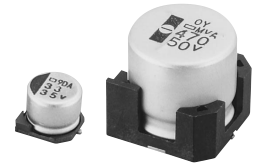


Alchip® MVA Series

- $\phi 4$ through $\phi 18$ case sizes are fully lined up
- Endurance : 85°C 2000 hours
- Suitable to fit for downsized equipment
- Solvent-proof type except 100 to 450V_{dc} (see PRECAUTIONS AND GUIDELINES)

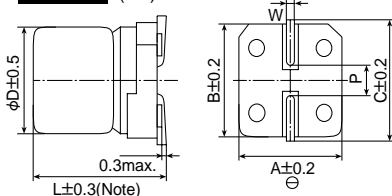
MVA

 ↓
downsized
size extended
↑
MV


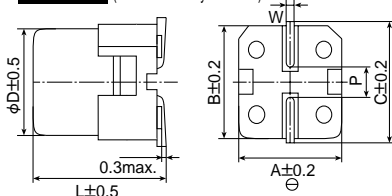
◆ SPECIFICATIONS

Items	Characteristics												
Category	Surface Mount Aluminum Electrolytic Capacitor												
Temperature Range	-40 to +85°C												
Rated Voltage Range	4 to 450V _{dc}												
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)												
Leakage Current	Rated voltage (V _{dc})	4 to 100V						160 to 450V					
	D55 to J10	I=0.01CV or 3μA, whichever is greater.(after 2 minutes)						-					
	K14 to M22	I=0.03CV or 4μA, whichever is greater.(after 1 minute)						I=0.04CV+100μA max.(after 1 minute)					
Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C)													
Dissipation Factor (tanδ)	Rated voltage (V _{dc})	4V	6.3V	10V	16V	25V	35V	50V	63V	100V	160 to 250V	400 & 450V	
	tanδ (Max.)	D55 to J10	0.42	0.35	0.30	0.26	0.16	0.14	0.12	0.12	0.12	-	-
		K14 to M22	-	0.38	0.34	0.30	0.26	0.22	0.18	0.14	0.10	0.20	0.25
When nominal capacitance exceeds 1000μF, add 0.02 to the value above for each 1000μF increase. (at 20°C, 120Hz)													
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V _{dc})	4V	6.3V	10V	16V	25V	35V	50V	63V	100V	160 to 250V	400 & 450V	
	D55 to J10	Z(-25°C)/Z(+20°C)	7	4	3	2	2	2	2	2	3	-	-
		Z(-40°C)/Z(+20°C)	17	10	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)		-	12	10	8	5	4	3	3	3	6	10	
(at 120Hz)													
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours at 85°C.												
	Case code	D55 to J10				D55 to J10				K14 to M22			
	Rated voltage (V _{dc})	4V & 6.3V				10 to 100V				6.3 to 450V			
	Capacitance change	≤±30% of the initial value				≤±20% of the initial value							
	DF (tanδ)	≤200% of the initial specified value				≤200% of the initial specified value							
	Leakage current	≤The initial specified value				≤The initial specified value							
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1000 hours at 85°C without voltage applied.												
	Case code	D55 to J10				D55 to J10				K14 to M22			
	Rated voltage	4V & 6.3V				10 to 100V				6.3 to 450V			
	Capacitance change	≤±30% of the initial value				≤±20% of the initial value							
	DF (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]

B55 to K16 (VC)


Note : L±0.5 for H10 to 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 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

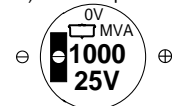
◆ MARKING

D55 to J10

EX) 16V47μF


K14 to H22

EX) 25V1000μF



◆ PART NUMBERING SYSTEM

MVA 16 VC 47 M E55

Tray code (TR : If necessary)

Case code

Cap tolerance (±20%)

Nominal cap code

Terminal type (VC or VD)

Rated voltage in volts

Series name

Capacitance	Code
0.1μF	R1
1.0μF	1
4.7μF	4R7
10μF	10
100μF	100
1000μF	1000



◆ **STANDARD RATINGS**

μF \ V_{dc}	4		6.3		10		16		25		35		50	
3.3													D55	15
4.7											D55	18	D55	18
10									D55	24	D55	24	E55	30
22					D55	26	D55	26	E55	41	E55	41	F55	47
33	D55	25	D55	30	D55	30	E55	37	E55	47	F55	54	F80	70
47	D55	30	D55	33	E55	44	E55	44	F55	60	F60	64	F80	85
56									F55	66				
100	E55	50	E55	55	F55	70	F55	70	F80	120	F80	120	H10	190
150					F55	79	F80	110	H10	210	H10	210		
220	F55	80	F55	88	F80	130	F80	130	H10	260	H10	260	J10	320
330	F80	135	F80	135	H10	270	H10	270	H10	300	J10	360	K14	600
470	F80	150	H10	280	H10	280	H10	280	J10	400	K14	600	K16 L17	740 850
680			H10	290			J10	380						
820			H10	320										
1,000	H10	320	J10	430	J10	430	K14	710	K14	820	L17	1100	L22 M22	1300 1400
1,500			J10	480										
2,200			K14	890	K14	960	L17	1150	L22 M17	1450 1400	M22	1700		
3,300			K16 L17	1000 1200	L17	1300	L22 M17	1450 1450	M22	1800				
4,700			L17	1400	L22 M17	1550 1600	M22	1750						
6,800			L22 M17	1750 1700	M22	1850								
10,000			M22	2000										

Rated ripple current (mAmps) at 85°C, 120Hz
 Case code

Non solvent-proof														
μF \ V_{dc}	63		100		160		200		250		400		450	
0.10	D55	1.3												
0.22	D55	3												
0.33	D55	4												
0.47	D55	5												
1.0	D55	8												
2.2	D55	12												
3.3	E55	17												
4.7	E55	20												
10	F55	32							K14	150	L17	140	L17	140
22	F80	60	H10	90			K14	240	K16	240	L22 M17	280 280	L22	280
33	H10	110	J10	120			K16	310	L17	340	M22	350	M22	350
47	H10	130			K16	370	L17	420	L22 M17	420 420				
56	J10	160												
68	J10	170	K14	380	L17	500	L22 M17	510 510	M22	490				
100	K14	380	K14	440	L22 M17	590 590	M22	590						
220	K14	580	L22 M17	850 800										
330	K16 L17	720 820	M22	1000										
470	L17 M17	950 1000												

Rated ripple current (mAmps) at 85°C, 120Hz
 Case code