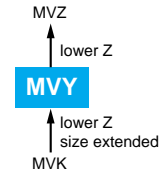


**Alchip® MVY Series**

- Expand up to  $\phi 18$  case size
- Expand up to 100V<sub>dc</sub>
- Low impedance, 105°C 1000 to 5000-hours-life
- For digital equipment, especially DC-DC converters and VRM
- Solvent-proof type except 80 & 100V<sub>dc</sub> (see PRECAUTIONS AND GUIDELINES)

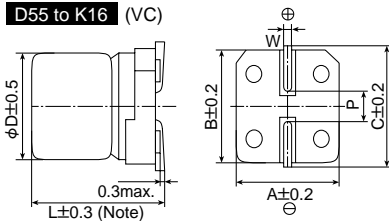


◆ **SPECIFICATIONS**

Items	Characteristics											
<b>Category</b> <b>Temperature Range</b>	-55 to +105°C (6.3 to 63V <sub>dc</sub> )					-40 to +105°C (80 & 100V <sub>dc</sub> )						
<b>Rated Voltage Range</b>	6.3 to 100V <sub>dc</sub>											
<b>Capacitance Tolerance</b>	±20% (M) (at 20°C, 120Hz)											
<b>Leakage Current</b>	I=0.01CV or 3μA, whichever is greater. Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C after 2 minutes)											
<b>Dissipation Factor (tanδ)</b>	Rated voltage (V <sub>dc</sub> )	6.3V	10V	16V	25V	35V	50V	63V	80V	100V	When nominal capacitance exceeds 1000μF, add 0.02 to the value above for each 1000μF increase. (at 20°C, 120Hz)	
	tanδ (Max.)	D55 to F80	0.24	0.20	0.16	0.14	0.12	—	—	—		
		H10 & J10	0.28	0.24	0.20	0.16	0.14	0.12	—	—		—
<b>Low Temperature Characteristics (Max. Impedance Ratio)</b>	Rated voltage (V <sub>dc</sub> )	6.3V	10V	16V	25V	35V	50V	63V	80V	100V	(at 120Hz)	
	Z(-40°C)/Z(+20°C)	D55 to J10	3	2	2	2	2	—	—	—		
		K14 to M22	10	8	6	4	3	3	3	3		3
<b>Endurance</b>	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for specified time at 105°C.											
	Time	D55 to F80 : 1000 hours H10 & J10 : 2000 hours K14 to M22 : 5000 hours										
	Rated voltage	6.3V <sub>dc</sub> (D55 to J10)					6.3 to 100V <sub>dc</sub>					
	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										
	<b>Shelf Life</b>	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1000 hours at 105°C without voltage applied.										
Rated voltage		6.3V <sub>dc</sub> (D55 to J10)					6.3 to 100V <sub>dc</sub>					
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										

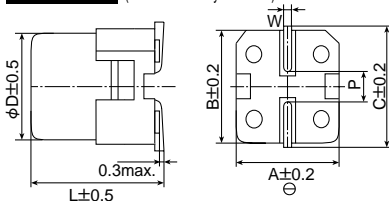
◆ **DIMENSIONS (Terminal Type=VC or VD) [mm]**

**D55 to K16 (VC)**



Note : L±0.5 for H10 to K16

**L17 to M22 (VD : with dummy terminals)**



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

◆ **MARKING**

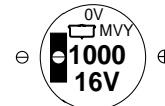
**D55 to J10**

EX) 6.3V100μF



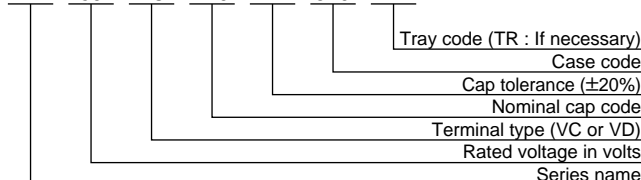
**K14 to M22**

EX) 16V1000μF



◆ **PART NUMBERING SYSTEM**

MVY 50 VC 220 M J10



Capacitance	Code
1.0μF	1
4.7μF	4R7
10μF	10
100μF	100
1000μF	1000



◆ **STANDARD RATINGS**

$\mu F \backslash V_{dc}$	6.3			10			16			25			35		
4.7													D55	3.0	60
10							D55	3.0	60	E55	1.8	95	E55	1.8	95
22	D55	3.0	60	E55	1.8	95	E55	1.8	95	F55	1.0	140	F55	1.0	140
33	E55	1.8	95	E55	1.8	95	F55	1.0	140	F55	1.0	140	F55	1.0	140
47	E55	1.8	95	F55	1.0	140	F55	1.0	140	F55	1.0	140	F55	1.0	140
68													F80	0.34	280
100	F55	1.0	140	F55	1.0	140	F55	1.0	140	F80	0.34	280	H10	0.30	450
220	F55	1.0	140	F80	0.34	280	F80	0.34	280	H10	0.30	450	H10	0.30	450
330	F80	0.34	280	H10	0.30	450	H10	0.30	450	H10	0.30	450	J10	0.15	670
470	H10	0.30	450	H10	0.30	450	H10	0.30	450	J10	0.15	670	K14	0.070	820
680	H10	0.30	450	J10	0.15	670	J10	0.15	670				L17	0.054	1,260
1,000	H10	0.30	450	J10	0.15	670	K14	0.070	820	L17	0.054	1,260	L17	0.054	1,260
1,500	J10	0.15	670				L17	0.054	1,260	M17	0.054	1,350	M17	0.054	1,350
2,200	K14	0.070	820	K16	0.060	950	L17	0.054	1,260	L22	0.038	1,630	M22	0.038	1,750
3,300	L17	0.054	1,260	L17	0.054	1,260	M17	0.054	1,350	M22	0.038	1,750			
4,700	M17	0.054	1,350	M17	0.054	1,350	M17	0.054	1,350	M22	0.038	1,750			
6,800	L22	0.038	1,630	L22	0.038	1,630	M22	0.038	1,750						
8,200	M22	0.038	1,750	M22	0.038	1,750									

— Rated ripple current (mArms) at 105°C, 100kHz  
 — Impedance ( $\Omega$ ) at 20°C, 100kHz  
 — Case code

<b>Non solvent-proof</b>												
$\mu F \backslash V_{dc}$	50			63			80			100		
1.0	D55	5.0	30									
2.2	D55	5.0	30									
3.3	D55	5.0	30									
4.7	E55	3.0	50									
10	F55	2.0	70									
22	F55	2.0	70									
33	F80	0.60	170									
47	F80	0.60	170							K14	0.33	450
68	H10	0.60	300	K14	0.19	500				K14	0.33	450
100	H10	0.60	300	K14	0.19	500	K14	0.33	450	L17	0.24	650
220	J10	0.30	500	L17	0.12	845	K16	0.26	550	L22	0.16	900
330	K14	0.11	650	L17	0.12	845	L22	0.16	900	M17	0.24	700
470	L17	0.087	900	M17	0.12	905	M17	0.24	700			
1,000	M17	0.087	1,060	L22	0.085	1,100	M22	0.16	950			
	M22	0.050	1,520	M17	0.12	905						

— Case code  
 — Impedance ( $\Omega$ ) at 20°C, 100kHz  
 — Rated ripple current (mArms) at 105°C, 100kHz