Alchip™-MZL Series New!

- Low ESR, 5,000hours at 105℃
- Rated voltage range : 6.3 to 50V, Nominal capacitance range : 100 to 1,500µF
- Solvent resistant type(see PRECAUTIONS AND GUIDELINES)
- Vibration resistance structure
- RoHS2 Compliant
- AEC-Q200 compliant : Please contact Chemi-Con for more details, test data, information.

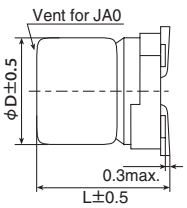
MZL
↑ Longer life
MZA/MZR

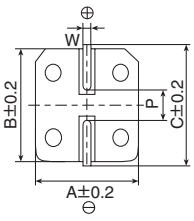
◆SPECIFICATIONS

Items	Characteristics							
Category Temperature Range	-55 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 (tan δ)	Rated voltage (Vdc)	6.3V	10V	16V	25V	35V	50V	
	tan δ (Max.)	0.26	0.19	0.16	0.14	0.12	0.10	(at 20℃, 120Hz)
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (Vdc)	6.3V	10V	16V	25V	35V	50V	
	Z(-25℃)/Z(+20℃)	2	2	2	2	2	2	
	Z(-40℃)/Z(+20℃)	3	3	3	3	3	3	
	Z(-55℃)/Z(+20℃)	4	4	4	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 5,000 hours at 105℃.							
	Capacitance change	≦±35% of the initial value						
	D.F. (tan δ)	≦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. (tan δ)	≦200% of the initial specified value						
	Leakage current	≦The initial specified value						
Surge Voltage Test	The capacitors shall be subjected to 1,000 cycles each consisting of charging with the specified surge voltage for 30±5 seconds through a protective resistor (as required for RC=0.1±0.05sec) and open-circuiting for 5.5 minutes at a room temperature of 15 to 35℃.							
	Rated voltage (Vdc)	6.3	10	16	25	35	50	
	Surge voltage (Vdc)	7.2	12	18	29	40	58	
	Appearance	No significant damage						
	Capacitance change	≦±20% of the initial value						
	D.F. (tan δ)	≦200% of the initial specified value						
	Leakage current	≦The initial specified value						
	(Caution) Surge Voltage Test intends to evaluate capacitors in durability of an exceptional excessive voltage under specific conditions.It does not imply long-term use at all.							

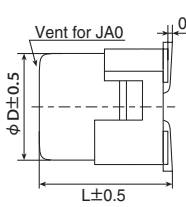
◆DIMENSIONS [mm]

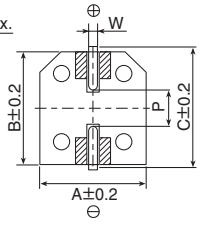
● Terminal Code : A





● Terminal Code : G(Vibration resistant structure)



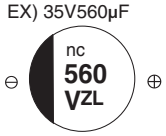


▨ : Dummy terminals

Size code	D	L	A	B	C	W	P
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) 35V560µF



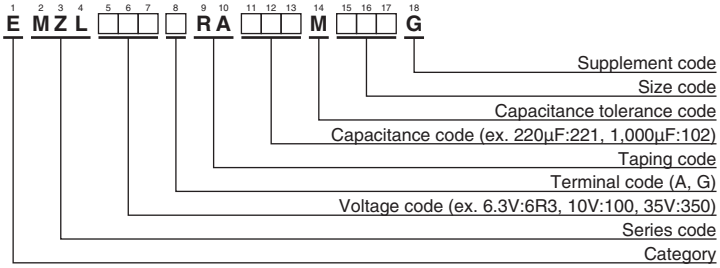
● Rated voltage symbol

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

Applying voltage over the rated voltages causes the capacitors to have short lifetime.
Besides, applying voltage over the specified surge voltages may cause to have short circuit failure. A protection circuit should be used if applied voltage will exceed the rated voltages.

Alchip™-MZL New! Series

◆PART NUMBERING SYSTEM



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

◆STANDARD RATINGS

WV (V_{dc})	Cap (μF)	Size code	tan δ	ESR (Ω max./20℃, 100kHz)	Rated ripple current (mArms/105℃, 100kHz)	Part No.
6.3	470	HA0	0.26	0.16	600	EMZL6R3□RA471MHA0G
	1,000	HA0	0.26	0.16	600	EMZL6R3□RA102MHA0G
	1,500	JA0	0.26	0.08	850	EMZL6R3□RA152MJA0G
10	330	HA0	0.19	0.16	600	EMZL100□RA331MHA0G
	470	HA0	0.19	0.16	600	EMZL100□RA471MHA0G
	680	HA0	0.19	0.16	600	EMZL100□RA681MHA0G
	1,000	JA0	0.19	0.08	850	EMZL100□RA102MJA0G
16	330	HA0	0.16	0.16	600	EMZL160□RA331MHA0G
	470	HA0	0.16	0.16	600	EMZL160□RA471MHA0G
	680	JA0	0.16	0.08	850	EMZL160□RA681MJA0G
25	220	HA0	0.14	0.16	600	EMZL250□RA221MHA0G
	330	HA0	0.14	0.16	600	EMZL250□RA331MHA0G
	470	HA0	0.14	0.08	850	EMZL250□RA471MHA0G
	470	JA0	0.14	0.08	850	EMZL250□RA471MJA0G
	820	JA0	0.14	0.06	1,190	EMZL250□RA821MJA0G
35	100	HA0	0.12	0.16	600	EMZL350□RA101MHA0G
	220	HA0	0.12	0.16	600	EMZL350□RA221MHA0G
	330	HA0	0.12	0.08	850	EMZL350□RA331MHA0G
	330	JA0	0.12	0.08	850	EMZL350□RA331MJA0G
	560	JA0	0.12	0.06	1,190	EMZL350□RA561MJA0G
50	100	HA0	0.10	0.34	350	EMZL500□RA101MHA0G
	220	JA0	0.10	0.18	670	EMZL500□RA221MJA0G

□ : Enter the appropriate terminal code.

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

Capacitance(μF) \ Frequency(Hz)	120	1k	10k	100k
100	0.40	0.75	0.90	1.00
220 to 560	0.50	0.85	0.94	1.00
680 to 1,500	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.