

Alchip® MVE Series

- Rated voltage range : 6.3 to 450V, capacitance range : 0.47 to 6800μF
- Endurance : 1000 to 2000 hours at 105°C
- Case size range : φ4×5.5 to φ18×21.5
- Solvent-proof type except 100 to 450V_{dc} (see PRECAUTIONS AND GUIDELINES)

MVE

↓
downsized
size extended
MVK

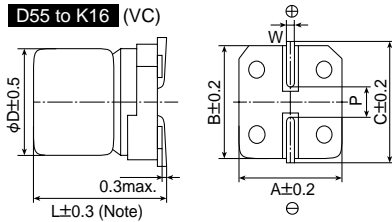


◆ **SPECIFICATIONS**

Items	Characteristics												
Category	-40 to +105°C												
Temperature Range													
Rated Voltage Range	6.3 to 450V _{dc}												
Capacitance Tolerance	±20%(M) (20°C, 120Hz)												
Leakage Current	Rated voltage(V _{dc})	6.3 to 100V						160 to 450V					
	D55 to J10	I=0.01CV or 3μA, whichever is greater (2 minutes)						—					
	K14 to M22	I=0.03CV or 4μA, whichever is greater (1 minute)						I=0.04CV+100μA (1minute)					
	Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (20°C)												
Dissipation Factor (tanδ)	See STANDARD RATINGS (20°C, 120Hz)												
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V _{dc})	6.3V	10V	16V	25V	35V	50V	63V	100V	160 to 250V	400 to 450V		
	D55 to J10	Z(-25°C)/Z(+20°C)	4	3	2	2	2	2	2	3	—	—	(120Hz)
		Z(-40°C)/Z(+20°C)	12	8	6	4	3	3	3	4	—	—	
	K14 to M22	Z(-25°C)/Z(+20°C)	5	4	3	2	2	2	2	2	3	6	
Z(-40°C)/Z(+20°C)		10	8	6	4	3	3	3	3	6	10		
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for the specified period of time at 105°C.												
	Case code	D55 to F80					H10 to M22						
	Time	1000 hours					2000 hours						
	Capacitance change	≤±30% of the initial value					≤±20% of the initial value						
	D.F. (tanδ)	≤300% of the initial specified value					≤200% of the initial specified value						
	Leakage current	≤The initial specified value					≤The initial specified value						
	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1000 hours (500 hours for B55 to F80 size) at 105°C without voltage applied.												
Shelf Life	Case code	D55 to F80					H10 to H22						
	Capacitance change	≤±25% of the initial value					≤±20% of the initial value						
	D.F. (tanδ)	≤200% of the initial specified value					≤200% of the initial specified value						
	Leakage current	≤The initial specified value					≤The initial specified value						

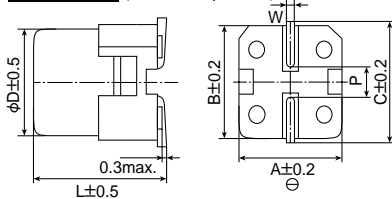
◆ **DIMENSIONS (Terminal Type=VC or VD) [mm]**

D55 to K16 (VC)



Note : L±0.5 for H10, J10, K14 and K16

L17 to M22 (VD : with dummy terminals)



Case code	D	L	A	B	C	W	P
D55	4	5.2	4.3	4.3	5.1	0.5~0.8	1.0
E55	5	5.2	5.3	5.3	5.9	0.5~0.8	1.4
F55	6.3	5.2	6.6	6.6	7.2	0.5~0.8	1.9
F60	6.3	5.7	6.6	6.6	7.2	0.5~0.8	1.9
F80	6.3	7.7	6.6	6.6	7.2	0.5~0.8	1.9
H10	8	10.0	8.3	8.3	9.0	0.7~1.1	3.1
J10	10	10.0	10.3	10.3	11.0	0.7~1.1	4.5
K14	12.5	13.5	13.0	13.0	13.7	1.0~1.3	4.2
K16	12.5	16.0	13.0	13.0	13.7	1.0~1.3	4.2
L17	16	16.5	17.0	17.0	18.0	1.0~1.3	6.5
L22	16	21.5	17.0	17.0	18.0	1.0~1.3	6.5
M17	18	16.5	19.0	19.0	20.0	1.0~1.3	6.5
M22	18	21.5	19.0	19.0	20.0	1.0~1.3	6.5

◆ **MARKING**

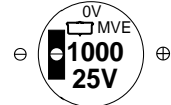
D55 to J10

Ex) 16V22MF



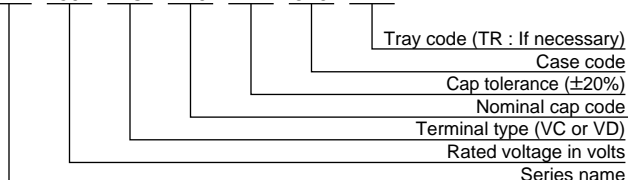
K14 to M22

Ex) 25V1000MF



◆ **PART NUMBERING SYSTEM**

MVE 50 VC 220 M J10



Capacitance	Code
10μF	10
100μF	100
1000μF	1000

◆ **STANDARD RATINGS**

μF \ V _{dc}	6.3			10			16			25			35			50			63		
	0.47																D55	5	0.12	D55	5
1.0																D55	8	0.12	D55	8	0.12
2.2																D55	12	0.12	D55	12	0.12
3.3																D55	15	0.12	E55	17	0.12
4.7													D55	16	0.14	E55	20	0.12	F55	22	0.12
10							D55	17	0.20	E55	27	0.16	E55	27	0.14	F55	32	0.12	F55	32	0.12
22	D55	22	0.30	E55	30	0.24	E55	30	0.20	F55	44	0.16	F55	44	0.14	F60	47	0.12	F80	58	0.12
33	E55	34	0.30	E55	34	0.24	F55	45	0.20	F55	50	0.16	F60	54	0.14	F80	65	0.14	H10	140	0.12
47	E55	38	0.30	F55	48	0.24	F55	48	0.20	F55	60	0.16	F80	80	0.16	F80	80	0.14	H10	170	0.12
100	F55	69	0.30	F55	69	0.30	F55	69	0.26	F80	100	0.18	F80	100	0.16	H10	230	0.14	J10	310	0.12
150				F80	100	0.35	F80	100	0.28	H10	240	0.18	H10	260	0.16						
220	F80	120	0.45	F80	120	0.35	F80	120	0.28	H10	320	0.18	J10	375	0.16	J10	375	0.14	K14	470	0.14
																L17	560	0.14	L17	560	0.14
330	H10	290	0.40	H10	290	0.35	H10	290	0.28	J10	450	0.16	J10	450	0.16	K14	500	0.18	L17	700	0.14
																L17	600	0.18	M17	750	0.14
470	H10	320	0.45	H10	320	0.35	H10	320	0.28	J10	490	0.18	K14	520	0.22	L17	700	0.18	L22	900	0.14
													L17	650	0.22	M17	750	0.18	M17	900	0.14
680	H10	340	0.45				J10	470	0.28												
1,000	J10	410	0.40	J10	410	0.35	K14	550	0.30	L17	820	0.26	L17	750	0.22	M22	1200	0.18			
							L17	650	0.30	M17	880	0.26	M17	1000	0.22						
1,500	J10	550	0.45																		
2,200	K14	680	0.40	K16	750	0.36	L17	950	0.32	L22	1250	0.28	M22	1450	0.24						
	L17	840	0.40	L17	850	0.36	M17	1000	0.32	M22	1300	0.28									
3,300	K16	850	0.42	L17	1000	0.38	L22	1200	0.34												
	M17	1000	0.42	M17	1100	0.38	M17	1200	0.34												
4,700	L22	1200	0.44	L22	1300	0.40															
	M17	1200	0.44	M22	1350	0.40															
6,800	L22	1200	0.48																		
	M22	1350	0.48																		

DF (tanδ at 20°C, 120Hz)
 Rated ripple current (mArms at 105°C, 120Hz)
 Case code

Non solvent-proof																				
μF \ V _{dc}	100			160			200			250			400			450				
	3.3																K14	40	0.20	
4.7										K14	65	0.15	K16	50	0.20	K16	50	0.20		
10							K14	80	0.15	K16	105	0.15	L17	85	0.20	L17	85	0.20		
22	H10	100	0.12				K16	110	0.15	L17	180	0.15	M22	130	0.20	M22	130	0.20		
33	J10	150	0.12	K14	95	0.15	L17	220	0.15	L22	230	0.15								
										M17	230	0.15								
47	K14	250	0.10	L17	260	0.15	L22	270	0.15	M22	280	0.15								
							M17	270	0.15											
68	K14	300	0.10	L22	320	0.15	M22	330	0.15											
				M17	320	0.15														
100	K14	380	0.10	L22	380	0.15														
	L17	450	0.10																	
220	L22	750	0.10																	
	M17	750	0.10																	
330	M22	980	0.10																	

DF (tanδ at 20°C, 120Hz)
 Rated ripple current (mArms at 105°C, 120Hz)
 Case code