Alchip™-MLA Series

- Low impedance, long life
- Rated voltage 6.3 to 50V, Capacitance 10 to 1,000μF
- Case size φ5×5.8L to φ10×10L
- Suitable for applications requiring long life and low impedance such as equipment in continuous operation, industrial applications, etc.
- Solvent resistant type (see PRECAUTIONS AND GUIDELINES)
- **RoHS Compliant**

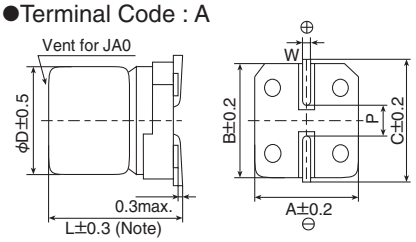
MVY P76 → Longer life → **MLA**

◆SPECIFICATIONS

Items	Characteristics							
Category Temperature Range	-40 to +105℃							
Rated Voltage Range	6.3 to 50Vdc							
Capacitance Tolerance	±20%(M)							(at 20℃, 120Hz)
Leakage Current	I=0.01CV or 3μA, 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)	Rated voltage(Vdc)		6.3V	10V	16V	25V	35V	50V
	tanδ (Max.)	E61 to F61	0.28	0.24	0.22	0.16	0.13	0.12
		F80	0.32	0.27	0.24	0.16	0.13	0.12
		HA0 to JA0	0.28	0.24	0.22	0.16	0.13	0.12
								(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	7	5	3	3	3
								(at 120Hz)
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage is applied for 3,000 hours at 105℃.							
	Capacitance change	≦±30% of the initial value						
	D.F. (tanδ)	≦300% 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 1,000 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	≦±30% of the initial value						
	D.F. (tanδ)	≦300% of the initial specified value						
	Leakage current	≦The initial specified value						

◆DIMENSIONS [mm]

●Terminal Code : A



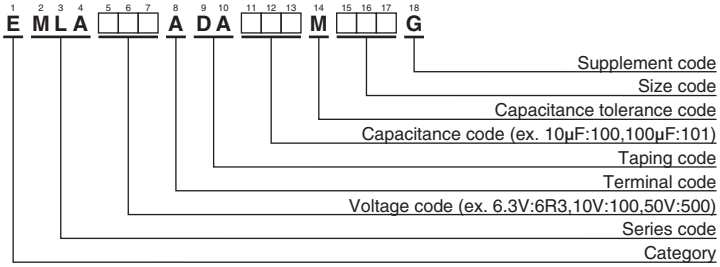
Note : L±0.5 for HA0 and JA0

Size code	D	L	A	B	C	W	P
E61	5	5.8	5.3	5.3	5.9	0.5 to 0.8	1.4
F61	6.3	5.8	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
HA0	8	10.0	8.3	8.3	9.0	0.7 to 1.1	3.1
JA0	10	10.0	10.3	10.3	11.0	0.7 to 1.1	4.5

◆MARKING

EX) 16V100μF

◆PART NUMBERING SYSTEM



Please refer to "Product code guide (surface mount type)"

●Rated voltage symbol

Rated voltage (Vdc)	Symbol
6.3	j
10	A
16	C
25	E
35	V
50	H

Alchip™-MLA Series

◆STANDARD RATINGS

WV (Vdc)	Cap (μF)	Size code	tanδ	Impedance (Ωmax/20℃, 100kHz)	Rated ripple current (mArms/105℃, 100kHz)	Part No.
6.3	47	E61	0.28	1.30	95	EMLA6R3ADA470ME61G
	100	F61	0.28	0.70	140	EMLA6R3ADA101MF61G
	150	F61	0.28	0.70	140	EMLA6R3ADA151MF61G
	220	F80	0.32	0.70	230	EMLA6R3ADA221MF80G
	330	F80	0.32	0.70	230	EMLA6R3ADA331MF80G
	330	HA0	0.28	0.16	600	EMLA6R3ADA331MHA0G
	470	HA0	0.28	0.16	600	EMLA6R3ADA471MHA0G
	1,000	JA0	0.28	0.08	850	EMLA6R3ADA102MJA0G
10	33	E61	0.24	1.30	95	EMLA100ADA330ME61G
	47	F61	0.24	0.70	140	EMLA100ADA470MF61G
	100	F61	0.24	0.70	140	EMLA100ADA101MF61G
	150	F61	0.24	0.70	140	EMLA100ADA151MF61G
	220	F80	0.27	0.70	230	EMLA100ADA221MF80G
	220	HA0	0.24	0.16	600	EMLA100ADA221MHA0G
	330	HA0	0.24	0.16	600	EMLA100ADA331MHA0G
	470	HA0	0.24	0.16	600	EMLA100ADA471MHA0G
16	22	E61	0.22	1.30	95	EMLA160ADA220ME61G
	33	F61	0.22	0.70	140	EMLA160ADA330MF61G
	47	F61	0.22	0.70	140	EMLA160ADA470MF61G
	100	F61	0.22	0.70	140	EMLA160ADA101MF61G
	100	F80	0.24	0.70	230	EMLA160ADA101MF80G
	150	F80	0.24	0.70	230	EMLA160ADA151MF80G
	220	F80	0.24	0.70	230	EMLA160ADA221MF80G
	220	HA0	0.22	0.16	600	EMLA160ADA221MHA0G
	330	HA0	0.22	0.16	600	EMLA160ADA331MHA0G
	470	HA0	0.22	0.16	600	EMLA160ADA471MHA0G
	470	JA0	0.22	0.08	850	EMLA160ADA471MJA0G
25	10	E61	0.16	1.30	95	EMLA250ADA100ME61G
	22	E61	0.16	1.30	95	EMLA250ADA220ME61G
	22	F61	0.16	0.70	140	EMLA250ADA220MF61G

WV (Vdc)	Cap (μF)	Size code	tanδ	Impedance (Ωmax/20℃, 100kHz)	Rated ripple current (mArms/105℃, 100kHz)	Part No.
25	33	F61	0.16	0.70	140	EMLA250ADA330MF61G
	47	F61	0.16	0.70	140	EMLA250ADA470MF61G
	47	F80	0.16	0.70	230	EMLA250ADA470MF80G
	100	F80	0.16	0.70	230	EMLA250ADA101MF80G
	100	HA0	0.16	0.16	600	EMLA250ADA101MHA0G
	150	HA0	0.16	0.16	600	EMLA250ADA151MHA0G
	220	HA0	0.16	0.16	600	EMLA250ADA221MHA0G
	330	HA0	0.16	0.16	600	EMLA250ADA331MHA0G
	330	JA0	0.16	0.08	850	EMLA250ADA331MJA0G
	470	JA0	0.16	0.08	850	EMLA250ADA471MJA0G
35	10	E61	0.13	1.30	95	EMLA350ADA100ME61G
	22	F61	0.13	0.70	140	EMLA350ADA220MF61G
	33	F61	0.13	0.70	140	EMLA350ADA330MF61G
	33	F80	0.13	0.70	230	EMLA350ADA330MF80G
	47	F80	0.13	0.70	230	EMLA350ADA470MF80G
	100	F80	0.13	0.70	230	EMLA350ADA101MF80G
	100	HA0	0.13	0.16	600	EMLA350ADA101MHA0G
	150	HA0	0.13	0.16	600	EMLA350ADA151MHA0G
	220	HA0	0.13	0.16	600	EMLA350ADA221MHA0G
	220	JA0	0.13	0.08	850	EMLA350ADA221MJA0G
	330	JA0	0.13	0.08	850	EMLA350ADA331MJA0G
50	10	F61	0.12	2.00	70	EMLA500ADA100MF61G
	22	F61	0.12	2.00	70	EMLA500ADA220MF61G
	33	F80	0.12	1.60	100	EMLA500ADA330MF80G
	47	F80	0.12	1.60	100	EMLA500ADA470MF80G
	47	HA0	0.12	0.34	350	EMLA500ADA470MHA0G
	100	HA0	0.12	0.34	350	EMLA500ADA101MHA0G
	100	JA0	0.12	0.18	670	EMLA500ADA101MJA0G
	150	JA0	0.12	0.18	670	EMLA500ADA151MJA0G
	220	JA0	0.12	0.18	670	EMLA500ADA221MJA0G

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

Frequency(Hz) / Capacitance(μF)	120	1k	10k	100k
10 to 150	0.40	0.75	0.90	1.00
220 to 470	0.50	0.85	0.94	1.00
1,000	0.60	0.87	0.95	1.00

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.