Chip Multilayer Ceramic Capacitors

INNOVATOR IN ELECTRONI Mar. 2020

Sn

Ni

Cu

High Q Chip Multilayer Ceramic Capacitors for General Purpose / GJM series

Features

- 1. Better Q and low ESR at VHF, UHF and microwave frequencies
- 2. Copper inner electrode
- 3. Tight tolerance available

[W] = +/-0.05pF for under 9.9pF [C] = +/-0.25pF for 1.0 to 9.9pF [F] = +/-1% for 10pF & over

[B] = +/-0.1pF for under 9.9pF

- [J] = +/-5% for 10pF & over
- [D] = +/-0.5pF for 5.1pF to 9.9pF [G] = +/-2% for 10pF & over



Ceramics

- 4. Low power consumption, yield ratio improvement due to the better Q or lower ESR.
- 5. GJM series is suited to VCO or PA module applications.
- 6. GJM series is offered with a Ni barrier termination plated with Matter Tin (Sn), and is RoHS compliant.

Global Part Numbering 3 **5C 1E 1R0** GJ Μ 03 С **B01** D -3--4--5--6--7--8--9--10-

-1-: Product ID

| Code | Product |
|------|------------------------|
| GJ | High Q Chip Multilayer |
| | Ceramic Capacitors |

-2-:Series

| Code | Product |
|------|-------------|
| М | Tin Plated |
| | Termination |

-3-:Dimension (LxW)

| Code | Dimension (LxW) |
|------|---------------------------|
| 01 | 0.25x0.125mm (EIA:008004) |
| 02 | 0.4x0.2mm (EIA:01005) |
| 03 | 0.6x0.3mm (EIA:0201) |
| 15 | 1.0x0.5mm (EIA:0402) |

-4-: Dimension (T)

| Code | Dimension (T) |
|------|---------------|
| 1 | 0.125mm |
| 2 | 0.2mm |
| 3 | 0.3mm |
| 5 | 0.5mm |

-5-: Temperature Characteristics

| Code | TC | Temp. Range | Temp. Coefficient | Operating Temp. |
|------|-----|----------------|-------------------|-----------------|
| 5C | C0G | 25 to 125 degC | 0+/-30ppm/C | -55 to 125 degC |
| 5G | X8G | 25 to 150 degC | 0+/-30ppm/C | -55 to 125 degC |

-6-:Rated Voltage

| Code | Rated Voltage |
|------|---------------|
| 0J | DC 6.3V |
| 1C | DC 16V |
| 1E | DC 25V |
| 1H | DC 50V |
| 2A | DC 100V |

-7-·Canacitanco

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|------|-------------|
| Code | Capacitance |
| R10 | 0.1pF |
| 1R0 | 1pF |
| 100 | 10pF |
| | |

-8-:Capacitance Tolerance

| Code | Cap. Tol. | TC |
|------|-----------|-------------------------|
| W | +/-0.05pF | C0G, X8G (under 9.9pF) |
| В | +/-0.1pF | C0G, X8G (under 9.9pF) |
| С | +/-0.25pF | C0G, X8G (1.0 to 9.9pF) |
| D | +/-0.5pF | C0G, X8G (5.1 to 9.9pF) |
| F | +/-1% | C0G, X8G (10pF & over) |
| G | +/-2% | C0G, X8G (10pF & over) |
| J | +/-5% | C0G, X8G (10pF & over) |

-9-:Individual Specification Code

-10-:Packaging

| Code | Packaging |
|------|-----------------------|
| D | Ф180mm Paper Taping |
| L | Ф180mm Plastic Taping |

Regarding detailed specifications, please check catalog or product specification. Information in this PDF are as of Mar.2020. They are subject to change or our products in it may be discontinued without advance notice. Please check the latest information before usage of the products.



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Chip size and Capacitance range



| T | Size | Chip T | то | Rated | | Capacitance Range | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|---------------------------------|--|------------------------|---------------|----------|-------------------|----------|----------|-------------|------------|------------|------|--|--|--|--|--|--|--|-------|--|---------------------------|--|------------|------------|--|--|--|--|---------------------------|
| туре | mm (inch) | (mm) | | Volt (Vdc) | 1pF | | | | | | | 10pF | | | | | | | | 100pF | | | | | | | | | | |
| GJM01 | 0201M (008004) | 0.125±0.013 | | 25 | | | | | | | | | | | | | | | | | | (0.2 - 10pF) | | | | | | | | |
| G IM02 | GJM02 0402M (01005) 0.2±0.02 | 0.2+0.02 | C0G | 25 | | | | | | | | | | | | | | | | | | 0.2 - 22pF | | | | | | | | |
| 0310102 | | (01005) 0.2±0.02 | (01005) | 0.2±0.02 | | 16 | | | | | | | | | | | | | | | | | | 0.2 - 22pF | | | | | | |
| | | | X8G | 100 | | | | | | | | | | | | | | | | | | 0.2 - 15pF (16 - 22pF) | | | | | | | | |
| GJM03 (0201) | 0603M | 603M 0201) 0.3±0.03 COG 25 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | 603M 0201) 0.3±0.03 | 0.3±0.03 | 0.3±0.03 | 02.002 | 0.2.0.02 | 0.2.0.02 | 0 2 1 0 0 2 | 0 3 + 0 03 | | 100 | | | | | | | | | | | | | | | | | | 0.2 - 15pF (16 - 22pF) |
| | (0201) | | | | | COG | 50 | | | | | | | | | | | | | | | | | | 0.2 - 15pF | | | | | |
| | | | | | | | | | | | 0.2 - 33pF | | | | | | | | | | | | | | | | | | | |
| GJM15 | 1005M | 0.5±0.05 | | 50 | | | | | | | | | | | | | | | | | | 0.1 - 47pF | | | | | | | | |



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High Q Chip Multilayer Ceramic Capacitors for General Purpose / GJM series

Electric Characteristic Comparisons < GJM vs GRM >

MEASURING EQUIPMENT E5071C / E4991A (Keysight)



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"You can search the murata P/N except the development items from the following URLs" <u>https://psearch.jp.murata.com/capacitor/lineup/gjm/</u>