The following specifications shall be satisfied when the capacitors are restored to 20 ℃ after the rated voltage is applied for 2,000 hours at 85°C,however the polarization shall be reversed every 250 hours. Capacitance change: ≦ ±20% of the initial value D.F. (tanδ): ≦ 200% of the initial specified value Leakage current: ≦ The initial specified value							
	MVK-BP	The following specifications shall be satisfied when the capacitors are restored to 20 ℃ after the rated voltage is applied for 1,000 hours at 105°C,however the polarization shall be reversed every 250 hours. Capacitance change: ≦ ±30% of the initial value D.F. (tanδ): ≦ 300% of the initial specified value Leakage current: ≦ The initial specified value							
Shelf Life	MV-BP	The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 500 hours at 85℃ without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4. Capacitance change: ≦ ±15% of the initial value D.F. (tanδ): ≦ 150% of the initial specified value Leakage current: ≦ The initial specified value							
	MVK-BP	The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 500 hours at 105℃ without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4. Capacitance change: ≦ ±25% of the initial value D.F. (tanδ): ≦ 200% of the initial specified value Leakage current: ≦ The initial specified value							

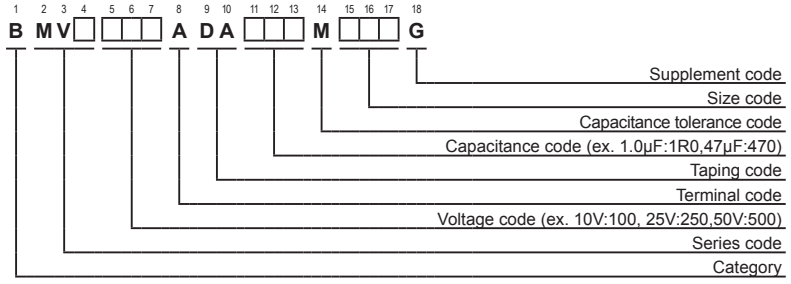
◆DIMENSIONS [mm]

●Terminal Code : A



Size code	D	L	A	B	C	W	P
D55	4	5.2	4.3	4.3	5.1	0.5 to 0.8	1.0
D60	4	5.7	4.3	4.3	5.1	0.5 to 0.8	1.0
E55	5	5.2	5.3	5.6	5.9	0.5 to 0.8	1.4
E60	5	5.7	5.3	5.6	5.9	0.5 to 0.8	1.4
F55	6.3	5.2	6.6	6.6	7.2	0.5 to 0.8	1.9
F60	6.3	5.7	6.6	6.6	7.2	0.5 to 0.8	1.9

◆ PART NUMBERING SYSTEM



◆表示

MV-BP
EX) 35V4.7μF

MVK-BP
EX) 35V4.7μF

Alchip™-MV-BP Series

◆STANDARD RATINGS

WV (V_{dc})	Cap (μF)	Size code	tan δ	Rated ripple current (mArms/85℃, 120Hz)	Part No.
6.3	10	D55	0.32	13	BMV-6R3ADA100MD55G
	22	E55	0.32	23	BMV-6R3ADA220ME55G
	47	F55	0.32	36	BMV-6R3ADA470MF55G
10	33	F55	0.26	33	BMV-100ADA330MF55G
16	4.7	D55	0.24	11	BMV-160ADA4R7MD55G
	10	E55	0.24	18	BMV-160ADA100ME55G
	22	F55	0.24	28	BMV-160ADA220MF55G
25	3.3	D55	0.22	9.0	BMV-250ADA3R3MD55G
35	2.2	D55	0.20	8.0	BMV-350ADA2R2MD55G
	4.7	E55	0.20	13	BMV-350ADA4R7ME55G
	10	F55	0.20	21	BMV-350ADA100MF55G
50	1.0	D55	0.20	5.5	BMV-500ADA1R0MD55G
	2.2	E55	0.20	9.0	BMV-500ADA2R2ME55G
	3.3	E55	0.20	11	BMV-500ADA3R3ME55G
	4.7	F55	0.20	14	BMV-500ADA4R7MF55G

Alchip™-MVK-BP Series

◆STANDARD RATINGS

WV (V_{dc})	Cap (μF)	Size code	tan δ	Rated ripple current (mArms/105℃, 120Hz)	Part No.
6.3	10	D60	0.35	14	BMVK6R3ADA100MD60G
	22	E60	0.35	25	BMVK6R3ADA220ME60G
	47	F60	0.35	39	BMVK6R3ADA470MF60G
10	33	F60	0.26	35	BMVK100ADA330MF60G
16	4.7	D60	0.24	12	BMVK160ADA4R7MD60G
	10	E60	0.24	20	BMVK160ADA100ME60G
	22	F60	0.24	32	BMVK160ADA220MF60G
25	3.3	D60	0.20	10	BMVK250ADA3R3MD60G
35	2.2	D60	0.18	8.8	BMVK350ADA2R2MD60G
	4.7	E60	0.18	15	BMVK350ADA4R7ME60G
	10	F60	0.18	23	BMVK350ADA100MF60G
50	1.0	D60	0.18	5.5	BMVK500ADA1R0MD60G
	2.2	E60	0.18	10	BMVK500ADA2R2ME60G
	3.3	E60	0.18	13	BMVK500ADA3R3ME60G
	4.7	F60	0.18	16	BMVK500ADA4R7MF60G

◆RATED RIPPLE CURRENT MULTIPLIERS

❶Frequency Multipliers

Capacitance(μF) \ Frequency(Hz)	120	1k	10k	100k
1	1.00	1.50	1.75	1.80
2.2 to 10	1.00	1.30	1.40	1.50
22 to 47	1.00	1.05	1.08	1.08

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5℃ rise.
When long life performance is required in actual use, the rms ripple current has to be reduced.