Alchip™-MZJ Series

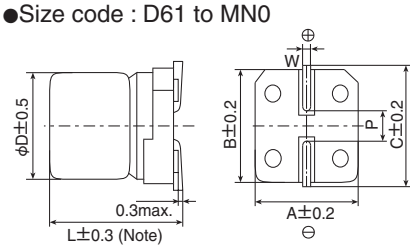
- Lower ESR, 2,000 to 5,000 hours at 105℃
- Rated voltage range : 6.3 to 50V
- Nominal capacitance range : 10 to 12,000μF
- Solvent resistant type
- **RoHS Compliant**

◆SPECIFICATIONS

Items	Characteristics
Category Temperature Range	−55 to +105℃
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 (tanδ)	Rated voltage (Vdc) 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℃, 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 the specified time at 105℃. 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℃ 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 50V Surge voltage (Vdc) 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.

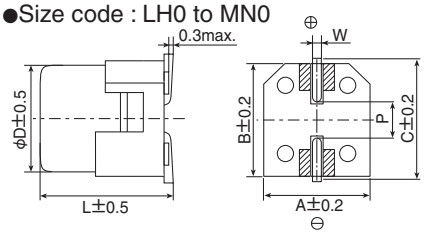
◆DIMENSIONS [mm]

- Terminal Code : A
- Size code : D61 to MN0



Note : L±0.5 for HA0 to MN0

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

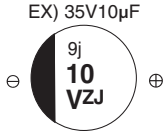


: Dummy terminals

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

D61 to JA0
EX) 35V10μF

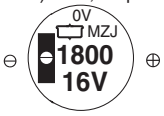


- Rated voltage symbol

D61 to JA0

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

KE0 to MN0
EX)16V1,800μF



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.

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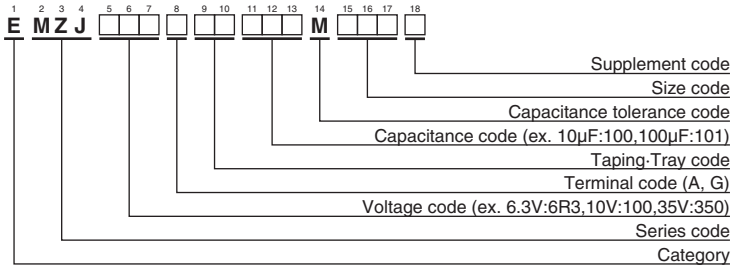
Alchip™-MZJ Series

◆PART NUMBERING SYSTEM



◆STANDARD RATINGS

WV (Vdc)	Cap (μF)	Size code	ESR (Ω max/ 20℃,100kHz)	Rated ripple current (mArms/ 105℃,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	LN0	0.026	2,330	EMZJ6R3□DA103MLN0S
	12,000	MN0	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	LN0	0.026	2,330	EMZJ100□DA682MLN0S
	6,800	MH0	0.033	2,070	EMZJ100□DA682MMH0S
	10,000	MN0	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	LN0	0.026	2,330	EMZJ160□DA562MLN0S
	8,200	MN0	0.025	2,680	EMZJ160□DA822MMN0S

□ : Enter the appropriate terminal code.

WV (Vdc)	Cap (μF)	Size code	ESR (Ω max/ 20℃,100kHz)	Rated ripple current (mArms/ 105℃,100kHz)	Part No.
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	LN0	0.026	2,330	EMZJ250□DA392MLN0S
	4,700	MN0	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	LN0	0.026	2,330	EMZJ350□DA272MLN0S
	3,300	MN0	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	LN0	0.050	1,920	EMZJ500□DA122MLN0S
	1,800	MN0	0.049	2,080	EMZJ500□DA182MMN0S

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