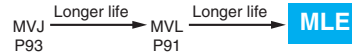


# Alchip™-MLE Series

- Endurance : 7,000 to 8,000 hours at 105°C
- Rated voltage range : 6.3 to 50V
- Nominal capacitance range : 1.0 to 1,000μF
- Suitable for high reliability products
- Solvent resistant type (see PRECAUTIONS AND GUIDELINES)
- RoHS Compliant

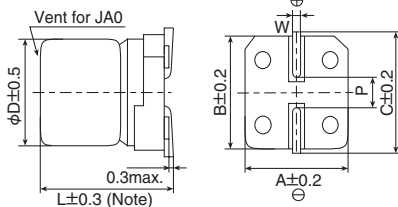


## ◆ SPECIFICATIONS

Items	Characteristics							
Category								
Temperature Range	-25 to +105°C							
Rated Voltage Range	6.3 to 50V <sub>dc</sub>							
Capacitance Tolerance	±20%(M) (at 20°C, 120Hz)							
Leakage Current	I=0.03CV or 4μA, whichever is greater Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C, after 2 minutes)							
Dissipation Factor (tanδ)	Rated voltage (V <sub>dc</sub> )	6.3V	10V	16V	25V	35V	50V	
	tanδ (Max.)	0.32	0.28	0.26	0.16	0.14	0.14	(at 20°C, 120Hz)
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage(V <sub>dc</sub> )	6.3V	10V	16V	25V	35V	50V	
	Z(-10°C)/Z(+20°C)	4	3	2	2	2	2	(at 120Hz)
Endurance	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	D73 to F73 : 7,000 hours F90 to JA0 : 8,000 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	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°C 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]

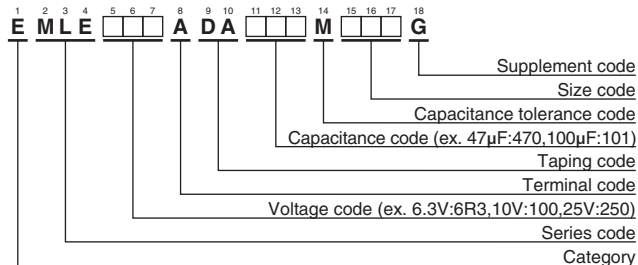
- Terminal Code : A



Note : L±0.5 for HA0 and JA0

Size code	D	L	A	B	C	W	P
D73	4	7.0	4.3	4.3	5.1	0.5 to 0.8	1.0
E73	5	7.0	5.3	5.3	5.9	0.5 to 0.8	1.4
F73	6.3	7.0	6.6	6.6	7.2	0.5 to 0.8	1.9
F90	6.3	8.7	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

## ◆ PART NUMBERING SYSTEM



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

## ◆ MARKING

EX) 16V47μF



- Rated voltage symbol

Rated voltage (V <sub>dc</sub> )	6.3	10	16	25	35	50
Symbol	j	A	C	E	V	H

Alchip™-MLE Series

◆STANDARD RATINGS

WV (Vdc)	Cap (μF)	Size code	Rated ripple current (mA <sub>rms</sub> /105°C, 120Hz)	Part No.	WV (Vdc)	Cap (μF)	Size code	Rated ripple current (mA <sub>rms</sub> /105°C, 120Hz)	Part No.
6.3	22	D73	22	EMLE6R3ADA220MD73G	35	1.0	D73	6.2	EMLE350ADA1R0MD73G
	47	E73	36	EMLE6R3ADA470ME73G		2.2	D73	11	EMLE350ADA2R2MD73G
	100	F73	60	EMLE6R3ADA101MF73G		3.3	D73	14	EMLE350ADA3R3MD73G
	220	F90	101	EMLE6R3ADA221MF90G		4.7	D73	15	EMLE350ADA4R7MD73G
	330	HA0	160	EMLE6R3ADA331MHA0G		4.7	E73	19	EMLE350ADA4R7ME73G
	1,000	JA0	313	EMLE6R3ADA102MJA0G		10	E73	25	EMLE350ADA100ME73G
10	33	E73	35	EMLE100ADA330ME73G		10	F73	30	EMLE350ADA100MF73G
	220	HA0	141	EMLE100ADA221MHA0G		22	F73	42	EMLE350ADA220MF73G
16	10	D73	18	EMLE160ADA100MD73G		22	F90	49	EMLE350ADA220MF90G
	22	E73	30	EMLE160ADA220ME73G		33	F90	57	EMLE350ADA330MF90G
	47	F73	50	EMLE160ADA470MF73G		220	JA0	216	EMLE350ADA221MJA0G
	100	F90	81	EMLE160ADA101MF90G		50	33	HA0	77
	470	JA0	254	EMLE160ADA471MJA0G	47		HA0	92	EMLE500ADA470MHA0G
33	F73	48	EMLE250ADA330MF73G	100	JA0		151	EMLE500ADA101MJA0G	
25	47	F90	63	EMLE250ADA470MF90G					
	100	HA0	116	EMLE250ADA101MHA0G					

◆RATED RIPPLE CURRENT MULTIPLIERS

● Frequency Multipliers

Frequency(Hz)	120	1k	10k	100k
Capacitance(μF)				
1.0	1.00	1.50	1.75	1.80
2.2 to 10	1.00	1.30	1.40	1.50
22 to 1,000	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°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.