

# Alchip™-MZR Series

- Downsizing and Lower ESR, 2,000 hours at 105°C
- Rated voltage range : 6.3 to 50V, Nominal capacitance range : 150 to 2,200μF
- Solvent resistant type
- Vibration resistant structure
- RoHS Compliant

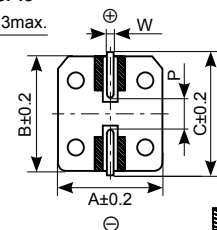
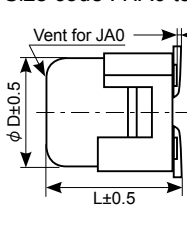
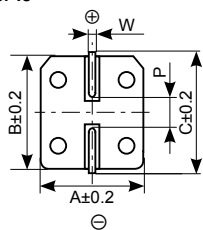
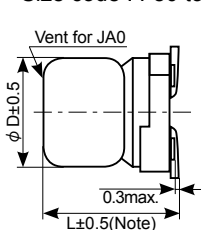
## ◆ SPECIFICATIONS

Items	Characteristics						
Category	-55 to +105°C						
Temperature Range	-55 to +105°C						
Rated Voltage Range	6.3 to 50V <sub>dc</sub>						
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)						
Leakage Current	I=0.01CV or 3μA, which is greater. Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C after 2 minutes)						
Dissipation Factor (tan δ)	Rated voltage (V <sub>dc</sub> )	6.3V	10V	16V	25V	35V	50V
	tan δ (Max.)	0.26	0.19	0.16	0.14	0.12	0.10
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V <sub>dc</sub> )	6.3V	10V	16V	25V	35V	50V
	Z(-25°C)/Z(+20°C)	2	2	2	2	2	2
	Z(-40°C)/Z(+20°C)	3	3	3	3	3	3
	Z(-55°C)/Z(+20°C)	4	4	4	3	3	3
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 2,000 hours at 105°C.						
	Capacitance change	≤ ±30% of the initial value					
	D.F. (tan δ)	≤ 200% 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. (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°C.						
	Rated voltage (V <sub>dc</sub> )	6.3V	10V	16V	25V	35V	50V
	Surge voltage (V <sub>dc</sub> )	7.2V	12V	18V	29V	40V	57V
	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
- Size code : F80 to JA0

- Terminal Code : G (Vibration resistant structure)
- Size code : HA0 to JA0



Size Code	D	L	A	B	C	W	P
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

▨ : Dummy terminals

## ◆ MARKING

EX) 35V330μF



### ● Rated voltage symbol

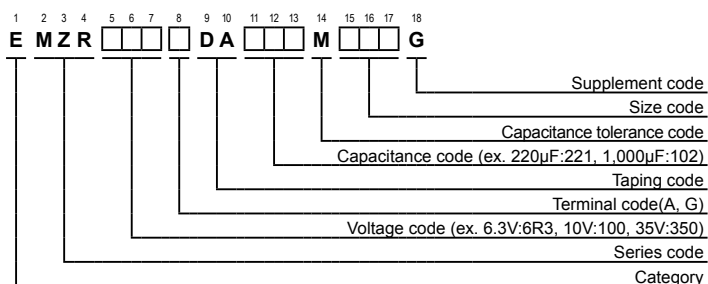
Rated voltage (V <sub>dc</sub> )	6.3	10	16	25	35	50
Symbol	j	A	C	E	V	H

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.

Please contact us for mass production schedule.  
Specifications in this bulletin are subject to change without notice.

## Alchip™-MZR Series

### ◆ PART NUMBERING SYSTEM



### ◆ STANDARD RATINGS

WV (V <sub>dc</sub> )	Cap (μF)	Size code	tan δ	ESR (Ω <sub>max</sub> /20°C, 100kHz)	Rated ripple current (mA <sub>rms</sub> /105°C, 100kHz)	Part No.
6.3	680	F80	0.26	0.16	600	EMZR6R3ADA681MF80G
	1,500	HA0	0.26	0.08	850	EMZR6R3□DA152MHA0G
	2,200	JA0	0.26	0.06	1,190	EMZR6R3□DA222MJA0G
10	470	F80	0.19	0.16	600	EMZR100ADA471MF80G
	1,000	HA0	0.19	0.08	850	EMZR100□DA102MHA0G
	1,500	JA0	0.19	0.06	1,190	EMZR100□DA152MJA0G
16	330	F80	0.16	0.16	600	EMZR160ADA331MF80G
	680	HA0	0.16	0.08	850	EMZR160□DA681MHA0G
	1,000	JA0	0.16	0.06	1,190	EMZR160□DA102MJA0G
25	220	F80	0.14	0.16	600	EMZR250ADA221MF80G
	470	HA0	0.14	0.08	850	EMZR250□DA471MHA0G
	820	JA0	0.14	0.06	1,190	EMZR250□DA821MJA0G
35	150	F80	0.12	0.16	600	EMZR350ADA151MF80G
	330	HA0	0.12	0.08	850	EMZR350□DA331MHA0G
	560	JA0	0.12	0.06	1,190	EMZR350□DA561MJA0G
50	220	HA0	0.10	0.18	670	EMZR500□DA221MHA0G
	330	JA0	0.10	0.12	900	EMZR500□DA331MJA0G

□ :Enter the appropriate terminal code.

Please contact us for mass production schedule.  
Specifications in this bulletin are subject to change without notice.