

Alchip™-MZT Series

- Downsizing and Lower ESR, 2,000hours at 105°C
- Rated voltage range : 16 to 35V, Nominal capacitance range : 220 to 1,500μF
- Solvent resistant type(see PRECAUTIONS AND GUIDELINES)
- Vibration resistance structure
- RoHS2 Compliant
- AEC-Q200 compliant : Please contact Chemi-Con for more details, test data, information.

MZT

↑ Higher capacitance
MZS



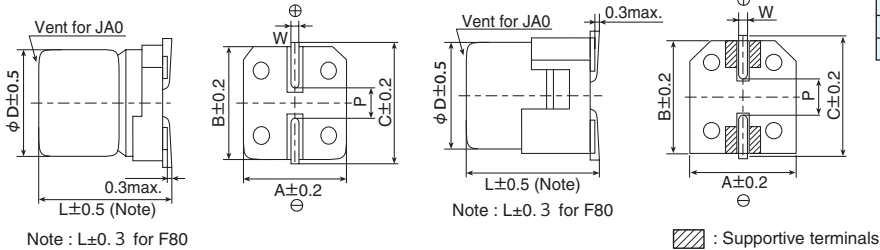
◆ SPECIFICATIONS

| Items | Characteristics |
|--|---|
| Category | -55 to +105°C |
| Temperature Range | -55 to +105°C |
| Rated Voltage Range | 16 to 35V _{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 (tan δ) | Rated voltage (V _{dc}) 16V 25V 35V |
| | tan δ (Max.) 0.16 0.14 0.12 (at 20°C, 120Hz) |
| Low Temperature Characteristics (Max. Impedance Ratio) | Rated voltage (V _{dc}) 16V 25V 35V |
| | Z(-25°C)/Z(+20°C) 2 2 2 |
| | Z(-40°C)/Z(+20°C) 3 3 3 |
| | Z(-55°C)/Z(+20°C) 4 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 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 _{dc}) 16 25 35 |
| | Surge voltage (V _{dc}) 18 29 40 |
| | 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 : F80 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 |

◆ MARKING

EX) 25V1,200μF



- Rated voltage symbol

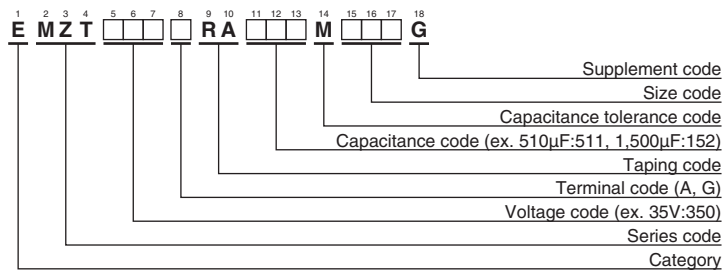
| Rated voltage (V _{dc}) | 16 | 25 | 35 |
|----------------------------------|----|----|----|
| Symbol | C | E | V |

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.



Alchip™-MZT Series

◆PART NUMBERING SYSTEM



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

◆STANDARD RATINGS

| WV (V _{dc}) | Cap (µF) | Size code | tan δ | ESR (Ω max./20°C, 100kHz) | Rated ripple current (mA _{rms} /105°C, 100kHz) | Part No. |
|-----------------------|----------|-----------|-------|---------------------------|---|----------------------|
| 16 | 470 | F80 | 0.16 | 0.16 | 600 | EMZT160[]RA471MF80G |
| | 820 | HA0 | 0.16 | 0.08 | 850 | EMZT160[]RA821MHA0G |
| | 1,500 | JA0 | 0.16 | 0.06 | 1,190 | EMZT160[]RA152MJA0G |
| 25 | 330 | F80 | 0.14 | 0.16 | 600 | EMZT250[]RA331MF80G |
| | 680 | HA0 | 0.14 | 0.08 | 850 | EMZT250[]RA681MHA0G |
| | 1,200 | JA0 | 0.14 | 0.06 | 1,190 | EMZT250[]RA122MJA0G |
| 35 | 220 | F80 | 0.12 | 0.16 | 600 | EMZT350[]RA221MF80G |
| | 510 | HA0 | 0.12 | 0.08 | 850 | EMZT350[]RA511MHA0G |
| | 820 | JA0 | 0.12 | 0.06 | 1,190 | EMZT350[]RA821MJA0G |

[] : Enter the appropriate terminal code.

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

| Capacitance(µF) | Frequency(Hz) | | | |
|-----------------|---------------|------|------|------|
| | 120 | 1k | 10k | 100k |
| 220 to 510 | 0.50 | 0.85 | 0.94 | 1.00 |
| 680 to 1,500 | 0.60 | 0.87 | 0.95 | 1.00 |

The deterioration of aluminum electrolytic capacitors accelerates their life due to the internal heating produced by ripple current. For details, refer to Section "5-3 Ripple Current Effect on Lifetime" in the catalog, Technical Note.



- Always read "Notes on Use" before using the product in order to enable you to use the product correctly and prevent any faults and accidents from occurring.
- Request the Product Specification on the product of NIPPON CHEMI-CON CORPORATION to refer to it as well as this brochure prior to the order of the products. Some specific notes on use of the ordered product may be described in the specifications.
- The products listed in this catalog are designed and manufactured for general electronics equipment use and are not intended for use in applications that can adversely affect human life; where the malfunction of equipment may cause damage to life or property. In addition, our products are not intended to be used in specific applications that may cause a major social impact. Please consult with us in advance of usage of our products in the following listed applications. ① Aerospace equipment ② Power generation equipment such as thermal power, nuclear power etc. ③ Medical equipment ④ Transport equipment (automobiles, trains, ships, etc.) ⑤ Transportation control equipment ⑥ Disaster prevention / crime prevention equipment ⑦ Highly publicized information processing equipment ⑧ Submarine equipment ⑨ Other applications that are not considered general-purpose applications.
- The circuits described as examples in this catalog and the "delivery specifications" are featured in order to show the operations and usage of our products, however, this fact does not guarantee that the circuits are available to function in your equipment systems. We are not in any case responsible for any failures or damage caused by the use of information contained herein. You should examine our products, of which the characteristics are described in the "delivery specifications" and other documents, and determine whether or not our products suit your requirements according to the specifications of your equipment systems. Therefore, you bear final responsibility regarding the use of our products.
Please make sure that you take appropriate safety measures such as use of redundant design and malfunction prevention measures in order to prevent fatal accidents and/or fires in the event any of our products malfunction.
- We strongly recommend our customers to purchase Nippon Chemi-Con products only through our official sales channels. We assume no responsibility for any defects or damages caused by using products purchased from outside our official sales channel or of counterfeit goods. In addition, we will ask the customer to pay the investigation cost for products purchased outside our official sales channel.
- We reserve the right to discontinue production and delivery of products. We do not guarantee that all the products included in this catalog will be available in the future.
The aforementioned does not apply in the case of individual agreements deviating from the foregoing for customer-specific products
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In addition, we have an established system with enhanced traceability, therefore we will limit the applicable lot items for any potential compensation.

[Part Numbering System](#)

[Part Numbering System \(Appendix\)](#)

[Standardization](#)

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[Technical Note](#)

[Precautions and Guidelines](#)

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[Available Terminals for Snap-in and Screw Mount Type](#)