Alchip™-MZA Series Upgrade!

- Endurance : 2,000 to 5,000 hours at 105℃
- Low impedance
- Solvent resistant type(see PRECAUTIONS AND GUIDELINES)
- Vibration resistant structure
- **RoHS Compliant**

MZA
↑ Lower Z
MVY P76

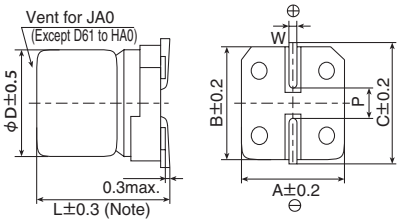


◆SPECIFICATIONS

Items	Characteristics									
Category Temperature Range	-55 to +105℃									
Rated Voltage Range	6.3 to 100Vdc									
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	63V	80V	100V
	tanδ(Max.) D61 to JA0	0.26	0.19	0.16	0.14	0.12	0.10	0.08	0.08	—
	tanδ(Max.) KE0 to MN0	—	—	—	0.16	0.14	0.12	0.12	0.10	0.10
	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	63V	80V	100V
	Z(-25℃)/Z(+20℃)	2	2	2	2	2	2	2	2	2
	Z(-40℃)/Z(+20℃)	3	3	3	3	3	3	3	3	3
	Z(-55℃)/Z(+20℃)	4	4	4	3	3	3	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 specified time at 105℃.									
	Time: D61 to JA0 : 2,000 hours; KE0 to MN0 : 5,000 hours									
	Capacitance change: ≦±30% of the initial value									
	D.F. (tanδ): ≦200% of the initial specified value									
	Leakage current: ≦The initial specified value									

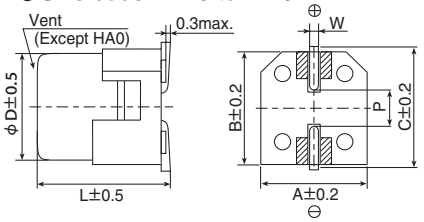
◆DIMENSIONS [mm]

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



Note : L±0.5 for HA0 and MN0

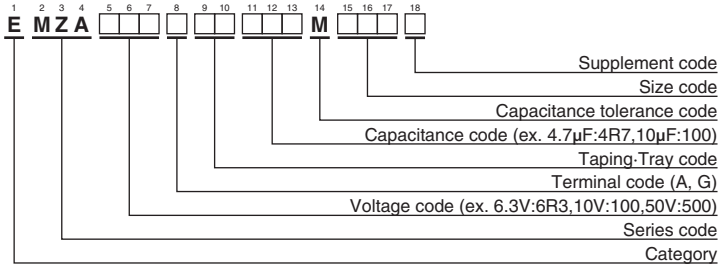
● Terminal Code : G(Vibration resistant structure)
● Size code : HA0 to MN0



▨ : 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

◆PART NUMBERING SYSTEM



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

◆MARKING

D61 to JA0
EX) 16V220μF



KE0 to MN0
EX) 25V1,000μF



●Rated voltage symbol (D61 to JA0)

Rated voltage (Vdc)	6.3	10	16	25	35	50	63	80
Symbol	j	A	C	E	V	H	J	K

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™-MZA Upgrade! Series

◆STANDARD RATINGS

WV (Vdc)	Cap (μF)	Size code	Impedance (Ω max/ 100kHz) 20℃	Impedance (Ω max/ 100kHz) -40℃	Rated ripple current (mArms/ 105℃,100kHz)	Part No.
6.3	22	D61	1.35	–	90	EMZA6R3ADA220MD61G
	47	D61	1.35	–	90	EMZA6R3ADA470MD61G
	47	E61	0.70	–	160	EMZA6R3ADA470ME61G
	100	E61	0.70	–	160	EMZA6R3ADA101ME61G
	100	F61	0.36	–	240	EMZA6R3ADA101MF61G
	220	F61	0.36	–	240	EMZA6R3ADA221MF61G
	330	F80	0.34	–	280	EMZA6R3ADA331MF80G
	470	HA0	0.16	–	600	EMZA6R3ADA471MHA0G
	1,000	HA0	0.16	–	600	EMZA6R3ADA102MHA0G
	1,500	JA0	0.08	–	850	EMZA6R3ADA152MJA0G
10	22	D61	1.35	–	90	EMZA100ADA220MD61G
	33	D61	1.35	–	90	EMZA100ADA330MD61G
	33	E61	0.70	–	160	EMZA100ADA330ME61G
	220	F80	0.34	–	280	EMZA100ADA221MF80G
	330	HA0	0.16	–	600	EMZA100ADA331MHA0G
	470	HA0	0.16	–	600	EMZA100ADA471MHA0G
	680	HA0	0.16	–	600	EMZA100ADA681MHA0G
	1,000	JA0	0.08	–	850	EMZA100ADA102MJA0G
16	10	D61	1.35	–	90	EMZA160ADA100MD61G
	22	D61	1.35	–	90	EMZA160ADA220MD61G
	22	E61	0.70	–	160	EMZA160ADA220ME61G
	47	E61	0.70	–	160	EMZA160ADA470ME61G
	47	F61	0.36	–	240	EMZA160ADA470MF61G
	100	F61	0.36	–	240	EMZA160ADA101MF61G
	220	F80	0.34	–	280	EMZA160ADA221MF80G
	330	HA0	0.16	–	600	EMZA160ADA331MHA0G
	470	HA0	0.16	–	600	EMZA160ADA471MHA0G
	680	JA0	0.08	–	850	EMZA160ADA681MJA0G
25	10	D61	1.35	–	90	EMZA250ADA100MD61G
	22	E61	0.70	–	160	EMZA250ADA220ME61G
	33	E61	0.70	–	160	EMZA250ADA330ME61G
	33	F61	0.36	–	240	EMZA250ADA330MF61G
	47	F61	0.36	–	240	EMZA250ADA470MF61G
	100	F80	0.34	–	280	EMZA250ADA101MF80G
	220	HA0	0.16	–	600	EMZA250ADA221MHA0G
	330	HA0	0.16	–	600	EMZA250ADA331MHA0G
	470	JA0	0.08	–	850	EMZA250ADA471MJA0G
	1,000	KE0	0.060	0.30	1,320	EMZA250ARA102MKE0S
	1,300	KG5	0.056	0.28	1,470	EMZA250ARA132MKG5S
	1,800	LH0	0.047	0.24	1,820	EMZA250□DA182MLH0S
	2,400	MH0	0.045	0.23	2,060	EMZA250□DA242MMH0S
	3,000	LN0	0.034	0.17	2,400	EMZA250□DA302MLN0S
	3,900	MN0	0.032	0.16	2,640	EMZA250□DA392MMN0S
35	4.7	D61	1.35	–	90	EMZA350ADA4R7MD61G
	10	D61	1.35	–	90	EMZA350ADA100MD61G
	10	E61	0.70	–	160	EMZA350ADA100ME61G
	22	E61	0.70	–	160	EMZA350ADA220ME61G
	33	F61	0.36	–	240	EMZA350ADA330MF61G
	47	F61	0.36	–	240	EMZA350ADA470MF61G
	100	F80	0.34	–	280	EMZA350ADA101MF80G
	100	HA0	0.16	–	600	EMZA350ADA101MHA0G
	220	HA0	0.16	–	600	EMZA350ADA221MHA0G

WV (Vdc)	Cap (μF)	Size code	Impedance (Ω max/ 100kHz) 20℃	Impedance (Ω max/ 100kHz) -40℃	Rated ripple current (mArms/ 105℃,100kHz)	Part No.
35	330	JA0	0.08	–	850	EMZA350ADA331MJA0G
	620	KE0	0.060	0.30	1,320	EMZA350ARA621MKE0S
	820	KG5	0.056	0.28	1,470	EMZA350ARA821MKG5S
	1,200	LH0	0.047	0.24	1,820	EMZA350□DA122MLH0S
	1,600	MH0	0.045	0.23	2,060	EMZA350□DA162MMH0S
	1,800	LN0	0.034	0.17	2,400	EMZA350□DA182MLN0S
	2,400	MN0	0.032	0.16	2,640	EMZA350□DA242MMN0S
50	4.7	D61	2.9	–	60	EMZA500ADA4R7MD61G
	10	E61	1.52	–	85	EMZA500ADA100ME61G
	10	F61	0.88	–	165	EMZA500ADA100MF61G
	22	F61	0.88	–	165	EMZA500ADA220MF61G
	33	F80	0.68	–	195	EMZA500ADA330MF80G
	47	F80	0.68	–	195	EMZA500ADA470MF80G
	100	HA0	0.34	–	350	EMZA500ADA101MHA0G
	220	JA0	0.18	–	670	EMZA500ADA221MJA0G
	330	KE0	0.11	0.55	980	EMZA500ARA331MKE0S
	430	KG5	0.10	0.50	1,090	EMZA500ARA431MKG5S
	620	LH0	0.087	0.44	1,320	EMZA500□DA621MLH0S
	820	MH0	0.087	0.44	1,420	EMZA500□DA821MMH0S
	1,000	LN0	0.050	0.25	1,910	EMZA500□DA102MLN0S
	1,300	MN0	0.050	0.25	2,180	EMZA500□DA132MMN0S
63	4.7	E61	4.8	–	50	EMZA630ADA4R7ME61G
	10	F61	2.2	–	80	EMZA630ADA100MF61G
	22	F80	2.1	–	120	EMZA630ADA220MF80G
	33	HA0	0.70	–	250	EMZA630ADA330MHA0G
	47	HA0	0.70	–	250	EMZA630ADA470MHA0G
	68	HA0	0.70	–	250	EMZA630ADA680MHA0G
	100	JA0	0.45	–	400	EMZA630ADA101MJA0G
	240	KE0	0.19	1.54	880	EMZA630ARA241MKE0S
	300	KG5	0.17	1.19	1,000	EMZA630ARA301MKG5S
	430	LH0	0.15	1.05	1,220	EMZA630□DA431MLH0S
	560	MH0	0.12	0.84	1,430	EMZA630□DA561MMH0S
	680	LN0	0.085	0.58	1,790	EMZA630□DA681MLN0S
	910	MN0	0.070	0.49	1,960	EMZA630□DA911MMN0S
80	3.3	E61	5.0	–	25	EMZA800ADA3R3ME61G
	4.7	F61	3.0	–	40	EMZA800ADA4R7MF61G
	10	F80	2.4	–	60	EMZA800ADA100MF80G
	22	HA0	1.3	–	130	EMZA800ADA220MHA0G
	33	HA0	1.3	–	130	EMZA800ADA330MHA0G
	47	JA0	0.70	–	200	EMZA800ADA470MJA0G
	150	KE0	0.22	1.54	810	EMZA800ARA151MKE0S
	220	KG5	0.17	1.19	1,000	EMZA800ARA221MKG5S
	330	LH0	0.15	1.05	1,220	EMZA800□DA331MLH0S
	430	MH0	0.12	0.84	1,430	EMZA800□DA431MMH0S
	470	LN0	0.085	0.58	1,790	EMZA800□DA471MLN0S
	680	MN0	0.070	0.49	1,960	EMZA800□DA681MMN0S
100	110	KE0	0.28	2.24	740	EMZA101ARA111MKE0S
	130	KG5	0.21	1.68	900	EMZA101ARA131MKG5S
	200	LH0	0.18	1.44	1,090	EMZA101□DA201MLH0S
	270	MH0	0.15	1.2	1,280	EMZA101□DA271MMH0S
	330	LN0	0.11	0.88	1,580	EMZA101□DA331MLN0S
	430	MN0	0.091	0.73	1,690	EMZA101□DA431MMN0S

□ : Enter the appropriate terminal code.

◆RATED RIPPLE CURRENT MULTIPLIERS

◎Freguency Multipliers

Size code	Frequency(Hz) / Capacitance(μF)	120	1k	10k	100k
D55 to JA0	3.3 to 4.7	0.35	0.70	0.90	1.00
	10 to 100	0.40	0.75	0.90	1.00
	220 to 470	0.50	0.85	0.94	1.00
	680 to 1,500	0.60	0.87	0.95	1.00
KE0 to MN0	110 to 200	0.40	0.75	0.90	1.00
	220 to 620	0.50	0.85	0.94	1.00
	680 to 1,800	0.60	0.87	0.95	1.00
	2,400 to 3,000	0.75	0.90	0.95	1.00
	3,900	0.85	0.95	0.98	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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