

Alchip™-MZJ Series

- Lower ESR, 2,000 to 5,000 hours at 105°C
- Rated voltage range : 6.3 to 50V
- Nominal capacitance range : 10 to 12,000μF
- Solvent resistant type
- RoHS Compliant



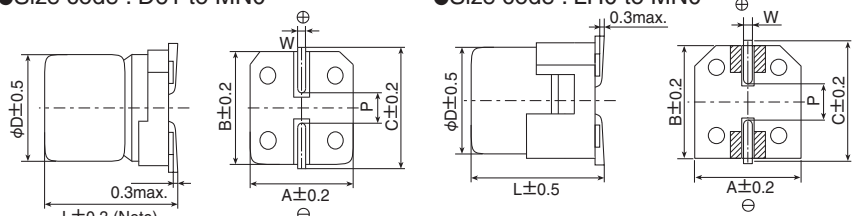
◆ SPECIFICATIONS

Items	Characteristics						
Category							
Temperature Range	-55 to +105°C						
Rated Voltage Range	6.3 to 50V _{dc}						
Capacitance Tolerance	±20% (M) (at 20°C, 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°C after 2 minutes)						
Dissipation Factor (tanδ)	Rated voltage (V _{dc})	6.3V	10V	16V	25V	35V	50V
	tanδ(Max.)	0.26	0.19	0.16	0.14	0.12	0.12
	When nominal capacitance exceeds 1,000μF, add 0.02 to the value above for each 1,000μF increase. (at 20°C, 120Hz)						
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V _{dc})	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
	(at 120Hz)						
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for the specified time at 105°C.						
	Time	D61 to JA0 : 2,000hours KE0 to MN0 : 5,000hours					
	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°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)	≤ 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 _{dc})	6.3V	10V	16V	25V	35V	50V
	Surge voltage (V _{dc})	7.2V	12V	18V	29V	40V	58V
	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 MN0

- Terminal Code : G
- Size code : LH0 to MN0



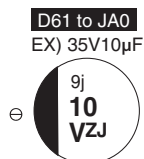
Note : L±0.5 for HA0 to MN0

▨ : Dummy terminals

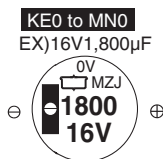
Size code	D	L	A	B	C	W	P
D61	4	5.8	4.3	4.3	5.1	0.5 to 0.8	1.0
E61	5	5.8	5.3	5.3	5.9	0.5 to 0.8	1.4
F61	6.3	5.8	6.6	6.6	7.2	0.5 to 0.8	1.9
F80	6.3	7.7	6.6	6.6	7.2	0.5 to 0.8	1.9
HA0	8	10.0	8.3	8.3	9.0	0.7 to 1.1	3.1
JA0	10	10.0	10.3	10.3	11.0	0.7 to 1.1	4.5
KE0	12.5	13.5	13.0	13.0	13.7	1.0 to 1.3	4.2
KG5	12.5	16.0	13.0	13.0	13.7	1.0 to 1.3	4.2
LH0	16	16.5	17.0	17.0	18.0	1.0 to 1.3	6.5
LN0	16	21.5	17.0	17.0	18.0	1.0 to 1.3	6.5
MH0	18	16.5	19.0	19.0	20.0	1.0 to 1.3	6.5
MN0	18	21.5	19.0	19.0	20.0	1.0 to 1.3	6.5

◆ MARKING

- Rated voltage symbol



Rated voltage (V _{dc})	Symbol
6.3	j
10	A
16	C
25	E
35	V

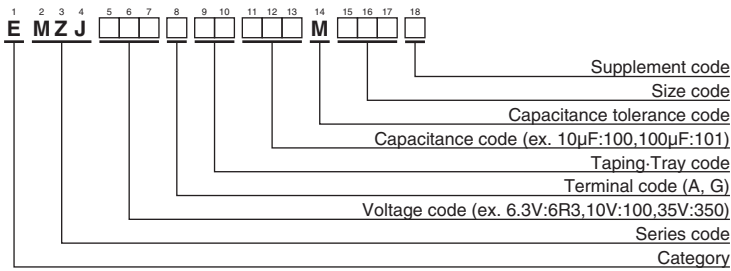


Applying voltage over the rated voltages causes the capacitors to have short lifetime. Besides, applying voltage over the specified surge voltages may cause to have short circuit failure. A protection circuit should be used if applied voltage will exceed the rated voltages.

Specifications in this bulletin are subject to change without notice.

Alchip™-MZJ Series

◆PART NUMBERING SYSTEM



◆STANDARD RATINGS

WV (Vdc)	Cap (μF)	Size code	ESR (Ω max/20°C,100kHz)	Rated ripple current (mA rms/105°C,100kHz)	Part No.
6.3	47	D61	0.85	160	EMZJ6R3ADA470MD61G
	100	E61	0.36	240	EMZJ6R3ADA101ME61G
	220	F61	0.26	300	EMZJ6R3ADA221MF61G
	330	F80	0.16	600	EMZJ6R3ADA331MF80G
	1,000	HA0	0.080	850	EMZJ6R3ADA102MHA0G
	1,500	JA0	0.060	1,190	EMZJ6R3ADA152MJA0G
	1,800	JA0	0.060	1,190	EMZJ6R3ADA182MJA0G
	3,300	KE0	0.051	1,210	EMZJ6R3ARA332MKE0S
	3,900	KG5	0.044	1,420	EMZJ6R3ARA392MKG5S
	6,800	LH0	0.035	1,850	EMZJ6R3□DA682MLH0S
	8,200	MH0	0.033	2,070	EMZJ6R3□DA822MMH0S
	10,000	LNO	0.026	2,330	EMZJ6R3□DA103MLN0S
12,000	MNO	0.025	2,680	EMZJ6R3□DA123MMN0S	
10	33	D61	0.85	160	EMZJ100ADA330MD61G
	150	F61	0.26	300	EMZJ100ADA151MF61G
	680	HA0	0.080	850	EMZJ100ADA681MHA0G
	1,000	JA0	0.060	1,190	EMZJ100ADA102MJA0G
	1,200	JA0	0.060	1,190	EMZJ100ADA122MJA0G
	2,200	KE0	0.051	1,210	EMZJ100ARA222MKE0S
	2,700	KG5	0.044	1,420	EMZJ100ARA272MKG5S
	4,700	LH0	0.035	1,850	EMZJ100□DA472MLH0S
	6,800	LNO	0.026	2,330	EMZJ100□DA682MLN0S
	6,800	MH0	0.033	2,070	EMZJ100□DA682MMH0S
10,000	MNO	0.025	2,680	EMZJ100□DA103MMN0S	
16	22	D61	0.85	160	EMZJ160ADA220MD61G
	47	E61	0.36	240	EMZJ160ADA470ME61G
	100	F61	0.26	300	EMZJ160ADA101MF61G
	150	F80	0.16	600	EMZJ160ADA151MF80G
	220	F80	0.16	600	EMZJ160ADA221MF80G
	470	HA0	0.080	850	EMZJ160ADA471MHA0G
	680	JA0	0.060	1,190	EMZJ160ADA681MJA0G
	820	JA0	0.060	1,190	EMZJ160ADA821MJA0G
	1,800	KE0	0.051	1,210	EMZJ160ARA182MKE0S
	2,200	KG5	0.044	1,420	EMZJ160ARA222MKG5S
	3,900	LH0	0.035	1,850	EMZJ160□DA392MLH0S
	4,700	MH0	0.033	2,070	EMZJ160□DA472MMH0S
	5,600	LNO	0.026	2,330	EMZJ160□DA562MLN0S
	8,200	MNO	0.025	2,680	EMZJ160□DA822MMN0S
25	10	D61	0.85	160	EMZJ250ADA100MD61G
	22	E61	0.36	240	EMZJ250ADA220ME61G
	33	E61	0.36	240	EMZJ250ADA330ME61G
	33	F61	0.26	300	EMZJ250ADA330MF61G
	47	F61	0.26	300	EMZJ250ADA470MF61G
	68	F61	0.26	300	EMZJ250ADA680MF61G
	100	F80	0.16	600	EMZJ250ADA101MF80G
	330	HA0	0.080	850	EMZJ250ADA331MHA0G
	470	JA0	0.060	1,190	EMZJ250ADA471MJA0G
	560	JA0	0.060	1,190	EMZJ250ADA561MJA0G
	1,200	KE0	0.051	1,210	EMZJ250ARA122MKE0S
	1,500	KG5	0.044	1,420	EMZJ250ARA152MKG5S
	2,200	LH0	0.035	1,850	EMZJ250□DA222MLH0S
	3,300	MH0	0.033	2,070	EMZJ250□DA332MMH0S
	3,900	LNO	0.026	2,330	EMZJ250□DA392MLN0S
	4,700	MNO	0.025	2,680	EMZJ250□DA472MMN0S
35	10	D61	0.85	160	EMZJ350ADA100MD61G
	22	E61	0.36	240	EMZJ350ADA220ME61G
	33	F61	0.26	300	EMZJ350ADA330MF61G
	47	F61	0.26	300	EMZJ350ADA470MF61G
	68	F61	0.26	300	EMZJ350ADA680MF61G
	100	F80	0.16	600	EMZJ350ADA101MF80G
	100	HA0	0.080	850	EMZJ350ADA101MHA0G
	150	HA0	0.080	850	EMZJ350ADA151MHA0G
	220	HA0	0.080	850	EMZJ350ADA221MHA0G
	330	JA0	0.060	1,190	EMZJ350ADA331MJA0G
	390	JA0	0.060	1,190	EMZJ350ADA391MJA0G
	680	KE0	0.051	1,210	EMZJ350ARA681MKE0S
	820	KG5	0.044	1,420	EMZJ350ARA821MKG5S
	1,500	LH0	0.035	1,850	EMZJ350□DA152MLH0S
	2,200	MH0	0.033	2,070	EMZJ350□DA222MMH0S
	2,700	LNO	0.026	2,330	EMZJ350□DA272MLN0S
3,300	MNO	0.025	2,680	EMZJ350□DA332MMN0S	
50	390	KE0	0.105	930	EMZJ500ARA391MKE0S
	470	KG5	0.092	1,120	EMZJ500ARA471MKG5S
	1,000	LH0	0.073	1,660	EMZJ500□DA102MLH0S
	1,000	MH0	0.069	1,680	EMZJ500□DA102MMH0S
	1,200	LNO	0.050	1,920	EMZJ500□DA122MLN0S
	1,800	MNO	0.049	2,080	EMZJ500□DA182MMN0S

□ : Enter the appropriate terminal code.