Alchip™-MZJ Series

- Lower ESR, 2,000 hours at 105℃
- Rated voltage range : 6.3 to 35V
- Nominal capacitance range : 10 to 1,800μF
- Solvent resistant type (see PRECAUTIONS AND GUIDELINES)
- Vibration resistant structure
- RoHS Compliant

MZJ
↑ Lower ESR
MZA P74



◆SPECIFICATIONS

Items	Characteristics
Category Temperature Range	−55 to +105℃
Rated Voltage Range	6.3 to 35Vdc
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
tanδ(Max.)	0.26	0.19	0.16	0.14	0.12

(at 20℃, 120Hz)

Low Temperature Characteristics (Max. Impedance Ratio)

Rated voltage (Vdc)	6.3V	10V	16V	25V	35V
Z(−25℃)/Z(+20℃)	2	2	2	2	2
Z(−40℃)/Z(+20℃)	3	3	3	3	3
Z(−55℃)/Z(+20℃)	4	4	4	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 2,000 hours at 105℃.

Capacitance change	≦±30% of the initial value
D.F. (tanδ)	≦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℃ 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)	≦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℃.

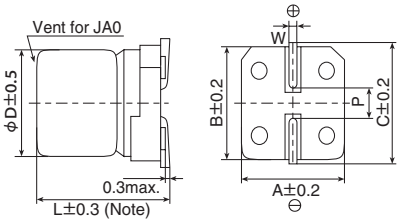
Rated voltage (Vdc)	6.3V	10V	16V	25V	35V
Surge voltage (Vdc)	7.2V	12V	18V	29V	40V

Appearance	No significant damage
Capacitance change	≦±20% of the initial value
D.F. (tanδ)	≦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.

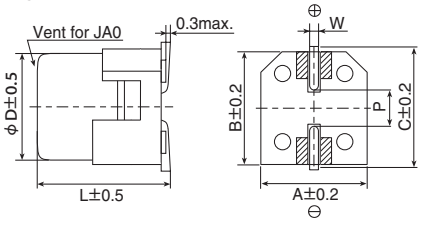
◆DIMENSIONS [mm]

● Terminal Code : A
● Size code : D61 to JA0



Note : L±0.5 for HA0 and JA0

● Terminal Code : G(Vibration resistant structure)
● Size code : HA0 and JA0



▨ : Dummy terminals

Size code	D	L	A	B	C	W	P
D61	4	5.8	4.3	4.3	5.1	0.5 to 0.8	1.0
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) 35V10μF



● Rated voltage symbol

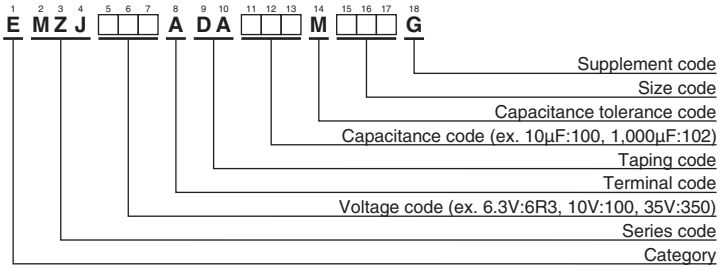
Rated voltage (Vdc)	6.3	10	16	25	35
Symbol	j	A	C	E	V

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.

Product specifications in this catalog are subject to change without notice.Request our product specifications before purchase and/or use. Please use our products based on the information contained in this catalog and product specifications.

Alchip™-MZJ Series

◆PART NUMBERING SYSTEM



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

◆STANDARD RATINGS

WV(Vdc)	Cap(μF)	Size code	tanδ	ESR (Ωmax/20℃, 100kHz)	Rated ripple current (mArms/105℃, 100kHz)	Part No.
6.3	47	D61	0.26	0.85	160	EMZJ6R3ADA470MD61G
	100	E61	0.26	0.36	240	EMZJ6R3ADA101ME61G
	220	F61	0.26	0.26	300	EMZJ6R3ADA221MF61G
	330	F80	0.26	0.16	600	EMZJ6R3ADA331MF80G
	1,000	HA0	0.26	0.08	850	EMZJ6R3ADA102MHA0G
	1,500	JA0	0.26	0.06	1,190	EMZJ6R3ADA152MJA0G
	1,800	JA0	0.26	0.06	1,190	EMZJ6R3ADA182MJA0G
10	33	D61	0.19	0.85	160	EMZJ100ADA330MD61G
	150	F61	0.19	0.26	300	EMZJ100ADA151MF61G
	680	HA0	0.19	0.08	850	EMZJ100ADA681MHA0G
	1,000	JA0	0.19	0.06	1,190	EMZJ100ADA102MJA0G
	1,200	JA0	0.19	0.06	1,190	EMZJ100ADA122MJA0G
16	22	D61	0.16	0.85	160	EMZJ160ADA220MD61G
	47	E61	0.16	0.36	240	EMZJ160ADA470ME61G
	100	F61	0.16	0.26	300	EMZJ160ADA101MF61G
	150	F80	0.16	0.16	600	EMZJ160ADA151MF80G
	220	F80	0.16	0.16	600	EMZJ160ADA221MF80G
	470	HA0	0.16	0.08	850	EMZJ160ADA471MHA0G
	680	JA0	0.16	0.06	1,190	EMZJ160ADA681MJA0G
	820	JA0	0.16	0.06	1,190	EMZJ160ADA821MJA0G
25	10	D61	0.14	0.85	160	EMZJ250ADA100MD61G
	22	E61	0.14	0.36	240	EMZJ250ADA220ME61G
	33	E61	0.14	0.36	240	EMZJ250ADA330ME61G
	33	F61	0.14	0.26	300	EMZJ250ADA330MF61G
	47	F61	0.14	0.26	300	EMZJ250ADA470MF61G
	68	F61	0.14	0.26	300	EMZJ250ADA680MF61G
	100	F80	0.14	0.16	600	EMZJ250ADA101MF80G
	330	HA0	0.14	0.08	850	EMZJ250ADA331MHA0G
	470	JA0	0.14	0.06	1,190	EMZJ250ADA471MJA0G
	560	JA0	0.14	0.06	1,190	EMZJ250ADA561MJA0G
35	10	D61	0.12	0.85	160	EMZJ350ADA100MD61G
	22	E61	0.12	0.36	240	EMZJ350ADA220ME61G
	33	F61	0.12	0.26	300	EMZJ350ADA330MF61G
	47	F61	0.12	0.26	300	EMZJ350ADA470MF61G
	68	F61	0.12	0.26	300	EMZJ350ADA680MF61G
	100	F80	0.12	0.16	600	EMZJ350ADA101MF80G
	100	HA0	0.12	0.08	850	EMZJ350ADA101MHA0G
	150	HA0	0.12	0.08	850	EMZJ350ADA151MHA0G
	220	HA0	0.12	0.08	850	EMZJ350ADA221MHA0G
	330	JA0	0.12	0.06	1,190	EMZJ350ADA331MJA0G
	390	JA0	0.12	0.06	1,190	EMZJ350ADA391MJA0G

◆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 560	0.50	0.85	0.94	1.00
680 to 1,800	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.

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