

GCM series / <100V Max>

Features

- GCM series is for power-train, safety equipment of automotive.** For other automotive equipment such as comfort, security, information and entertainment, GRM series is available.
- GCM series meets AEC-Q200 requirements.**
- GCM series is offered with a Ni barrier termination plated with Matte Tin (Sn), and is RoHS compliant.
- TA chip capacitor replacement product lineup is available in X7R (X7S) temperature characteristics.
- No polarity.
- Stringent dimensional tolerances allow highly reliable, high speed automatic chip placement on PCBs.

Global Part Numbering

GC M 18 8 R7 1H 102 K A37 D
-1- -2- -3- -4- -5- -6- -7- -8- -9- -10-

-1:-Product ID

| Code | Product |
|------|-----------------------------------|
| GC | For Power-train, Safety Equipment |

-2:-Series

| Code | Product |
|------|------------------------|
| M | Tin Plated Termination |

-3:-Dimension (LxW)

| Code | Dimension (LxW) |
|------|-----------------------|
| 03 | 0.6x0.3mm (EIA:0201) |
| 15 | 1.0x0.5mm (EIA:0402) |
| 18 | 1.6x0.8mm (EIA:0603) |
| 21 | 2.0x1.25mm (EIA:0805) |
| 31 | 3.2x1.6mm (EIA:1206) |
| 32 | 3.2x2.5mm (EIA:1210) |

-4:-Dimension (T)

| Code | Dimension (T) |
|------|---------------|
| 3 | 0.3mm |
| 5 | 0.5mm |
| 6 | 0.6mm |
| 8 | 0.8mm |
| 9 | 0.85mm |
| A | 1.0mm |
| M | 1.15mm |
| B | 1.25mm |
| C | 1.6mm |
| D | 2.0mm |
| E | 2.5mm |

-5:-Temperature Characteristics

| Code | TC | Temp. Range | Cap. Change or Temp. Coefficient | Operating Temp. |
|------|-----|-----------------|----------------------------------|-----------------|
| R7 | X7R | -55 to 125 degC | +/-15% | -55 to 125 degC |
| C7 | X7S | -55 to 125 degC | +/-22% | |
| 5C | C0G | 25 to 125 degC | 0+/-30ppm/°C | |
| 7U | U2J | 25 to 85 degC | -750±120ppm/°C | -55 to 150 degC |
| L8 | X8L | -55 to 150 degC | +15/-40% | |
| M8 | X8M | | +15/-50% | |
| R9 | X8R | | +/-15% | |
| 5G | X8G | 25 to 150 degC | 0+/-30ppm/°C | |

-6:-Rated Voltage

| Code | Rated Voltage |
|------|---------------|
| 0J | DC 6.3V |
| 1A | DC 10V |
| 1C | DC 16V |
| 1E | DC 25V |
| YA | DC 35V |
| 1H | DC 50V |
| 2A | DC 100V |
| EE | DC 16V(*) |
| EF | DC 25V(*) |
| EG | DC 35V(*) |
| EH | DC 50V(*) |
| EL | DC 100V(*) |

* : Rated voltage derating product

-7:-Capacitance

| Code | Capacitance |
|------|-------------|
| 1R0 | 1pF |
| 100 | 10pF |
| 101 | 100pF |
| 102 | 1,000pF |
| 103 | 0.01µF |
| 104 | 0.1µF |
| 105 | 1µF |
| 106 | 10µF |

-8:-Capacitance Tolerance

| Code | Cap. Tol. | TC |
|------|-----------|--------------------|
| B | +/-0.1pF | C0G (1 to 5pF) |
| C | +/-0.25pF | C0G (1 to 9.9pF) |
| D | +/-0.5pF | C0G (5.1 to 9.9pF) |
| F | +/-1% | C0G (10pF) |
| G | +/-2% | C0G (10pF & over) |
| J | +/-5% | C0G (10pF & over) |
| J | +/-5% | X8G (10pF & over) |
| K | +/-10% | X8_ |
| K | +/-10% | X7_ |

-9:-Individual Specification Code

-10:-Packaging

| Code | Packaging |
|------|-------------------------|
| D | φ 180mm Paper Taping |
| L | φ 180mm Embossed Taping |
| J | φ 330mm Paper Taping |
| K | φ 330mm Embossed Taping |

GCM series / <100V Max>

<X7R,X7S Type>

Chip size and Capacitance range

< X7R,X7S,X7T >

 M.P. (Recommend) Not Recommended

| Type | Size (inch) | WV | Capacitance | | | | | | | | | | | | | | | | | |
|--------|-------------|-----|-------------|-----|-----|----|-----|-----|----|----|----|-----|-----|-----|----|-----|-----|----|----|----|
| | | | pF | | | nF | | | | | | | | | μF | | | | | |
| | | | 100 | 220 | 470 | 1 | 2.2 | 4.7 | 10 | 22 | 47 | 100 | 220 | 470 | 1 | 2.2 | 4.7 | 10 | 22 | 47 |
| GCM 03 | 0201 | 25 | R7 | R7 | R7 | R7 | R7 | | | | | | | | | | | | | |
| | | 16 | | | | | R7 | | | | | | | | | | | | | |
| | | 10 | | | | | R7 | R7 | R7 | | | | | | | | | | | |
| GCM 15 | 0402 | 100 | R7 | R7 | R7 | R7 | R7 | | | | | | | | | | | | | |
| | | 50 | R7 | R7 | R7 | R7 | R7 | R7 | R7 | R7 | | | | | | | | | | |
| | | 25 | | | | | | R7 | R7 | R7 | R7 | | | | | | | | | |
| | | 16 | | | | | | | | | R7 | R7 | R7 | | | | | | | |
| | | 10 | | | | | | | | | | R7 | | C7 | C7 | | | | | |
| GCM 18 | 0603 | 100 | | | | R7 | R7 | R7 | R7 | R7 | | | | | | | | | | |
| | | 50 | | | | R7 | R7 | R7 | R7 | R7 | R7 | R7 | | | | | | | | |
| | | 25 | | | | R7 | R7 | R7 | R7 | R7 | R7 | R7 | R7 | R7 | R7 | | | | | |
| | | 16 | | | | | | | | | | R7 | | R7 | R7 | | | | | |
| | | 6.3 | | | | | | | | | | | | | | R7 | | D7 | | |
| | | 4 | | | | | | | | | | | | | | | | D7 | | |
| GCM 21 | 0805 | 100 | | | | R7 | R7 | R7 | R7 | R7 | R7 | R7 | | | C7 | | | | | |
| | | 50 | | | | | | | | | R7 | R7 | R7 | R7 | R7 | | | | | |
| | | 35 | | | | | | | | | | | | | R7 | C7 | C7 | | | |
| | | 25 | | | | | | | | | | R7 | R7 | R7 | R7 | R7 | R7 | C7 | | |
| | | 16 | | | | | | | | | | | R7 | R7 | R7 | R7 | R7 | R7 | C7 | |
| | | 10 | | | | | | | | | | | | | | R7 | C7 | R7 | | |
| | | 6.3 | | | | | | | | | | | | | | | | R7 | | |
| GCM 31 | 1206 | 100 | | | | | | | | | | R7 | R7 | | R7 | C7 | | | | |
| | | 50 | | | | | | | | | | R7 | R7 | R7 | R7 | R7 | C7 | | | |
| | | 25 | | | | | | | | | | | R7 | R7 | R7 | R7 | R7 | C7 | | |
| | | 16 | | | | | | | | | | | | | | R7 | R7 | | | |
| | | 10 | | | | | | | | | | | | | | | | R7 | R7 | |
| | | 6.3 | | | | | | | | | | | | | | | | | R7 | |
| GCM 32 | 1210 | 100 | | | | | | | | | | | | | | C7 | | | | |
| | | 50 | | | | | | | | | | | | R7 | R7 | R7 | C7 | | | |
| | | 35 | | | | | | | | | | | | | | | C7 | | | |
| | | 25 | | | | | | | | | | | | | | R7 | R7 | C7 | | |
| | | 16 | | | | | | | | | | | | | | | R7 | R7 | | |
| | | 10 | | | | | | | | | | | | | | | | R7 | C7 | |
| | | 6.3 | | | | | | | | | | | | | | | | | R7 | |

GCM series / <100V Max>

<X7R,X7S Type>

Murata P/N List < 0201 size / X7R,X7S >

| Size (inch) | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|-------------|-------------|-----|----|---------|---------|--------------------|-----------|-----------------|
| 0201 | 0.3+/-0.03 | X7R | 25 | 100pF | +/-10% | GCM033R71E101KA03D | Available | Mass Production |
| | 0.3+/-0.03 | X7R | | 220pF | +/-10% | GCM033R71E221KA03D | Available | Mass Production |
| | 0.3+/-0.03 | X7R | | 470pF | +/-10% | GCM033R71E471KA03D | Available | Mass Production |
| | 0.3+/-0.03 | X7R | | 1,000pF | +/-10% | GCM033R71E102KA03D | Available | Mass Production |
| | 0.3+/-0.03 | X7R | 16 | 2,200pF | +/-10% | GCM033R71E222KE02D | Available | Mass Production |
| | 0.3+/-0.03 | X7R | | 2,200pF | +/-10% | GCM033R71C222KA55D | Available | Mass Production |
| | 0.3+/-0.03 | X7R | | 2,200pF | +/-10% | GCM033R71A222KA03D | Available | Mass Production |
| | 0.3+/-0.03 | X7R | | 4,700pF | +/-10% | GCM033R71A472KA03D | Available | Mass Production |
| | 0.3+/-0.03 | X7R | | 0.01μF | +/-10% | GCM033R71A103KA03D | Available | Mass Production |

Murata P/N List < 0402 size / X7R,X7S >

| Size (inch) | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|-------------|-------------|-----|---------|---------|--------------------|--------------------|--------------------|-----------------|
| 0402 | 0.5+/-0.05 | X7R | 100 | 220pF | +/-10% | GCM155R72A221KA37D | Available | Mass Production |
| | 0.5+/-0.05 | X7R | | 470pF | +/-10% | GCM155R72A471KA37D | Available | Mass Production |
| | 0.5+/-0.05 | X7R | | 1,000pF | +/-10% | GCM155R72A102KA37D | Available | Mass Production |
| | 0.5+/-0.05 | X7R | | 2,200pF | +/-10% | GCM155R72A222KA37D | Available | Mass Production |
| | 0.5+/-0.05 | X7R | | 4,700pF | +/-10% | GCM155R72A472KA37D | Available | Mass Production |
| | 0.5+/-0.05 | X7R | 50 | 220pF | +/-10% | GCM155R71H221KA37D | Available | Mass Production |
| | 0.5+/-0.05 | X7R | | 470pF | +/-10% | GCM155R71H471KA37D | Available | Mass Production |
| | 0.5+/-0.05 | X7R | | 1,000pF | +/-10% | GCM155R71H102KA37D | Available | Mass Production |
| | 0.5+/-0.05 | X7R | | 2,200pF | +/-10% | GCM155R71H222KA37D | Available | Mass Production |
| | 0.5+/-0.05 | X7R | | 4,700pF | +/-10% | GCM155R71H472KA37D | Available | Mass Production |
| | 0.5+/-0.05 | X7R | | 0.01μF | +/-10% | GCM155R71H103KA55D | Available | Mass Production |
| | 0.5+/-0.05 | X7R | | 0.022μF | +/-10% | GCM155R71H223KA55D | Available | Mass Production |
| | 0.5+/-0.05 | X7R | | 0.047μF | +/-10% | GCM155R71H473KE02D | Available | Mass Production |
| | 0.5+/-0.05 | X7R | | 0.1μF | +/-10% | GCM155R71H104KE02D | Available | Mass Production |
| | 0.5+/-0.05 | X7R | | 25 | 4,700pF | +/-10% | GCM155R71E472KA37D | Available |
| | 0.5+/-0.05 | X7R | 0.01μF | | +/-10% | GCM155R71E103KA37D | Available | Mass Production |
| | 0.5+/-0.05 | X7R | 0.022μF | | +/-10% | GCM155R71E223KA55D | Available | Mass Production |
| | 0.5+/-0.05 | X7R | 0.047μF | | +/-10% | GCM155R71E473KA55D | Available | Mass Production |
| | 0.5+/-0.05 | X7R | 0.1μF | | +/-10% | GCM155R71E104KE02D | Available | Mass Production |
| | 0.5+/-0.05 | X7R | 16 | 0.047μF | +/-10% | GCM155R71C473KA37D | Available | Mass Production |
| | 0.5+/-0.05 | X7R | | 0.1μF | +/-10% | GCM155R71C104KA55D | Available | Mass Production |
| | 0.5+/-0.05 | X7R | | 0.22μF | +/-10% | GCM155R71C224KE02D | Available | Mass Production |
| | 0.5+/-0.05 | X7R | 10 | 0.1μF | +/-10% | GCM155R71A104KA55D | Available | Mass Production |
| | 0.5+/-0.1 | X7S | | 0.47μF | +/-10% | GCM155C71A474KE36D | Available | Mass Production |
| 0.5+/-0.2 | X7S | 1μF | | +/-10% | GCM155C71A105KE38D | Available | Mass Production | |

GCM series / <100V Max>

<X7R,X7S Type>

Murata P/N List < 0603 size / X7R,X7S,X7T >

| Size (inch) | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|-------------|-------------|-----|-----|---------|---------|--------------------|-----------|-----------------|
| 0603 | 0.8+/-0.1 | X7R | 100 | 1,000pF | +/-10% | GCM188R72A102KA37D | Available | Mass Production |
| | 0.8+/-0.1 | X7R | | 2,200pF | +/-10% | GCM188R72A222KA37D | Available | Mass Production |
| | 0.8+/-0.1 | X7R | | 4,700pF | +/-10% | GCM188R72A472KA37D | Available | Mass Production |
| | 0.8+/-0.1 | X7R | | 0.01μF | +/-10% | GCM188R72A103KA37D | Available | Mass Production |
| | 0.8+/-0.1 | X7R | | 0.022μF | +/-10% | GCM188R72A223KA37D | Available | Mass Production |
| | 0.8+/-0.1 | X7R | 50 | 1,000pF | +/-10% | GCM188R71H102KA37D | Available | Mass Production |
| | 0.8+/-0.1 | X7R | | 2,200pF | +/-10% | GCM188R71H222KA37D | Available | Mass Production |
| | 0.8+/-0.1 | X7R | | 4,700pF | +/-10% | GCM188R71H472KA37D | Available | Mass Production |
| | 0.8+/-0.1 | X7R | | 0.01μF | +/-10% | GCM188R71H103KA37D | Available | Mass Production |
| | 0.8+/-0.1 | X7R | | 0.022μF | +/-10% | GCM188R71H223KA37D | Available | Mass Production |
| | 0.8+/-0.1 | X7R | | 0.047μF | +/-10% | GCM188R71H473KA55D | Available | Mass Production |
| | 0.8+/-0.1 | X7R | | 0.1μF | +/-10% | GCM188R71H104KA57D | Available | Mass Production |
| | 0.8+/-0.1 | X7R | | 0.22μF | +/-10% | GCM188R71H224KA64D | Available | Mass Production |
| | 0.8+/-0.1 | X7R | 25 | 1,000pF | +/-10% | GCM188R71E102KA37D | Available | Mass Production |
| | 0.8+/-0.1 | X7R | | 2,200pF | +/-10% | GCM188R71E222KA37D | Available | Mass Production |
| | 0.8+/-0.1 | X7R | | 4,700pF | +/-10% | GCM188R71E472KA37D | Available | Mass Production |
| | 0.8+/-0.1 | X7R | | 0.01μF | +/-10% | GCM188R71E103KA37D | Available | Mass Production |
| | 0.8+/-0.1 | X7R | | 0.022μF | +/-10% | GCM188R71E223KA37D | Available | Mass Production |
| | 0.8+/-0.1 | X7R | | 0.047μF | +/-10% | GCM188R71E473KA37D | Available | Mass Production |
| | 0.8+/-0.1 | X7R | | 0.1μF | +/-10% | GCM188R71E104KA57D | Available | Mass Production |
| | 0.8+/-0.1 | X7R | | 0.22μF | +/-10% | GCM188R71E224KA55D | Available | Mass Production |
| | 0.8+/-0.1 | X7R | | 0.47μF | +/-10% | GCM188R71E474KA64D | Available | Mass Production |
| | 0.8+/-0.1 | X7R | | 1μF | +/-10% | GCM188R71E105KA64D | Available | Mass Production |
| | 0.8+/-0.1 | X7R | 16 | 0.1μF | +/-10% | GCM188R71C104KA37D | Available | Mass Production |
| | 0.8+/-0.1 | X7R | | 0.47μF | +/-10% | GCM188R71C474KA55D | Available | Mass Production |
| | 0.8+/-0.1 | X7R | | 1μF | +/-10% | GCM188R71C105KA64D | Available | Mass Production |
| | 0.8+/-0.1 | X7R | 6.3 | 2.2μF | +/-10% | GCM188R70J225KE22D | Available | Mass Production |
| | 0.8+/-0.2 | X7T | | 10μF | +/-20% | GCM188D70J106ME36D | Available | Mass Production |
| | 0.8+/-0.2 | X7T | 4 | 10μF | +/-20% | GCM188D70G106ME36D | Available | Mass Production |

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2) Q1 = January to March, Q2 = April to June, Q3 = July to September, Q4 = October to December

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4) Above individual specification code and packaging code were decided with muRata standard specification, and it may change due to the special requirement by customer's drawing.

5) Sample marked "-" in Sample column are built upon your request. Lead time will be around 4wks (might be extended depending on production schedule). Please contact Murata Sales or Product Engineer directly.

GCM series / <100V Max>

<X7R,X7S Type>

Murata P/N List < 0805 size / X7R >

| Size | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. | |
|------|-------------|-----|-------|---------|---------|--------------------|--------------------|-----------------|-----------------|
| 0805 | 0.6+/-0.1 | X7R | 100 | 1,000pF | +/-10% | GCM216R72A102KA37D | Available | Mass Production | |
| | 0.6+/-0.1 | X7R | | 2,200pF | +/-10% | GCM216R72A222KA37D | Available | Mass Production | |
| | 0.6+/-0.1 | X7R | | 4,700pF | +/-10% | GCM216R72A472KA37D | Available | Mass Production | |
| | 0.6+/-0.1 | X7R | | 0.01μF | +/-10% | GCM216R72A103KA37D | Available | Mass Production | |
| | 0.6+/-0.1 | X7R | | 0.022μF | +/-10% | GCM216R72A223KA37D | Available | Mass Production | |
| | 1.25+/-0.15 | X7R | | 0.047μF | +/-10% | GCM21BR72A473KA37L | Available | Mass Production | |
| | 1.25+/-0.15 | X7R | | 0.1μF | +/-10% | GCM21BR72A104KA37L | Available | Mass Production | |
| | 1.25+/-0.2 | X7S | | 1μF | +/-10% | GCM21BC72A105KE36L | Available | Mass Production | |
| | 1.25+/-0.15 | X7R | 50 | 0.047μF | +/-10% | GCM21BR71H473KA37L | Available | Mass Production | |
| | 1.25+/-0.15 | X7R | | 0.1μF | +/-10% | GCM21BR71H104KA37L | Available | Mass Production | |
| | 1.25+/-0.15 | X7R | | 0.22μF | +/-10% | GCM21BR71H224KA37L | Available | Mass Production | |
| | 1.25+/-0.15 | X7R | | 0.47μF | +/-10% | GCM21BR71H474KA55L | Available | Mass Production | |
| | 1.25+/-0.15 | X7R | | 1μF | +/-10% | GCM21BR71H105KA03L | Available | Mass Production | |
| | 1.25+/-0.15 | X7R | | 1μF | +/-10% | GCM21BR7YA105KA55L | Available | Mass Production | |
| | 1.25+/-0.2 | X7S | | 35 | 2.2μF | +/-10% | GCM21BC7YA225KE02L | Available | Mass Production |
| | 1.25+/-0.2 | X7S | | | 4.7μF | +/-10% | GCM21BC7YA475KE36L | Available | Mass Production |
| | 1.25+/-0.15 | X7R | 25 | 0.1μF | +/-10% | GCM21BR71E104KA37L | Available | Mass Production | |
| | 1.25+/-0.15 | X7R | | 0.22μF | +/-10% | GCM21BR71E224KA37L | Available | Mass Production | |
| | 0.85+/-0.1 | X7R | | 0.47μF | +/-10% | GCM219R71E474KA55D | Available | Mass Production | |
| | 1.25+/-0.15 | X7R | | 1μF | +/-10% | GCM21BR71E105KA56L | Available | Mass Production | |
| | 1.25+/-0.15 | X7R | | 2.2μF | +/-10% | GCM21BR71E225KA73L | Available | Mass Production | |
| | 1.25+/-0.2 | X7S | | 4.7μF | +/-10% | GCM21BC71E475KE36L | Available | Mass Production | |
| | 0.85+/-0.1 | X7R | | 16 | 0.22μF | +/-10% | GCM219R71C224KA37D | Available | Mass Production |
| | 1.25+/-0.15 | X7R | | | 0.47μF | +/-10% | GCM21BR71C474KA37L | Available | Mass Production |
| | 0.85+/-0.1 | X7R | 1μF | | +/-10% | GCM219R71C105KA37D | Available | Mass Production | |
| | 1.25+/-0.15 | X7R | 2.2μF | | +/-10% | GCM21BR71C225KA64L | Available | Mass Production | |
| | 1.25+/-0.15 | X7R | 4.7μF | | +/-10% | GCM21BR71C475KA73L | Available | Mass Production | |
| | 1.25+/-0.2 | X7S | 10μF | | +/-10% | GCM21BC71C106KE36L | Available | Mass Production | |
| | 1.25+/-0.15 | X7R | 10 | | 2.2μF | +/-10% | GCM21BR71A225KA37L | Available | Mass Production |
| | 1.25+/-0.15 | X7S | | | 4.7μF | +/-10% | GCM21BC71A475KA73L | Available | Mass Production |
| | 1.25+/-0.15 | X7R | | 10μF | +/-10% | GCM21BR71A106KE22L | Available | Mass Production | |
| | 1.25+/-0.15 | X7R | | 6.3 | 10μF | +/-10% | GCM21BR70J106KE22L | Available | Mass Production |

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GCM series / <100V Max>

<X7R,X7S Type>

Murata P/N List < 1206 size / X7R,X7S,X7T >

| Size (inch) | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|-------------|-------------|-----|------|--------|--------------------|--------------------|-----------------|-----------------|
| 1206 | 0.85+/-0.1 | X7R | 100 | 0.1μF | +/-10% | GCM319R72A104KA37D | Available | Mass Production |
| | 1.15+/-0.1 | X7R | | 0.22μF | +/-10% | GCM31MR72A224KA37L | Available | Mass Production |
| | 1.6+/-0.2 | X7R | | 1.0μF | +/-10% | GCM31CR72A105KA03L | Available | Mass Production |
| | 1.6+/-0.2 | X7S | | 2.2μF | +/-10% | GCM31CC72A225KE02L | Available | Mass Production |
| | 1.15+/-0.1 | X7R | 50 | 0.1μF | +/-10% | GCM31MR71H104KA37L | Available | Mass Production |
| | 1.15+/-0.1 | X7R | | 0.22μF | +/-10% | GCM31MR71H224KA37L | Available | Mass Production |
| | 1.15+/-0.1 | X7R | | 0.47μF | +/-10% | GCM31MR71H474KA37L | Available | Mass Production |
| | 1.15+/-0.1 | X7R | | 1μF | +/-10% | GCM31MR71H105KA55L | Available | Mass Production |
| | 1.6+/-0.2 | X7R | | 2.2μF | +/-10% | GCM31CR71H225KA55L | Available | Mass Production |
| | 1.6+/-0.2 | X7S | | 4.7μF | +/-10% | GCM31CC71H475KA03L | Available | Mass Production |
| | 0.85+/-0.1 | X7R | 25 | 0.22μF | +/-10% | GCM319R71E224KA37D | Available | Mass Production |
| | 1.15+/-0.1 | X7R | | 0.47μF | +/-10% | GCM31MR71E474KA37L | Available | Mass Production |
| | 1.15+/-0.1 | X7R | | 1μF | +/-10% | GCM31MR71E105KA37L | Available | Mass Production |
| | 1.15+/-0.15 | X7R | | 2.2μF | +/-10% | GCM31MR71E225KA57L | Available | Mass Production |
| | 1.6+/-0.2 | X7R | | 4.7μF | +/-10% | GCM31CR71E475KA55L | Available | Mass Production |
| | 1.6+/-0.3 | X7S | 10μF | +/-10% | GCM31CC71E106KA03L | Available | Mass Production | |
| | 1.6+/-0.2 | X7R | 16 | 4.7μF | +/-10% | GCM31CR71C475KA37L | Available | Mass Production |
| | 1.6+/-0.2 | X7R | | 10μF | +/-10% | GCM31CR71C106KA64L | Available | Mass Production |
| | 1.6+/-0.2 | X7R | 10 | 10μF | +/-10% | GCM31CR71A106KA64L | Available | Mass Production |
| | 1.6+/-0.2 | X7R | | 22μF | +/-10% | GCM31CR71A226KE02L | Available | Mass Production |
| 1.6+/-0.2 | X7R | 6.3 | | 22μF | +/-10% | GCM31CR70J226KE23L | Available | Mass Production |

Murata P/N List < 1210 size / X7R,X7S >

| Size (inch) | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|-------------|-------------|-----|------|--------|--------------------|--------------------|--------------------|-----------------|
| 1210 | 2.0+/-0.2 | X7S | 100 | 4.7μF | +/-10% | GCM32DC72A475KE02L | Available | Mass Production |
| | 2.0+/-0.2 | X7R | 50 | 0.47μF | +/-10% | GCM32DR71H474KA37L | Available | Mass Production |
| | 2.5+/-0.2 | X7R | | 1μF | +/-10% | GCM32ER71H105KA37L | Available | Mass Production |
| | 2.5+/-0.2 | X7R | | 4.7μF | +/-10% | GCM32ER71H475KA55L | Available | Mass Production |
| | 2.5+/-0.2 | X7S | 10μF | +/-10% | GCM32EC71H106KA03L | Available | Mass Production | |
| | 2.5+/-0.2 | X7S | 35 | 10μF | +/-10% | GCM32EC7YA106KA03L | Available | Mass Production |
| | 2.0+/-0.2 | X7R | 25 | 4.7μF | +/-10% | GCM32DR71E475KA55L | Available | Mass Production |
| | 2.5+/-0.2 | X7R | | 10μF | +/-10% | GCM32ER71E106KA57L | Available | Mass Production |
| | 2.5+/-0.2 | X7S | | 22μF | +/-10% | GCM32EC71E226KE36L | Available | Mass Production |
| | 2.0+/-0.2 | X7R | | 16 | 10μF | +/-10% | GCM32DR71C106KA37L | Available |
| | 2.5+/-0.2 | X7R | 22μF | | +/-10% | GCM32ER71C226KE19L | Available | Mass Production |
| | 2.5+/-0.2 | X7R | 10 | 22μF | +/-10% | GCM32ER71A226KE12L | Available | Mass Production |
| | 2.5+/-0.2 | X7S | | 47μF | +/-10% | GCM32EC71A476KE02L | Available | Mass Production |
| | 2.5+/-0.2 | X7R | 6.3 | 47μF | +/-10% | GCM32ER70J476KE19L | Available | Mass Production |

GCM series / <100V Max>

<C0G Type>

Chip size and Capacitance range

< C0G >

 M.P. (Recommend) Not Recommended

| Type | Size (inch) | W.V | Capacitance | | | | | | | | | | | | | | | |
|-------|-------------|-----|-------------|----|-----|---|----|-----|----|----|-----|-----|--|--|-----|--|--|--|
| | | | pF | | | | | | nF | | | | | | μ F | | | |
| | | | 1 | 10 | 100 | 1 | 10 | 100 | 1 | 10 | 100 | 100 | | | | | | |
| GCM03 | 0201 | 50 | | | | | | | | | | | | | | | | |
| | | 25 | | | | | | | | | | | | | | | | |
| GCM15 | 0402 | 50 | | | | | | | | | | | | | | | | |
| GCM18 | 0603 | 100 | | | | | | | | | | | | | | | | |
| | | 80 | | | | | | | | | | | | | | | | |
| | | 50 | | | | | | | | | | | | | | | | |
| GCM21 | 0805 | 100 | | | | | | | | | | | | | | | | |
| | | 80 | | | | | | | | | | | | | | | | |
| | | 50 | | | | | | | | | | | | | | | | |
| GCM31 | 1206 | 100 | | | | | | | | | | | | | | | | |
| | | 80 | | | | | | | | | | | | | | | | |
| | | 50 | | | | | | | | | | | | | | | | |

<U2J Type>

Chip size and Capacitance range

< U2J >

| Type | Size (inch) | W.V | Capacitance | | | | | | | | | | | | | | | |
|-------|-------------|-----|-------------|----|-----|---|----|-----|----|----|-----|-----|--|--|--|--|--|--|
| | | | pF | | | | | | nF | | | | | | | | | |
| | | | 1 | 10 | 100 | 1 | 10 | 100 | 1 | 10 | 100 | 100 | | | | | | |
| GCM18 | 0603 | 100 | | | | | | | | | | | | | | | | |
| | | 50 | | | | | | | | | | | | | | | | |

GCM series / <100V Max>

<COG Type>

Murata P/N List < 0201 size / COG / 50V >

| Size (inch) | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|-------------|-------------|-------|-------|--------------------|-----------|--------------------|-----------|-----------------|
| 0201 | 0.3+/-0.03 | C0G | 50 | 1pF | +/-0.25pF | GCM0335C1H1R0CA16D | Available | Mass Production |
| | 0.3+/-0.03 | C0G | | 2pF | +/-0.25pF | GCM0335C1H2R0CA16D | Available | Mass Production |
| | 0.3+/-0.03 | C0G | | 3pF | +/-0.25pF | GCM0335C1H3R0CA16D | Available | Mass Production |
| | 0.3+/-0.03 | C0G | | 4pF | +/-0.25pF | GCM0335C1H4R0CA16D | Available | Mass Production |
| | 0.3+/-0.03 | C0G | | 5pF | +/-0.25pF | GCM0335C1H5R0CA16D | Available | Mass Production |
| | 0.3+/-0.03 | C0G | | 6pF | +/-0.5pF | GCM0335C1H6R0DA16D | Available | Mass Production |
| | 0.3+/-0.03 | C0G | | 7pF | +/-0.5pF | GCM0335C1H7R0DA16D | Available | Mass Production |
| | 0.3+/-0.03 | C0G | | 8pF | +/-0.5pF | GCM0335C1H8R0DA16D | Available | Mass Production |
| | 0.3+/-0.03 | C0G | | 9pF | +/-0.5pF | GCM0335C1H9R0DA16D | Available | Mass Production |
| | 0.3+/-0.03 | C0G | | 10pF | +/-5% | GCM0335C1H100JA16D | Available | Mass Production |
| | 0.3+/-0.03 | C0G | | 15pF | +/-5% | GCM0335C1H150JA16D | Available | Mass Production |
| | 0.3+/-0.03 | C0G | | 22pF | +/-5% | GCM0335C1H220JA16D | Available | Mass Production |
| | 0.3+/-0.03 | C0G | | 33pF | +/-5% | GCM0335C1H330JA16D | Available | Mass Production |
| | 0.3+/-0.03 | C0G | | 47pF | +/-5% | GCM0335C1H470JA16D | Available | Mass Production |
| | 0.3+/-0.03 | C0G | | 68pF | +/-5% | GCM0335C1H680JA16D | Available | Mass Production |
| 0.3+/-0.03 | C0G | 100pF | +/-5% | GCM0335C1H101JA16D | Available | Mass Production | | |

Murata P/N List < 0201 size / COG / 25V >

| Size (inch) | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|-------------|-------------|-------|-------|--------------------|-----------|--------------------|-----------|-----------------|
| 0201 | 0.3+/-0.03 | C0G | 25 | 1pF | +/-0.25pF | GCM0335C1E1R0CA16D | Available | Mass Production |
| | 0.3+/-0.03 | C0G | | 2pF | +/-0.25pF | GCM0335C1E2R0CA16D | Available | Mass Production |
| | 0.3+/-0.03 | C0G | | 3pF | +/-0.25pF | GCM0335C1E3R0CA16D | Available | Mass Production |
| | 0.3+/-0.03 | C0G | | 4pF | +/-0.25pF | GCM0335C1E4R0CA16D | Available | Mass Production |
| | 0.3+/-0.03 | C0G | | 5pF | +/-0.25pF | GCM0335C1E5R0CA16D | Available | Mass Production |
| | 0.3+/-0.03 | C0G | | 6pF | +/-0.5pF | GCM0335C1E6R0DA16D | Available | Mass Production |
| | 0.3+/-0.03 | C0G | | 7pF | +/-0.5pF | GCM0335C1E7R0DA16D | Available | Mass Production |
| | 0.3+/-0.03 | C0G | | 8pF | +/-0.5pF | GCM0335C1E8R0DA16D | Available | Mass Production |
| | 0.3+/-0.03 | C0G | | 9pF | +/-0.5pF | GCM0335C1E9R0DA16D | Available | Mass Production |
| | 0.3+/-0.03 | C0G | | 10pF | +/-5% | GCM0335C1E100JA16D | Available | Mass Production |
| | 0.3+/-0.03 | C0G | | 15pF | +/-5% | GCM0335C1E150JA16D | Available | Mass Production |
| | 0.3+/-0.03 | C0G | | 22pF | +/-5% | GCM0335C1E220JA16D | Available | Mass Production |
| | 0.3+/-0.03 | C0G | | 33pF | +/-5% | GCM0335C1E330JA16D | Available | Mass Production |
| | 0.3+/-0.03 | C0G | | 47pF | +/-5% | GCM0335C1E470JA16D | Available | Mass Production |
| | 0.3+/-0.03 | C0G | | 68pF | +/-5% | GCM0335C1E680JA16D | Available | Mass Production |
| 0.3+/-0.03 | C0G | 100pF | +/-5% | GCM0335C1E101JA16D | Available | Mass Production | | |

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- 4) Above individual specification code and packaging code were decided with muRata standard specification, and it may change due to the special requirement by customer's drawing.
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GCM series / <100V Max>

<C0G Type>

Murata P/N List < 0402 size / C0G / 50V >

| Size (inch) | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|-------------|-------------|--------|-------|--------------------|-----------|--------------------|-----------|-----------------|
| 0402 | 0.5+/-0.05 | C0G | 50 | 1pF | +/-0.25pF | GCM1555C1H1R0CA16D | Available | Mass Production |
| | 0.5+/-0.05 | C0G | | 2pF | +/-0.25pF | GCM1555C1H2R0CA16D | Available | Mass Production |
| | 0.5+/-0.05 | C0G | | 3pF | +/-0.25pF | GCM1555C1H3R0CA16D | Available | Mass Production |
| | 0.5+/-0.05 | C0G | | 4pF | +/-0.25pF | GCM1555C1H4R0CA16D | Available | Mass Production |
| | 0.5+/-0.05 | C0G | | 5pF | +/-0.25pF | GCM1555C1H5R0CA16D | Available | Mass Production |
| | 0.5+/-0.05 | C0G | | 6pF | +/-0.5pF | GCM1555C1H6R0DA16D | Available | Mass Production |
| | 0.5+/-0.05 | C0G | | 7pF | +/-0.5pF | GCM1555C1H7R0DA16D | Available | Mass Production |
| | 0.5+/-0.05 | C0G | | 8pF | +/-0.5pF | GCM1555C1H8R0DA16D | Available | Mass Production |
| | 0.5+/-0.05 | C0G | | 9pF | +/-0.5pF | GCM1555C1H9R0DA16D | Available | Mass Production |
| | 0.5+/-0.05 | C0G | | 10pF | +/-5% | GCM1555C1H100JA16D | Available | Mass Production |
| | 0.5+/-0.05 | C0G | | 15pF | +/-5% | GCM1555C1H150JA16D | Available | Mass Production |
| | 0.5+/-0.05 | C0G | | 22pF | +/-5% | GCM1555C1H220JA16D | Available | Mass Production |
| | 0.5+/-0.05 | C0G | | 33pF | +/-5% | GCM1555C1H330JA16D | Available | Mass Production |
| | 0.5+/-0.05 | C0G | | 47pF | +/-5% | GCM1555C1H470JA16D | Available | Mass Production |
| | 0.5+/-0.05 | C0G | | 68pF | +/-5% | GCM1555C1H680JA16D | Available | Mass Production |
| | 0.5+/-0.05 | C0G | | 100pF | +/-5% | GCM1555C1H101JA16D | Available | Mass Production |
| | 0.5+/-0.05 | C0G | | 150pF | +/-5% | GCM1555C1H151JA16D | Available | Mass Production |
| | 0.5+/-0.05 | C0G | | 220pF | +/-5% | GCM1555C1H221JA16D | Available | Mass Production |
| | 0.5+/-0.05 | C0G | | 330pF | +/-5% | GCM1555C1H331JA16D | Available | Mass Production |
| | 0.5+/-0.05 | C0G | | 470pF | +/-5% | GCM1555C1H471JA16D | Available | Mass Production |
| 0.5+/-0.05 | C0G | 680pF | +/-5% | GCM1555C1H681JA16D | Available | Mass Production | | |
| 0.5+/-0.05 | C0G | 1000pF | +/-5% | GCM1555C1H102JA16D | Available | Mass Production | | |

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GCM series / <100V Max>

<C0G Type>

Murata P/N List < 0603 size / C0G / 100V >

| Size (inch) | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|-------------|-------------|---------|-------|--------------------|-----------|--------------------|-----------|-----------------|
| 0603 | 0.8+/-0.1 | C0G | 100 | 1pF | +/-0.25pF | GCM1885C2A1R0CA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 2pF | +/-0.25pF | GCM1885C2A2R0CA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 3pF | +/-0.25pF | GCM1885C2A3R0CA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 4pF | +/-0.25pF | GCM1885C2A4R0CA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 5pF | +/-0.25pF | GCM1885C2A5R0CA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 6pF | +/-0.5pF | GCM1885C2A6R0DA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 7pF | +/-0.5pF | GCM1885C2A7R0DA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 8pF | +/-0.5pF | GCM1885C2A8R0DA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 9pF | +/-0.5pF | GCM1885C2A9R0DA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 10pF | +/-5% | GCM1885C2A100JA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 15pF | +/-5% | GCM1885C2A150JA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 22pF | +/-5% | GCM1885C2A220JA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 33pF | +/-5% | GCM1885C2A330JA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 47pF | +/-5% | GCM1885C2A470JA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 68pF | +/-5% | GCM1885C2A680JA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 100pF | +/-5% | GCM1885C2A101JA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 150pF | +/-5% | GCM1885C2A151JA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 220pF | +/-5% | GCM1885C2A221JA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 330pF | +/-5% | GCM1885C2A331JA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 470pF | +/-5% | GCM1885C2A471JA16D | Available | Mass Production |
| 0.8+/-0.1 | C0G | 680pF | +/-5% | GCM1885C2A681JA16D | Available | Mass Production | | |
| 0.8+/-0.1 | C0G | 1,000pF | +/-5% | GCM1885C2A102JA16D | Available | Mass Production | | |
| 0.8+/-0.1 | C0G | 1,500pF | +/-5% | GCM1885C2A152JA16D | Available | Mass Production | | |

Murata P/N List < 0603 size / C0G / 80V >

| Size (inch) | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|-------------|-------------|-----|----|---------|---------|--------------------|-----------|-----------------|
| 0603 | 0.8+/-0.1 | C0G | 80 | 2,200pF | +/-5% | GCM1885C1K222JA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 3,300pF | +/-5% | GCM1885C1K332JA16D | Available | Mass Production |

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GCM series / <100V Max>

<C0G Type>

Murata P/N List < 0603 size / C0G / 50V >

| Size (inch) | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|-------------|-------------|-----|----|---------|-----------|--------------------|-----------|-----------------|
| 0603 | 0.8+/-0.1 | C0G | 50 | 1pF | +/-0.25pF | GCM1885C1H1R0CA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 2pF | +/-0.25pF | GCM1885C1H2R0CA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 3pF | +/-0.25pF | GCM1885C1H3R0CA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 4pF | +/-0.25pF | GCM1885C1H4R0CA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 5pF | +/-0.25pF | GCM1885C1H5R0CA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 6pF | +/-0.5pF | GCM1885C1H6R0DA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 7pF | +/-0.5pF | GCM1885C1H7R0DA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 8pF | +/-0.5pF | GCM1885C1H8R0DA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 9pF | +/-0.5pF | GCM1885C1H9R0DA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 10pF | +/-5% | GCM1885C1H100JA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 15pF | +/-5% | GCM1885C1H150JA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 22pF | +/-5% | GCM1885C1H220JA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 33pF | +/-5% | GCM1885C1H330JA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 47pF | +/-5% | GCM1885C1H470JA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 68pF | +/-5% | GCM1885C1H680JA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 100pF | +/-5% | GCM1885C1H101JA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 150pF | +/-5% | GCM1885C1H151JA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 220pF | +/-5% | GCM1885C1H221JA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 330pF | +/-5% | GCM1885C1H331JA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 470pF | +/-5% | GCM1885C1H471JA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 680pF | +/-5% | GCM1885C1H681JA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 1,000pF | +/-5% | GCM1885C1H102JA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 1,500pF | +/-5% | GCM1885C1H152JA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 2,200pF | +/-5% | GCM1885C1H222JA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 3,300pF | +/-5% | GCM1885C1H332JA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 4,700pF | +/-5% | GCM1885C1H472JA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 6,800pF | +/-5% | GCM1885C1H682JA16D | Available | Mass Production |
| | 0.8+/-0.1 | C0G | | 0.01μF | +/-5% | GCM1885C1H103JA16D | Available | Mass Production |

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GCM series / <100V Max>

<COG Type>

Murata P/N List < 0805 size / COG / 100V >

| Size | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|------|-------------|-----|-----|---------|---------|--------------------|-----------|-----------------|
| 0805 | 0.6+/-0.1 | C0G | 100 | 100pF | +/-5% | GCM2165C2A101JA16D | Available | Mass Production |
| | 0.6+/-0.1 | C0G | | 150pF | +/-5% | GCM2165C2A151JA16D | Available | Mass Production |
| | 0.6+/-0.1 | C0G | | 220pF | +/-5% | GCM2165C2A221JA16D | Available | Mass Production |
| | 0.6+/-0.1 | C0G | | 330pF | +/-5% | GCM2165C2A331JA16D | Available | Mass Production |
| | 0.6+/-0.1 | C0G | | 470pF | +/-5% | GCM2165C2A471JA16D | Available | Mass Production |
| | 0.6+/-0.1 | C0G | | 680pF | +/-5% | GCM2165C2A681JA16D | Available | Mass Production |
| | 0.6+/-0.1 | C0G | | 1,000pF | +/-5% | GCM2165C2A102JA16D | Available | Mass Production |
| | 0.6+/-0.1 | C0G | | 1,500pF | +/-5% | GCM2165C2A152JA16D | Available | Mass Production |
| | 0.6+/-0.1 | C0G | | 2,200pF | +/-5% | GCM2165C2A222JA16D | Available | Mass Production |
| | 0.6+/-0.1 | C0G | | 3,300pF | +/-5% | GCM2165C2A332JA16D | Available | Mass Production |

Murata P/N List < 0805 size / COG / 80V >

| Size | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|------|-------------|-----|----|---------|---------|--------------------|-----------|-----------------|
| 0805 | 0.6+/-0.1 | C0G | 80 | 4,700pF | +/-5% | GCM2165C1K472JA16D | Available | Mass Production |
| | 0.85+/-0.1 | C0G | | 6,800pF | +/-5% | GCM2195C1K682JA16D | Available | Mass Production |
| | 0.85+/-0.1 | C0G | | 0.01µF | +/-5% | GCM2195C1K103JA16D | Available | Mass Production |
| | 0.85+/-0.1 | C0G | | 0.015µF | +/-5% | GCM2195C1K153JA16D | Available | Mass Production |
| | 1.25+/-0.15 | C0G | | 0.022µF | +/-5% | GCM21B5C1K223JA16L | Available | Mass Production |

Murata P/N List < 0805 size / COG / 50V >

| Size (inch) | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|-------------|-------------|-----|----|---------|---------|--------------------|-----------|-----------------|
| 0805 | 0.6+/-0.1 | C0G | 50 | 100pF | +/-5% | GCM2165C1H101JA16D | Available | Mass Production |
| | 0.6+/-0.1 | C0G | | 150pF | +/-5% | GCM2165C1H151JA16D | Available | Mass Production |
| | 0.6+/-0.1 | C0G | | 220pF | +/-5% | GCM2165C1H221JA16D | Available | Mass Production |
| | 0.6+/-0.1 | C0G | | 330pF | +/-5% | GCM2165C1H331JA16D | Available | Mass Production |
| | 0.6+/-0.1 | C0G | | 470pF | +/-5% | GCM2165C1H471JA16D | Available | Mass Production |
| | 0.6+/-0.1 | C0G | | 680pF | +/-5% | GCM2165C1H681JA16D | Available | Mass Production |
| | 0.6+/-0.1 | C0G | | 1,000pF | +/-5% | GCM2165C1H102JA16D | Available | Mass Production |
| | 0.6+/-0.1 | C0G | | 1,500pF | +/-5% | GCM2165C1H152JA16D | Available | Mass Production |
| | 0.6+/-0.1 | C0G | | 2,200pF | +/-5% | GCM2165C1H222JA16D | Available | Mass Production |
| | 0.6+/-0.1 | C0G | | 3,300pF | +/-5% | GCM2165C1H332JA16D | Available | Mass Production |
| | 0.6+/-0.1 | C0G | | 4,700pF | +/-5% | GCM2165C1H472JA16D | Available | Mass Production |
| | 0.85+/-0.1 | C0G | | 6,800pF | +/-5% | GCM2195C1H682JA16D | Available | Mass Production |
| | 0.85+/-0.1 | C0G | | 0.01µF | +/-5% | GCM2195C1H103JA16D | Available | Mass Production |
| | 0.85+/-0.1 | C0G | | 0.015µF | +/-5% | GCM2195C1H153JA16D | Available | Mass Production |
| | 1.25+/-0.15 | C0G | | 0.022µF | +/-5% | GCM21B5C1H223JA16L | Available | Mass Production |

GCM series / <100V Max>

<COG Type>

Murata P/N List < 1206 size / COG / 100V >

| Size (inch) | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|-------------|-------------|-----|-----|---------|---------|--------------------|-----------|-----------------|
| 1206 | 0.85+/-0.1 | C0G | 100 | 1,000pF | +/-5% | GCM3195C2A102JA16D | Available | Mass Production |
| | 0.85+/-0.1 | C0G | | 1,500pF | +/-5% | GCM3195C2A152JA16D | Available | Mass Production |
| | 0.85+/-0.1 | C0G | | 2,200pF | +/-5% | GCM3195C2A222JA16D | Available | Mass Production |
| | 0.85+/-0.1 | C0G | | 3,300pF | +/-5% | GCM3195C2A332JA16D | Available | Mass Production |
| | 0.85+/-0.1 | C0G | | 4,700pF | +/-5% | GCM3195C2A472JA16D | Available | Mass Production |
| | 0.85+/-0.1 | C0G | | 6,800pF | +/-5% | GCM3195C2A682JA16D | Available | Mass Production |
| | 0.85+/-0.1 | C0G | | 0.01μF | +/-5% | GCM3195C2A103JA16D | Available | Mass Production |
| | 1.6+/-0.2 | C0G | | 0.1μF | +/-5% | GCM31C5C2A104JE02L | Available | Mass Production |

Murata P/N List < 1206 size / COG / 80V >

| Size (inch) | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|-------------|-------------|-----|----|---------|---------|--------------------|-----------|-----------------|
| 1206 | 0.85+/-0.1 | C0G | 80 | 0.015μF | +/-5% | GCM3195C1K153JA16D | Available | Mass Production |
| | 0.85+/-0.1 | C0G | | 0.022μF | +/-5% | GCM3195C1K223JA16D | Available | Mass Production |
| | 0.85+/-0.1 | C0G | | 0.033μF | +/-5% | GCM3195C1K333JA16D | Available | Mass Production |

Murata P/N List < 1206 size / COG / 50V >

| Size (inch) | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|-------------|-------------|-----|----|---------|---------|--------------------|-----------|-----------------|
| 1206 | 0.85+/-0.1 | C0G | 50 | 1,000pF | +/-5% | GCM3195C1H102JA16D | Available | Mass Production |
| | 0.85+/-0.1 | C0G | | 1,500pF | +/-5% | GCM3195C1H152JA16D | Available | Mass Production |
| | 0.85+/-0.1 | C0G | | 2,200pF | +/-5% | GCM3195C1H222JA16D | Available | Mass Production |
| | 0.85+/-0.1 | C0G | | 3,300pF | +/-5% | GCM3195C1H332JA16D | Available | Mass Production |
| | 0.85+/-0.1 | C0G | | 4,700pF | +/-5% | GCM3195C1H472JA16D | Available | Mass Production |
| | 0.85+/-0.1 | C0G | | 6,800pF | +/-5% | GCM3195C1H682JA16D | Available | Mass Production |
| | 0.85+/-0.1 | C0G | | 0.01μF | +/-5% | GCM3195C1H103JA16D | Available | Mass Production |
| | 0.85+/-0.1 | C0G | | 0.015μF | +/-5% | GCM3195C1H153JA16D | Available | Mass Production |
| | 0.85+/-0.1 | C0G | | 0.022μF | +/-5% | GCM3195C1H223JA16D | Available | Mass Production |
| | 0.85+/-0.1 | C0G | | 0.033μF | +/-5% | GCM3195C1H333JA16D | Available | Mass Production |
| | 0.85+/-0.1 | C0G | | 0.047μF | +/-5% | GCM31M5C1H473JA16L | Available | Mass Production |
| | 1.6+/-0.2 | C0G | | 0.068μF | +/-5% | GCM31C5C1H683JA16L | Available | Mass Production |
| | 1.6+/-0.2 | C0G | | 0.1μF | +/-5% | GCM31C5C1H104JA16L | Available | Mass Production |

- 1) "*" of under development P/N have not fixed yet.
- 2) Q1 = January to March, Q2 = April to June, Q3 = July to September, Q4 = October to December
- 3) This is muRata's development schedule, which may change due to progress of each development works.
- 4) Above individual specification code and packaging code were decided with muRata standard specification, and it may change due to the special requirement by customer's drawing.
- 5) Sample marked "-" in Sample column are built upon your request. Lead time will be around 4wks (might be extended depending on production schedule). Please contact Murata Sales or Product Engineer directly.

GCM series / <100V Max>

<U2J Type>

Murata P/N List < 0603 size / U2J / 100V >

| Size (inch) | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|-------------|-------------|-----|-----|---------|---------|--------------------|-----------|-----------------|
| 0603 | 0.8+/-0.1 | U2J | 100 | 1,000pF | +/-5% | GCM1887U2A102JA16D | Available | Mass Production |
| | 0.8+/-0.1 | U2J | | 1,500pF | +/-5% | GCM1887U2A152JA16D | Available | Mass Production |
| | 0.8+/-0.1 | U2J | | 2,200pF | +/-5% | GCM1887U2A222JA16D | Available | Mass Production |
| | 0.8+/-0.1 | U2J | | 3,300pF | +/-5% | GCM1887U2A332JA16D | Available | Mass Production |
| | 0.8+/-0.1 | U2J | | 4,700pF | +/-5% | GCM1887U2A472JA16D | Available | Mass Production |
| | 0.8+/-0.1 | U2J | | 6,800pF | +/-5% | GCM1887U2A682JA16D | Available | Mass Production |
| | 0.8+/-0.1 | U2J | | 0.01μF | +/-5% | GCM1887U2A103JA16D | Available | Mass Production |

Murata P/N List < 0603 size / U2J / 50V >

| Size (inch) | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|-------------|-------------|-----|----|---------|---------|--------------------|-----------|-----------------|
| 0603 | 0.8+/-0.1 | U2J | 50 | 1,000pF | +/-5% | GCM1887U1H102JA16D | Available | Mass Production |
| | 0.8+/-0.1 | U2J | | 1,500pF | +/-5% | GCM1887U1H152JA16D | Available | Mass Production |
| | 0.8+/-0.1 | U2J | | 2,200pF | +/-5% | GCM1887U1H222JA16D | Available | Mass Production |
| | 0.8+/-0.1 | U2J | | 3,300pF | +/-5% | GCM1887U1H332JA16D | Available | Mass Production |
| | 0.8+/-0.1 | U2J | | 4,700pF | +/-5% | GCM1887U1H472JA16D | Available | Mass Production |
| | 0.8+/-0.1 | U2J | | 6,800pF | +/-5% | GCM1887U1H682JA16D | Available | Mass Production |
| | 0.8+/-0.1 | U2J | | 0.01μF | +/-5% | GCM1887U1H103JA16D | Available | Mass Production |

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- 3) This is muRata's development schedule, which may change due to progress of each development works.
- 4) Above individual specification code and packaging code were decided with muRata standard specification, and it may change due to the special requirement by customer's drawing.
- 5) Sample marked "-" in Sample column are built upon your request. Lead time will be around 4wks (might be extended depending on production schedule). Please contact Murata Sales or Product Engineer directly.

GCM series / <100V Max>

<X8L,X8M,X8R,X8G type>

Chip size and Capacitance range

< X8L,M8 >

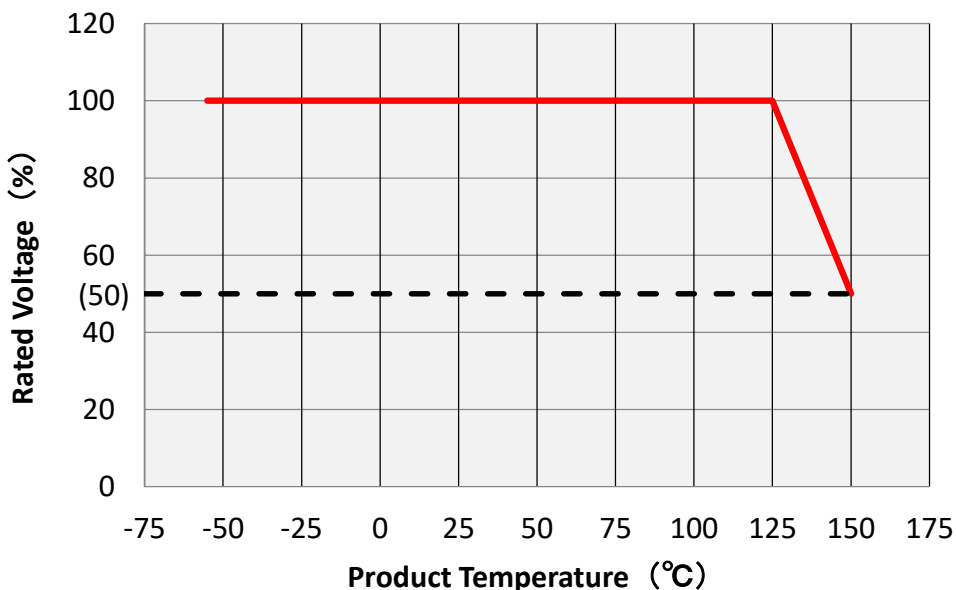
 M.P. (Recommend) Not Recommended

| Type | Size (inch) | WV | Capacitance | | | | | | | | | | | | | | | |
|-------|-------------|-----|-------------|-----|----|-----|-----|----|----|------|------|-----|-----|------|------|------|------|------|
| | | | pF | | nF | | | | | | | | | μF | | | | |
| | | | 220 | 470 | 1 | 2.2 | 4.7 | 10 | 22 | 47 | 100 | 220 | 470 | 1 | 2.2 | 4.7 | 10 | 22 |
| GCM15 | 0402 | 50 | L8 | L8 | L8 | L8 | L8 | | | L8 * | L8 * | | | | | | | |
| | | 25 | | | | | | L8 | | | L8 | | | | | | | |
| | | 16 | | | | | | | L8 | L8 | | | | | | | | |
| GCM18 | 0603 | 50 | L8 | L8 | L8 | L8 | L8 | L8 | L8 | L8 | L8 | | | | | | | |
| | | 25 | | | | | | | | | | L8 | | | | | | |
| | | 16 | | | | | | | | | | | L8 | | | | | |
| GCM21 | 0805 | 50 | | | | | | | | | L8 | L8 | | | | | | |
| | | 35 | | | | | | | | | | | | L8 * | L8 * | | | |
| | | 25 | | | | | | | | | | | L8 | | | L8 * | | |
| GCM31 | 1206 | 100 | | | | | | | | | | | | | | | | |
| | | 50 | | | | | | | | | L8 | L8 | L8 | L8 | | | | |
| | | 25 | | | | | | | | | | | | L8 | | | | |
| GCM32 | 1210 | 100 | | | | | | | | | | | | | | | | |
| | | 50 | | | | | | | | | | | | | | | L8 * | |
| | | 25 | | | | | | | | | | | | | | | | L8 * |
| | | 10 | | | | | | | | | | | | | | | | L8 |

* : Rated voltage derating product

※ Rated Voltage Derating Type

When the product temperature exceeds 125° C, please use this product within the voltage and temperature derated conditions in the figure below.



GCM series / <100V Max>

<X8L,X8M,X8R,X8G type>

Chip size and Capacitance range

< X8R >

M.P. (Recommend)
 Not Recommended

| Type | Size (inch) | WV | Capacitance | | | | | | | | | | | | |
|-------|-------------|-----|-------------|-----|----|-----|-----|----|----|----|-----|-----|-----|---|----|
| | | | pF | | nF | | | | | | | | | | μF |
| | | | 220 | 470 | 1 | 2.2 | 4.7 | 10 | 22 | 47 | 100 | 220 | 470 | 1 | |
| GCM18 | 0603 | 100 | | | | | | | | | | | | | |
| | | 50 | | | | | | | | | | | | | |
| | | 25 | | | | | | | | | | | | | |
| GCM21 | 0805 | 100 | | | | | | | | | | | | | |
| | | 50 | | | | | | | | | | | | | |
| | | 25 | | | | | | | | | | | | | |
| GCM31 | 1206 | 50 | | | | | | | | | | | | | |
| | | 25 | | | | | | | | | | | | | |

< X8G >

| Type | Size (inch) | WV | Capacitance | | | | | | | | | | | | | |
|-------|-------------|-----|-------------|-----|--|--|----|--|----|--|-----|--|--|--|--|--|
| | | | pF | | | | nF | | | | | | | | | |
| | | | 10 | 100 | | | 1 | | 10 | | 100 | | | | | |
| GCM15 | 0402 | 50 | | | | | | | | | | | | | | |
| GCM18 | 0603 | 100 | | | | | | | | | | | | | | |
| | | 50 | | | | | | | | | | | | | | |
| GCM21 | 0805 | 100 | | | | | | | | | | | | | | |
| | | 50 | | | | | | | | | | | | | | |
| GCM31 | 1206 | 100 | | | | | | | | | | | | | | |
| | | 50 | | | | | | | | | | | | | | |

GCM series / <100V Max>

<X8L,X8M,X8R,X8G type>

Murata P/N List < 0402 size / X8L >

| Size (inch) | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|-------------|-------------|---------|-------|---------|--------------------|--------------------|-----------------|-----------------|
| 0402 | 0.5+/-0.05 | X8L | 50 | 220pF | +/-10% | GCM155L81H221KA37D | Available | Mass Production |
| | 0.5+/-0.05 | X8L | | 470pF | +/-10% | GCM155L81H471KA37D | Available | Mass Production |
| | 0.5+/-0.05 | X8L | | 1,000pF | +/-10% | GCM155L81H102KA37D | Available | Mass Production |
| | 0.5+/-0.05 | X8L | | 2,200pF | +/-10% | GCM155L81H222KA37D | Available | Mass Production |
| | 0.5+/-0.05 | X8L | | 4,700pF | +/-10% | GCM155L81H472KA37D | Available | Mass Production |
| | 0.5+/-0.05 | X8L | 50(*) | 0.047μF | +/-10% | GCM155L8EH473KE07D | Available | Mass Production |
| | 0.5+/-0.05 | X8L | | 0.1μF | +/-10% | GCM155L8EH104KE07D | Available | Mass Production |
| | 0.5+/-0.05 | X8L | 25 | 0.01μF | +/-10% | GCM155L81E103KA37D | Available | Mass Production |
| | 0.5+/-0.05 | X8L | | 0.1μF | +/-10% | GCM155L81E104KE02D | Available | Mass Production |
| | 0.5+/-0.05 | X8L | 16 | 0.022μF | +/-10% | GCM155L81C223KA37D | Available | Mass Production |
| 0.5+/-0.05 | X8L | 0.047μF | | +/-10% | GCM155L81C473KA37D | Available | Mass Production | |

Murata P/N List < 0603 size / X8L >

| Size (inch) | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|-------------|-------------|-----|--------|---------|--------------------|--------------------|-----------------|-----------------|
| 0603 | 0.8+/-0.1 | X8L | 50 | 220pF | +/-10% | GCM188L81H221KA03D | Available | Mass Production |
| | 0.8+/-0.1 | X8L | | 470pF | +/-10% | GCM188L81H471KA03D | Available | Mass Production |
| | 0.8+/-0.1 | X8L | | 1000pF | +/-10% | GCM188L81H102KA03D | Available | Mass Production |
| | 0.8+/-0.1 | X8L | | 2200pF | +/-10% | GCM188L81H222KA03D | Available | Mass Production |
| | 0.8+/-0.1 | X8L | | 4700pF | +/-10% | GCM188L81H472KA03D | Available | Mass Production |
| | 0.8+/-0.1 | X8L | | 0.01μF | +/-10% | GCM188L81H103KA03D | Available | Mass Production |
| | 0.8+/-0.1 | X8L | | 0.022μF | +/-10% | GCM188L81H223KA37D | Available | Mass Production |
| | 0.8+/-0.1 | X8L | | 0.047μF | +/-10% | GCM188L81H473KA55D | Available | Mass Production |
| | 0.8+/-0.1 | X8L | | 0.1μF | +/-10% | GCM188L81H104KA57D | Available | Mass Production |
| | 0.8+/-0.1 | X8L | 25 | 0.22μF | +/-10% | GCM188L81E224KA64D | Available | Mass Production |
| 0.8+/-0.1 | X8L | 16 | 0.22μF | +/-10% | GCM188L81C224KA37D | Available | Mass Production | |

Murata P/N List < 0805 size / X8L,X8M >

| Size (inch) | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|-------------|-------------|-------|-------|--------|--------------------|--------------------|-----------------|-----------------|
| 0805 | 1.25+/-0.15 | X8L | 50 | 0.1μF | +/-10% | GCM21BL81H104KA37L | Available | Mass Production |
| | 1.25+/-0.15 | X8L | | 0.22μF | +/-10% | GCM21BL81H224KA37L | Available | Mass Production |
| | 1.25+/-0.15 | X8L | 35(*) | 2.2μF | +/-10% | GCM21BL8EG225KE07L | Available | Mass Production |
| | 1.25+/-0.2 | X8L | | 4.7μF | +/-10% | GCM21BL8EG475KE08L | Available | Mass Production |
| | 1.25+/-0.15 | X8L | 25 | 0.47μF | +/-10% | GCM21BL81E474KA37L | Available | Mass Production |
| | 1.25+/-0.2 | X8L | 25(*) | 4.7μF | +/-10% | GCM21BL8EF475KE08L | Available | Mass Production |
| | 1.25+/-0.15 | X8L | 16 | 0.47μF | +/-10% | GCM21BL81C474KA37L | Available | Mass Production |
| | 1.25+/-0.15 | X8L | | 1μF | +/-10% | GCM21BL81C105KA58L | Available | Mass Production |
| 1.25+/-0.2 | X8M | 16(*) | 10μF | +/-10% | GCM21BM8EE106KE08L | Available | Mass Production | |

* : Rated voltage derating product

GCM series / <100V Max>

<X8L,X8M,X8R,X8G type>

Murata P/N List < 1206 size / X8L >

| Size (inch) | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|-------------|-------------|-----|--------|--------|---------|--------------------|-----------|-----------------|
| 1206 | 1.6+/-0.2 | X8L | 100(*) | 2.2μF | +/-10% | GCM31CL8EL225KE07L | Available | Mass Production |
| | 1.15+/-0.1 | X8L | 50 | 0.1μF | +/-10% | GCM31ML81H104KA37L | Available | Mass Production |
| | 1.15+/-0.1 | X8L | | 0.22μF | +/-10% | GCM31ML81H224KA37L | Available | Mass Production |
| | 1.15+/-0.1 | X8L | | 0.47μF | +/-10% | GCM31ML81H474KA37L | Available | Mass Production |
| | 1.6+/-0.2 | X8L | | 1μF | +/-10% | GCM31CL81H105KA55L | Available | Mass Production |
| | 1.15+/-0.1 | X8L | 25 | 1μF | +/-10% | GCM31ML81E105KA37L | Available | Mass Production |
| | 1.15+/-0.15 | X8L | 16 | 2.2μF | +/-10% | GCM31ML81C225KA54L | Available | Mass Production |

Murata P/N List < 1210 size / X8L >

| Size (inch) | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|-------------|---------------|-----|--------|-------|---------|--------------------|-----------|-----------------|
| 1210 | 2.0+/-0.2 | X8L | 100(*) | 4.7μF | +/-10% | GCM32DL8EL475KE07L | Available | Mass Production |
| | 2.5+/-0.2 | X8L | 50(*) | 10μF | +/-10% | GCM32EL8EH106KA07L | Available | Mass Production |
| | 2.5+0.35/-0.2 | X8L | 25(*) | 22μF | +/-10% | GCM32EL8EF226KE08L | Available | Mass Production |
| | 2.0+/-0.2 | X8L | 10 | 10μF | +/-10% | GCM32DL81A106KA37L | Available | Mass Production |

* : Rated voltage derating product

- 1) “**” of under development P/N have not fixed yet.
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- 3) This is muRata’s development schedule, which may change due to progress of each development works.
- 4) Above individual specification code and packaging code were decided with muRata standard specification, and it may change due to the special requirement by customer’s drawing.
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GCM series / <100V Max>

<X8L,X8M,X8R,X8G type>

Murata P/N List < 0603 size / X8R >

| Size (inch) | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|-------------|-------------|-----|-----|---------|---------|--------------------|-----------|-----------------|
| 0603 | 0.8+/-0.1 | X8R | 100 | 1000pF | +/-10% | GCM188R92A102KA37D | Available | Mass Production |
| | 0.8+/-0.1 | X8R | | 2200pF | +/-10% | GCM188R92A222KA37D | Available | Mass Production |
| | 0.8+/-0.1 | X8R | | 4700pF | +/-10% | GCM188R92A472KA37D | Available | Mass Production |
| | 0.8+/-0.1 | X8R | | 0.01μF | +/-10% | GCM188R92A103KA37D | Available | Mass Production |
| | 0.8+/-0.1 | X8R | 50 | 1000pF | +/-10% | GCM188R91H102KA37D | Available | Mass Production |
| | 0.8+/-0.1 | X8R | | 2200pF | +/-10% | GCM188R91H222KA37D | Available | Mass Production |
| | 0.8+/-0.1 | X8R | | 4700pF | +/-10% | GCM188R91H472KA37D | Available | Mass Production |
| | 0.8+/-0.1 | X8R | | 0.01μF | +/-10% | GCM188R91H103KA37D | Available | Mass Production |
| | 0.8+/-0.1 | X8R | | 0.022μF | +/-10% | GCM188R91H223KA37D | Available | Mass Production |
| | 0.8+/-0.1 | X8R | | 0.047μF | +/-10% | GCM188R91H473KA37D | Available | Mass Production |
| | 0.8+/-0.1 | X8R | 25 | 0.1μF | +/-10% | GCM188R91E104KA37D | Available | Mass Production |

Murata P/N List < 0805 size / X8R >

| Size (inch) | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|-------------|-------------|-----|-----|---------|---------|--------------------|-----------|-----------------|
| 0805 | 0.85+/-0.1 | X8R | 100 | 0.01μF | +/-10% | GCM219R92A103KA37D | Available | Mass Production |
| | 0.85+/-0.1 | X8R | | 0.022μF | +/-10% | GCM219R92A223KA37D | Available | Mass Production |
| | 1.25+/-0.15 | X8R | | 0.047μF | +/-10% | GCM21BR92A473KA37L | Available | Mass Production |
| | 0.85+/-0.1 | X8R | 50 | 0.01μF | +/-10% | GCM219R91H103KA37D | Available | Mass Production |
| | 0.85+/-0.1 | X8R | | 0.022μF | +/-10% | GCM219R91H223KA37D | Available | Mass Production |
| | 1.25+/-0.15 | X8R | | 0.047μF | +/-10% | GCM21BR91H473KA37L | Available | Mass Production |
| | 1.25+/-0.15 | X8R | | 0.1μF | +/-10% | GCM21BR91H104KA37L | Available | Mass Production |
| | 1.25+/-0.15 | X8R | 25 | 0.22μF | +/-10% | GCM21BR91E224KA37L | Available | Mass Production |

Murata P/N List < 1206 size / X8R >

| Size (inch) | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|-------------|-------------|-----|----|--------|---------|--------------------|-----------|-----------------|
| 1206 | 1.15+/-0.1 | X8R | 50 | 0.22μF | +/-10% | GCM31MR91H224KA37L | Available | Mass Production |
| | 1.6+/-0.2 | X8R | | 0.47μF | +/-10% | GCM31CR91H474KA37L | Available | Mass Production |
| | 1.15+/-0.1 | X8R | 25 | 0.47μF | +/-10% | GCM31MR91E474KA37L | Available | Mass Production |
| | 1.6+/-0.2 | X8R | | 1μF | +/-10% | GCM31CR91E105KA37L | Available | Mass Production |

1) "*" of under development P/N have not fixed yet.

2) Q1 = January to March, Q2 = April to June, Q3 = July to September, Q4 = October to December

3) This is muRata's development schedule, which may change due to progress of each development works.

4) Above individual specification code and packaging code were decided with muRata standard specification, and it may change due to the special requirement by customer's drawing.

5) Sample marked "-" in Sample column are built upon your request. Lead time will be around 4wks (might be extended depending on production schedule). Please contact Murata Sales or Product Engineer directly.

GCM series / <100V Max>

<X8L,X8M,X8R,X8G type>

Murata P/N List < 0402 size / X8G >

| Size (inch) | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|-------------|-------------|---------|-------|--------------------|-----------|--------------------|-----------|-----------------|
| 0402 | 0.5+/-0.05 | X8G | 50 | 1pF | +/-0.25pF | GCM1555G1H1R0CA16D | Available | Mass Production |
| | 0.5+/-0.05 | X8G | | 2pF | +/-0.25pF | GCM1555G1H2R0CA16D | Available | Mass Production |
| | 0.5+/-0.05 | X8G | | 3pF | +/-0.25pF | GCM1555G1H3R0CA16D | Available | Mass Production |
| | 0.5+/-0.05 | X8G | | 4pF | +/-0.25pF | GCM1555G1H4R0CA16D | Available | Mass Production |
| | 0.5+/-0.05 | X8G | | 5pF | +/-0.25pF | GCM1555G1H5R0CA16D | Available | Mass Production |
| | 0.5+/-0.05 | X8G | | 6pF | +/-0.25pF | GCM1555G1H6R0CA16D | Available | Mass Production |
| | 0.5+/-0.05 | X8G | | 7pF | +/-0.25pF | GCM1555G1H7R0CA16D | Available | Mass Production |
| | 0.5+/-0.05 | X8G | | 8pF | +/-0.25pF | GCM1555G1H8R0CA16D | Available | Mass Production |
| | 0.5+/-0.05 | X8G | | 9pF | +/-0.25pF | GCM1555G1H9R0CA16D | Available | Mass Production |
| | 0.5+/-0.05 | X8G | | 10pF | +/-5% | GCM1555G1H100JA16D | Available | Mass Production |
| | 0.5+/-0.05 | X8G | | 15pF | +/-5% | GCM1555G1H150JA16D | Available | Mass Production |
| | 0.5+/-0.05 | X8G | | 22pF | +/-5% | GCM1555G1H220JA16D | Available | Mass Production |
| | 0.5+/-0.05 | X8G | | 33pF | +/-5% | GCM1555G1H330JA16D | Available | Mass Production |
| | 0.5+/-0.05 | X8G | | 47pF | +/-5% | GCM1555G1H470JA16D | Available | Mass Production |
| | 0.5+/-0.05 | X8G | | 68pF | +/-5% | GCM1555G1H680JA16D | Available | Mass Production |
| | 0.5+/-0.05 | X8G | | 100pF | +/-5% | GCM1555G1H101JA16D | Available | Mass Production |
| | 0.5+/-0.05 | X8G | | 150pF | +/-5% | GCM1555G1H151JA16D | Available | Mass Production |
| | 0.5+/-0.05 | X8G | | 220pF | +/-5% | GCM1555G1H221JA16D | Available | Mass Production |
| | 0.5+/-0.05 | X8G | | 330pF | +/-5% | GCM1555G1H331JA16D | Available | Mass Production |
| | 0.5+/-0.05 | X8G | | 470pF | +/-5% | GCM1555G1H471JA16D | Available | Mass Production |
| 0.5+/-0.05 | X8G | 680pF | +/-5% | GCM1555G1H681JA16D | Available | Mass Production | | |
| 0.5+/-0.05 | X8G | 1,000pF | +/-5% | GCM1555G1H102JA16D | Available | Mass Production | | |

1) "*" of under development P/N have not fixed yet.

2) Q1 = January to March, Q2 = April to June, Q3 = July to September, Q4 = October to December

3) This is muRata's development schedule, which may change due to progress of each development works.

4) Above individual specification code and packaging code were decided with muRata standard specification, and it may change due to the special requirement by customer's drawing.

5) Sample marked "-" in Sample column are built upon your request. Lead time will be around 4wks (might be extended depending on production schedule). Please contact Murata Sales or Product Engineer directly.

GCM series / <100V Max>

<X8L,X8M,X8R,X8G type>

Murata P/N List < 0603 size / X8G >

| Size (inch) | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|-------------|-------------|-----|---------|---------|--------------------|--------------------|--------------------|-----------------|
| 0603 | 0.8+/-0.1 | X8G | 100 | 10pF | +/-5% | GCM1885G2A100JA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | | 15pF | +/-5% | GCM1885G2A150JA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | | 22pF | +/-5% | GCM1885G2A220JA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | | 33pF | +/-5% | GCM1885G2A330JA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | | 47pF | +/-5% | GCM1885G2A470JA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | | 68pF | +/-5% | GCM1885G2A680JA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | | 100pF | +/-5% | GCM1885G2A101JA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | | 150pF | +/-5% | GCM1885G2A151JA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | | 220pF | +/-5% | GCM1885G2A221JA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | | 330pF | +/-5% | GCM1885G2A331JA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | | 470pF | +/-5% | GCM1885G2A471JA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | | 680pF | +/-5% | GCM1885G2A681JA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | | 1,000pF | +/-5% | GCM1885G2A102JA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | | 50 | 1pF | +/-0.25pF | GCM1885G1H1R0CA16D | Available |
| | 0.8+/-0.1 | X8G | 2pF | | +/-0.25pF | GCM1885G1H2R0CA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | 3pF | | +/-0.25pF | GCM1885G1H3R0CA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | 4pF | | +/-0.25pF | GCM1885G1H4R0CA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | 5pF | | +/-0.25pF | GCM1885G1H5R0CA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | 6pF | | +/-0.5pF | GCM1885G1H6R0DA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | 7pF | | +/-0.5pF | GCM1885G1H7R0DA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | 8pF | | +/-0.5pF | GCM1885G1H8R0DA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | 9pF | | +/-0.5pF | GCM1885G1H9R0DA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | 10pF | | +/-5% | GCM1885G1H100JA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | 15pF | | +/-5% | GCM1885G1H150JA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | 22pF | | +/-5% | GCM1885G1H220JA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | 33pF | | +/-5% | GCM1885G1H330JA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | 47pF | | +/-5% | GCM1885G1H470JA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | 68pF | | +/-5% | GCM1885G1H680JA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | 100pF | | +/-5% | GCM1885G1H101JA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | 150pF | | +/-5% | GCM1885G1H151JA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | 220pF | | +/-5% | GCM1885G1H221JA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | 330pF | | +/-5% | GCM1885G1H331JA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | 470pF | | +/-5% | GCM1885G1H471JA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | 680pF | | +/-5% | GCM1885G1H681JA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | 1,000pF | | +/-5% | GCM1885G1H102JA16D | Available | Mass Production |
| | 0.8+/-0.1 | X8G | 1,500pF | +/-5% | GCM1885G1H152JA16D | Available | Mass Production | |
| | 0.8+/-0.1 | X8G | 2,200pF | +/-5% | GCM1885G1H222JA16D | Available | Mass Production | |

GCM series / <100V Max>

<X8L,X8M,X8R,X8G type>

Murata P/N List < 0805 size / X8G >

| Size (inch) | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|-------------|-------------|--------|-------|--------------------|-----------|--------------------|-----------|-----------------|
| 0805 | 0.6+/-0.1 | X8G | 100 | 100pF | +/-5% | GCM2165G2A101JA16D | Available | Mass Production |
| | 0.6+/-0.1 | X8G | | 150pF | +/-5% | GCM2165G2A151JA16D | Available | Mass Production |
| | 0.6+/-0.1 | X8G | | 220pF | +/-5% | GCM2165G2A221JA16D | Available | Mass Production |
| | 0.6+/-0.1 | X8G | | 330pF | +/-5% | GCM2165G2A331JA16D | Available | Mass Production |
| | 0.6+/-0.1 | X8G | | 470pF | +/-5% | GCM2165G2A471JA16D | Available | Mass Production |
| | 0.6+/-0.1 | X8G | | 680pF | +/-5% | GCM2165G2A681JA16D | Available | Mass Production |
| | 0.85+/-0.1 | X8G | | 1,000pF | +/-5% | GCM2195G2A102JA16D | Available | Mass Production |
| | 0.85+/-0.1 | X8G | | 1,500pF | +/-5% | GCM2195G2A152JA16D | Available | Mass Production |
| | 0.6+/-0.1 | X8G | 50 | 100pF | +/-5% | GCM2165G1H101JA16D | Available | Mass Production |
| | 0.6+/-0.1 | X8G | | 150pF | +/-5% | GCM2165G1H151JA16D | Available | Mass Production |
| | 0.6+/-0.1 | X8G | | 220pF | +/-5% | GCM2165G1H221JA16D | Available | Mass Production |
| | 0.6+/-0.1 | X8G | | 330pF | +/-5% | GCM2165G1H331JA16D | Available | Mass Production |
| | 0.6+/-0.1 | X8G | | 470pF | +/-5% | GCM2165G1H471JA16D | Available | Mass Production |
| | 0.6+/-0.1 | X8G | | 680pF | +/-5% | GCM2165G1H681JA16D | Available | Mass Production |
| | 0.6+/-0.1 | X8G | | 1,000pF | +/-5% | GCM2165G1H102JA16D | Available | Mass Production |
| | 0.6+/-0.1 | X8G | | 1,500pF | +/-5% | GCM2165G1H152JA16D | Available | Mass Production |
| | 0.6+/-0.1 | X8G | | 2,200pF | +/-5% | GCM2165G1H222JA16D | Available | Mass Production |
| | 0.6+/-0.1 | X8G | | 3,300pF | +/-5% | GCM2165G1H332JA16D | Available | Mass Production |
| | 0.6+/-0.1 | X8G | | 4,700pF | +/-5% | GCM2165G1H472JA16D | Available | Mass Production |
| | 0.85+/-0.1 | X8G | | 6,800pF | +/-5% | GCM2195G1H682JA16D | Available | Mass Production |
| 0.85+/-0.1 | X8G | 0.01µF | +/-5% | GCM2195G1H103JA16D | Available | Mass Production | | |

Murata P/N List < 1206 size / X8G >

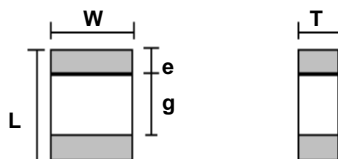
| Size (inch) | Chip T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | M.P. |
|-------------|-------------|-----|-----|---------|---------|--------------------|-----------|-----------------|
| 1206 | 0.85+/-0.1 | X8G | 100 | 1,000pF | +/-5% | GCM3195G2A102JA16D | Available | Mass Production |
| | 0.85+/-0.1 | X8G | | 1,500pF | +/-5% | GCM3195G2A152JA16D | Available | Mass Production |
| | 0.85+/-0.1 | X8G | | 2,200pF | +/-5% | GCM3195G2A222JA16D | Available | Mass Production |
| | 0.85+/-0.1 | X8G | | 3,300pF | +/-5% | GCM3195G2A332JA16D | Available | Mass Production |
| | 0.85+/-0.1 | X8G | | 4,700pF | +/-5% | GCM3195G2A472JA16D | Available | Mass Production |
| | 0.85+/-0.1 | X8G | 50 | 1,000pF | +/-5% | GCM3195G1H102JA16D | Available | Mass Production |
| | 0.85+/-0.1 | X8G | | 1,500pF | +/-5% | GCM3195G1H152JA16D | Available | Mass Production |
| | 0.85+/-0.1 | X8G | | 2,200pF | +/-5% | GCM3195G1H222JA16D | Available | Mass Production |
| | 0.85+/-0.1 | X8G | | 3,300pF | +/-5% | GCM3195G1H332JA16D | Available | Mass Production |
| | 0.85+/-0.1 | X8G | | 4,700pF | +/-5% | GCM3195G1H472JA16D | Available | Mass Production |
| | 0.85+/-0.1 | X8G | | 6,800pF | +/-5% | GCM3195G1H682JA16D | Available | Mass Production |
| | 0.85+/-0.1 | X8G | | 0.01µF | +/-5% | GCM3195G1H103JA16D | Available | Mass Production |
| | 0.85+/-0.1 | X8G | | 0.015µF | +/-5% | GCM3195G1H153JA16D | Available | Mass Production |
| | 0.85+/-0.1 | X8G | | 0.022µF | +/-5% | GCM3195G1H223JA16D | Available | Mass Production |

GCM series / <250 to 1000V, U2J Char.>

Features

1. Low Loss Type for automotive application
2. Meet AEC-Q200
3. Sn-plated external electrodes realizes good solderability.
4. Use the GCM21/31 types with flow or reflow soldering, and other types with reflow soldering only.
5. Suitable For High Pulse Applications
6. Lead Free

Chip dimension



(mm)

| Type | EIA size | L | W | T | e min. | g min. |
|--------|----------|-----------|------------|-------------|--------|--------|
| GCM21A | 0805 | 2.0+/-0.2 | 1.25+/-0.2 | 1.0+0/-0.3 | 0.3 | 0.7 |
| GCM21B | 0805 | 2.0+/-0.2 | 1.25+/-0.2 | 1.25+/-0.2 | 0.3 | 0.7 |
| GCM31A | 1206 | 3.2+/-0.2 | 1.6+/-0.2 | 1.0+0/-0.3 | 0.3 | 1.5 |
| GCM31B | 1206 | 3.2+/-0.2 | 1.6+/-0.2 | 1.25+0/-0.3 | 0.3 | 1.5 |
| GCM31C | 1206 | 3.2+/-0.2 | 1.6+/-0.2 | 1.6+/-0.2 | 0.3 | 1.2 |
| GCM32A | 1210 | 3.2+/-0.2 | 2.5+/-0.2 | 1.0+0/-0.3 | 0.3 | 1.5 |
| GCM32B | 1210 | 3.2+/-0.2 | 2.5+/-0.2 | 1.25+0/-0.3 | 0.3 | 1.5 |
| GCM32Q | 1210 | 3.2+/-0.2 | 2.5+/-0.2 | 1.5+0/-0.3 | 0.3 | 1.2 |
| GCM32D | 1210 | 3.2+/-0.2 | 2.5+/-0.2 | 2.0+0/-0.3 | 0.3 | 1.2 |
| GCM43Q | 1812 | 4.5+/-0.3 | 3.2+/-0.3 | 1.5+0/-0.3 | 0.3 | 2.2 |
| GCM43D | 1812 | 4.5+/-0.3 | 3.2+/-0.3 | 2.0+0/-0.3 | 0.3 | 3.2 |
| GCM55Q | 2220 | 5.7+/-0.4 | 5.0+/-0.4 | 1.5+0/-0.3 | 0.3 | 3.2 |
| GCM55D | 2220 | 5.7+/-0.4 | 5.0+/-0.4 | 2.0+0/-0.3 | 0.3 | 3.2 |

Capacitance range

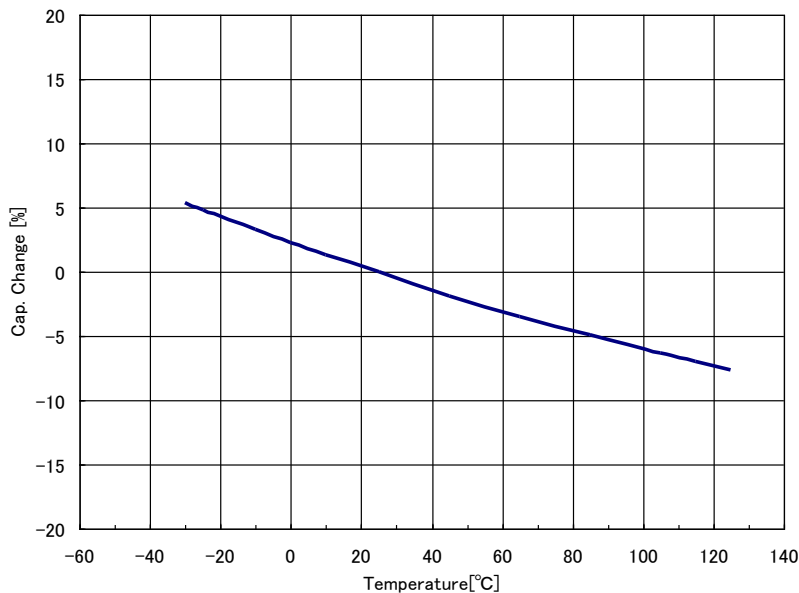
M.P. (Recommend)

| Type | TC | WV | Capacitance Range | | | | | | |
|--------------|-----|------|-------------------|-----|----|----|-----|--|------------------|
| | | | pF | | nF | | | | |
| | | | 10 | 100 | 1 | 10 | 100 | | |
| GCM21(0805) | U2J | 250V | | | | | | | 100 to 5600pF |
| | | 250V | | | | | | | 2700 to 10000pF |
| GCM31(1206) | U2J | 630V | | | | | | | 10 to 4700oF |
| | | 1kV | | | | | | | 10 to 1000pF |
| GCM32 (1210) | U2J | 630V | | | | | | | 1200 to 10000pF |
| | | 1kV | | | | | | | 1200 to 2200pF |
| GCM43(1812) | U2J | 630V | | | | | | | 12000 to 22000pF |
| | | 1kV | | | | | | | 2700 to 4700pF |
| GCM55(2220) | U2J | 630V | | | | | | | 27000 to 47000pF |
| | | 1kV | | | | | | | 5600 to 10000pF |

GCM series / <250 to 1000V, U2J Char.>

Mar. 2019

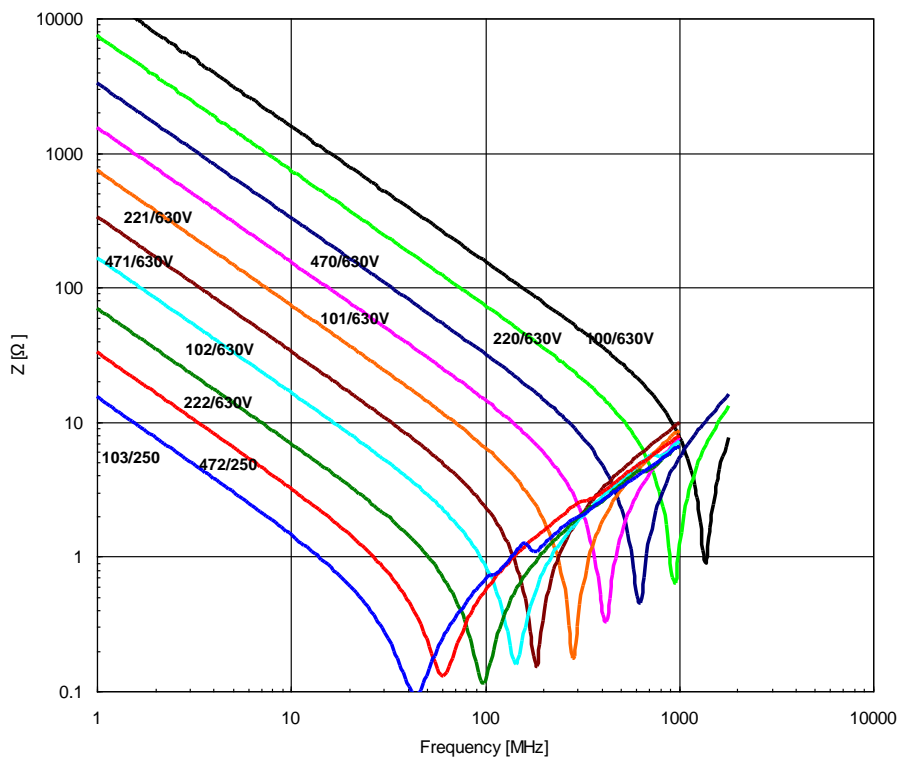
Temperature - Characteristic (Temp.Char.U2J)



U2J: -750 +/- 120 ppm/°C (Range: +25 to +125°C)

-750+120,-347 ppm/°C (Range: -55 to +25°C)

Impedance - Frequency (Temp.Char.U2J 250V, 630V)



GCM series / <250 to 1000V, U2J Char.>

Global Part Numbering

GC M 21 A 7U 2E 102 J X01 D
-1- -2- -3- -4- -5- -6- -7- -8- -9- -10-

-1:-Product ID

| Code | Product and Series |
|------|--------------------|
| GCM | For Automotive |

-2:-Series code

-6:-Rated Voltage

| Code | Rated Voltage |
|------|---------------|
| 2E | DC 250V |
| 2J | DC 630V |
| 3A | DC 1kV |

-8:-Capacitance Tolerance

| Code | Cap. Tol. | Cap |
|------|-----------|--------|
| J | +/-5% | >=10pF |

-3:-Dimension (LxW)

-4:-Dimension (T)

| Code | Dimension (LxW) | Code | Dimension (T) |
|------|-----------------|------|---------------|
| 21 | 2.0x1.25mm | A | 1.0mm |
| 31 | 3.2x1.6mm | B | 1.25mm |
| 32 | 3.2x2.5mm | C | 1.6mm |
| 43 | 4.5x3.2mm | D | 2.0mm |
| 55 | 5.7x5.0mm | Q | 1.5mm |

-7:-Capacitance

| Code | Capacitance |
|------|-------------|
| 221 | 220pF |
| 102 | 1000pF |

-9:-Individual Specification Code

-5:-Temperature Characteristics

| Code | TC | Temp. Range | Cap. Change |
|------|-----|--------------------------|---|
| 7U | U2J | -55 to 25C 25 to 125C | -750ppm+120ppm, -347ppm/C -750ppm+/-120ppm/C |

-10:-Packaging

| Code | Packaging |
|------|-----------------------|
| D | φ180mm Paper Taping |
| L | φ180mm Plastic Taping |

| Size (inch) | Dimension LxW (mm) | Dimension T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | Mass Production |
|-------------|--------------------|------------------|-----|------|--------|---------|----------------------|-----------|-----------------|
| 0805 | 2.0 x 1.25 | 1.0 | U2J | 250V | 100pF | +/-5% | GCM21A7U2E101JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | U2J | 250V | 120pF | +/-5% | GCM21A7U2E121JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | U2J | 250V | 150pF | +/-5% | GCM21A7U2E151JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | U2J | 250V | 180pF | +/-5% | GCM21A7U2E181JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | U2J | 250V | 220pF | +/-5% | GCM21A7U2E221JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | U2J | 250V | 270pF | +/-5% | GCM21A7U2E271JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | U2J | 250V | 330pF | +/-5% | GCM21A7U2E331JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | U2J | 250V | 390pF | +/-5% | GCM21A7U2E391JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | U2J | 250V | 470pF | +/-5% | GCM21A7U2E471JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | U2J | 250V | 560pF | +/-5% | GCM21A7U2E561JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | U2J | 250V | 680pF | +/-5% | GCM21A7U2E681JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | U2J | 250V | 820pF | +/-5% | GCM21A7U2E821JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | U2J | 250V | 1000pF | +/-5% | GCM21A7U2E102JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | U2J | 250V | 1200pF | +/-5% | GCM21A7U2E122JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | U2J | 250V | 1500pF | +/-5% | GCM21A7U2E152JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | U2J | 250V | 1800pF | +/-5% | GCM21A7U2E182JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | U2J | 250V | 2200pF | +/-5% | GCM21A7U2E222JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.25 | U2J | 250V | 2700pF | +/-5% | * GCM21B7U2E272JX03L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 250V | 2700pF | +/-5% | GCM31A7U2E272JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.25 | U2J | 250V | 3300pF | +/-5% | * GCM21B7U2E332JX03L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 250V | 3300pF | +/-5% | GCM31A7U2E332JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.25 | U2J | 250V | 3900pF | +/-5% | * GCM21B7U2E392JX03L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 250V | 3900pF | +/-5% | GCM31A7U2E392JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.25 | U2J | 250V | 4700pF | +/-5% | * GCM21B7U2E472JX03L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 250V | 4700pF | +/-5% | GCM31A7U2E472JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.25 | U2J | 250V | 5600pF | +/-5% | * GCM21B7U2E562JX03L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 250V | 5600pF | +/-5% | GCM31A7U2E562JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.25 | U2J | 250V | 6800pF | +/-5% | GCM31B7U2E682JX01L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.25 | U2J | 250V | 8200pF | +/-5% | GCM31B7U2E822JX01L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.25 | U2J | 250V | 0.01uF | +/-5% | GCM31B7U2E103JX01L | Available | M.P. |

* Small Size

GCM series / <250 to 1000V, U2J Char.>

| Size (inch) | Dimension LxW (mm) | Dimension T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | Mass Production |
|-------------|--------------------|------------------|-----|------|---------|---------|----------------------|-----------|-----------------|
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 630V | 10pF | +/-5% | GCM31A7U2J100JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 630V | 12pF | +/-5% | GCM31A7U2J120JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 630V | 15pF | +/-5% | GCM31A7U2J150JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 630V | 18pF | +/-5% | GCM31A7U2J180JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 630V | 22pF | +/-5% | GCM31A7U2J220JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 630V | 27pF | +/-5% | GCM31A7U2J270JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 630V | 33pF | +/-5% | GCM31A7U2J330JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 630V | 39pF | +/-5% | GCM31A7U2J390JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 630V | 47pF | +/-5% | GCM31A7U2J470JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 630V | 56pF | +/-5% | GCM31A7U2J560JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 630V | 68pF | +/-5% | GCM31A7U2J680JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 630V | 82pF | +/-5% | GCM31A7U2J820JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 630V | 100pF | +/-5% | GCM31A7U2J101JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 630V | 120pF | +/-5% | GCM31A7U2J121JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 630V | 150pF | +/-5% | GCM31A7U2J151JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 630V | 180pF | +/-5% | GCM31A7U2J181JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 630V | 220pF | +/-5% | GCM31A7U2J221JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 630V | 270pF | +/-5% | GCM31A7U2J271JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 630V | 330pF | +/-5% | GCM31A7U2J331JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 630V | 390pF | +/-5% | GCM31A7U2J391JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 630V | 470pF | +/-5% | GCM31A7U2J471JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 630V | 560pF | +/-5% | GCM31A7U2J561JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 630V | 680pF | +/-5% | GCM31A7U2J681JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 630V | 820pF | +/-5% | GCM31A7U2J821JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 630V | 1000pF | +/-5% | GCM31A7U2J102JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 630V | 1200pF | +/-5% | * GCM31A7U2J122JX01D | Available | M.P. |
| 1210 | 3.2 x 2.5 | 1.0 | U2J | 630V | 1200pF | +/-5% | GCM32A7U2J122JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 630V | 1500pF | +/-5% | * GCM31A7U2J152JX01D | Available | M.P. |
| 1210 | 3.2 x 2.5 | 1.0 | U2J | 630V | 1500pF | +/-5% | GCM32A7U2J152JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 630V | 1800pF | +/-5% | * GCM31A7U2J182JX01D | Available | M.P. |
| 1210 | 3.2 x 2.5 | 1.0 | U2J | 630V | 1800pF | +/-5% | GCM32A7U2J182JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 630V | 2200pF | +/-5% | * GCM31A7U2J222JX01D | Available | M.P. |
| 1210 | 3.2 x 2.5 | 1.0 | U2J | 630V | 2200pF | +/-5% | GCM32A7U2J222JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.25 | U2J | 630V | 2700pF | +/-5% | GCM31B7U2J272JX01L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.25 | U2J | 630V | 3300pF | +/-5% | GCM31B7U2J332JX01L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.6 | U2J | 630V | 3900pF | +/-5% | GCM31C7U2J392JX03L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.6 | U2J | 630V | 4700pF | +/-5% | GCM31C7U2J472JX03L | Available | M.P. |
| 1210 | 3.2 x 2.5 | 1.25 | U2J | 630V | 5600pF | +/-5% | GCM32B7U2J562JX01L | Available | M.P. |
| 1210 | 3.2 x 2.5 | 1.5 | U2J | 630V | 6800pF | +/-5% | GCM32Q7U2J682JX01L | Available | M.P. |
| 1210 | 3.2 x 2.5 | 2.0 | U2J | 630V | 8200pF | +/-5% | GCM32D7U2J822JX01L | Available | M.P. |
| 1210 | 3.2 x 2.5 | 2.0 | U2J | 630V | 0.01uF | +/-5% | GCM32D7U2J103JX01L | Available | M.P. |
| 1812 | 4.5 x 3.2 | 1.5 | U2J | 630V | 0.012uF | +/-5% | GCM43Q7U2J123JX01L | Available | M.P. |
| 1812 | 4.5 x 3.2 | 2.0 | U2J | 630V | 0.015uF | +/-5% | GCM43D7U2J153JX01L | Available | M.P. |
| 1812 | 4.5 x 3.2 | 2.0 | U2J | 630V | 0.018uF | +/-5% | GCM43D7U2J183JX01L | Available | M.P. |
| 1812 | 4.5 x 3.2 | 2.0 | U2J | 630V | 0.022uF | +/-5% | GCM43D7U2J223JX01L | Available | M.P. |
| 2220 | 5.7 x 5.0 | 1.5 | U2J | 630V | 0.027uF | +/-5% | GCM55Q7U2J273JX01L | Available | M.P. |
| 2220 | 5.7 x 5.0 | 2.0 | U2J | 630V | 0.033uF | +/-5% | GCM55D7U2J333JX01L | Available | M.P. |
| 2220 | 5.7 x 5.0 | 2.0 | U2J | 630V | 0.039uF | +/-5% | GCM55D7U2J393JX01L | Available | M.P. |
| 2220 | 5.7 x 5.0 | 2.0 | U2J | 630V | 0.047uF | +/-5% | GCM55D7U2J473JX01L | Available | M.P. |

* Small Size

- 1) "*" of under development P/N have not fixed yet.
- 2) Q1 = January to March, Q2 = April to June, Q3 = July to September, Q4 = October to December
- 3) This is muRata's development schedule, which may change due to progress of each development works.
- 4) Above individual specification code and packaging code were decided with muRata standard specification, and it may change due to the special requirement by customer's drawing.
- 5) Sample marked "-" in Sample column are built upon your request. Lead time will be around 4wks (might be extended depending on production schedule). Please contact Murata Sales or Product Engineer directly.

GCM series / <250 to 1000V, U2J Char.>

| Size (inch) | Dimension LxW (mm) | Dimension T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | Mass Production |
|-------------|--------------------|------------------|-----|-----|--------|---------|--------------------|-----------|-----------------|
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 1kV | 10pF | +/-5% | GCM31A7U3A100JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 1kV | 12pF | +/-5% | GCM31A7U3A120JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 1kV | 15pF | +/-5% | GCM31A7U3A150JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 1kV | 18pF | +/-5% | GCM31A7U3A180JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 1kV | 22pF | +/-5% | GCM31A7U3A220JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 1kV | 27pF | +/-5% | GCM31A7U3A270JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 1kV | 33pF | +/-5% | GCM31A7U3A330JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 1kV | 39pF | +/-5% | GCM31A7U3A390JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 1kV | 47pF | +/-5% | GCM31A7U3A470JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 1kV | 56pF | +/-5% | GCM31A7U3A560JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 1kV | 68pF | +/-5% | GCM31A7U3A680JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 1kV | 82pF | +/-5% | GCM31A7U3A820JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 1kV | 100pF | +/-5% | GCM31A7U3A101JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 1kV | 120pF | +/-5% | GCM31A7U3A121JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 1kV | 150pF | +/-5% | GCM31A7U3A151JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 1kV | 180pF | +/-5% | GCM31A7U3A181JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 1kV | 220pF | +/-5% | GCM31A7U3A221JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 1kV | 270pF | +/-5% | GCM31A7U3A271JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | U2J | 1kV | 330pF | +/-5% | GCM31A7U3A331JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.25 | U2J | 1kV | 390pF | +/-5% | GCM31B7U3A391JX01L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.25 | U2J | 1kV | 470pF | +/-5% | GCM31B7U3A471JX01L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.25 | U2J | 1kV | 560pF | +/-5% | GCM31B7U3A561JX01L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.25 | U2J | 1kV | 680pF | +/-5% | GCM31B7U3A681JX01L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.6 | U2J | 1kV | 820pF | +/-5% | GCM31C7U3A821JX03L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.6 | U2J | 1kV | 1000pF | +/-5% | GCM31C7U3A102JX03L | Available | M.P. |
| 1210 | 3.2 x 2.5 | 1.25 | U2J | 1kV | 1200pF | +/-5% | GCM32B7U3A122JX01L | Available | M.P. |
| 1210 | 3.2 x 2.5 | 1.5 | U2J | 1kV | 1500pF | +/-5% | GCM32Q7U3A152JX01L | Available | M.P. |
| 1210 | 3.2 x 2.5 | 2.0 | U2J | 1kV | 1800pF | +/-5% | GCM32D7U3A182JX01L | Available | M.P. |
| 1210 | 3.2 x 2.5 | 2.0 | U2J | 1kV | 2200pF | +/-5% | GCM32D7U3A222JX01L | Available | M.P. |
| 1812 | 4.5 x 3.2 | 1.5 | U2J | 1kV | 2700pF | +/-5% | GCM43Q7U3A272JX01L | Available | M.P. |
| 1812 | 4.5 x 3.2 | 1.5 | U2J | 1kV | 3300pF | +/-5% | GCM43Q7U3A332JX01L | Available | M.P. |
| 1812 | 4.5 x 3.2 | 2.0 | U2J | 1kV | 3900pF | +/-5% | GCM43D7U3A392JX01L | Available | M.P. |
| 1812 | 4.5 x 3.2 | 2.0 | U2J | 1kV | 4700pF | +/-5% | GCM43D7U3A472JX01L | Available | M.P. |
| 2220 | 5.7 x 5.0 | 1.5 | U2J | 1kV | 5600pF | +/-5% | GCM55Q7U3A562JX01L | Available | M.P. |
| 2220 | 5.7 x 5.0 | 1.5 | U2J | 1kV | 6800pF | +/-5% | GCM55Q7U3A682JX01L | Available | M.P. |
| 2220 | 5.7 x 5.0 | 2.0 | U2J | 1kV | 8200pF | +/-5% | GCM55D7U3A822JX01L | Available | M.P. |
| 2220 | 5.7 x 5.0 | 2.0 | U2J | 1kV | 0.01uF | +/-5% | GCM55D7U3A103JX01L | Available | M.P. |

1) "*" of under development P/N have not fixed yet.

2) Q1 = January to March, Q2 = April to June, Q3 = July to September, Q4 = October to December

3) This is muRata's development schedule, which may change due to progress of each development works.

4) Above individual specification code and packaging code were decided with muRata standard specification, and it may change due to the special requirement by customer's drawing.

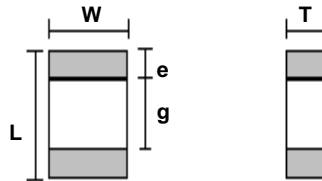
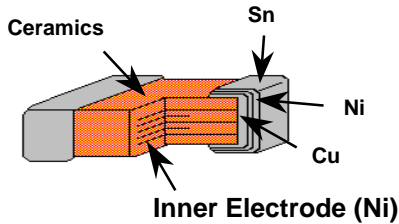
5) Sample marked "-" in Sample column are built upon your request. Lead time will be around 4wks (might be extended depending on production schedule). Please contact Murata Sales or Product Engineer directly.

GCM series / <250V, C0G Char.>

Features

1. Soldering Method / 2.0x1.25mm(0805) Size, 3.2x1.6mm(1206) Size : Flow and Reflow soldering
2. Low-loss and suitable for high frequency circuits like resonant circuit.
3. Ideal use on snubber for DC-DC converter and power supply

Chip dimension



(mm)

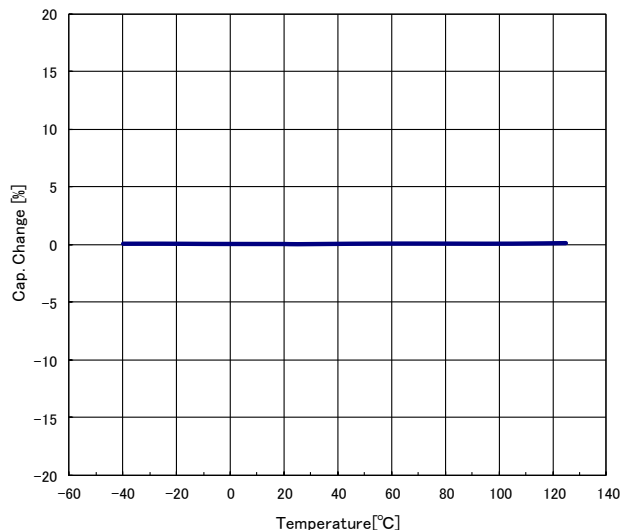
| Type | EIA size | L | W | T | e min. | g min. |
|--------|----------|-----------|------------|-------------|--------|--------|
| GCM21A | 0805 | 2.0+/-0.2 | 1.25+/-0.2 | 1.0+0/-0.3 | 0.3 | 0.7 |
| GCM21B | 0805 | 2.0+/-0.2 | 1.25+/-0.2 | 1.25+/-0.2 | 0.3 | 0.7 |
| GCM31A | 1206 | 3.2+/-0.2 | 1.6+/-0.2 | 1.0+0/-0.3 | 0.3 | 1.5 |
| GCM31B | 1206 | 3.2+/-0.2 | 1.6+/-0.2 | 1.25+0/-0.3 | 0.3 | 1.5 |
| GCM31C | 1206 | 3.2+/-0.2 | 1.6+/-0.2 | 1.6+/-0.2 | 0.3 | 1.5 |

Capacitance range

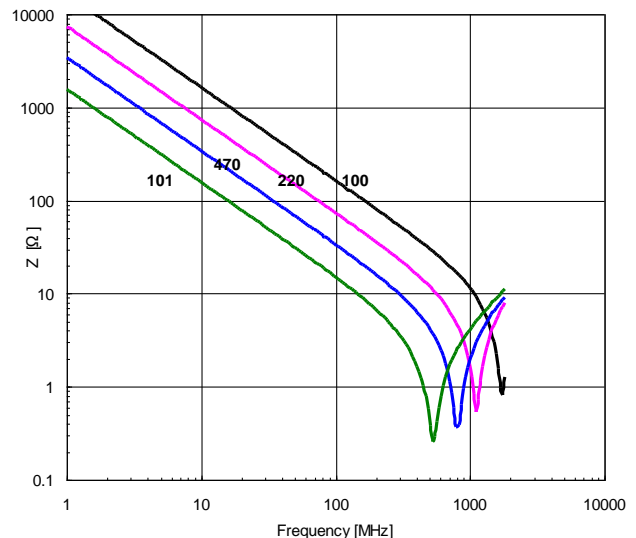
M.P. (Recommend)

| Type | TC | WV | Capacitance Range | | | | | | | | M.P. (Recommend) | | |
|-------------|-----|------|-------------------|-----|---|----|----|----|-----|------|------------------|--|---------------|
| | | | pF | | | | nF | | | | | | |
| | | | 10 | 100 | 1 | 10 | 1 | 10 | 100 | 1000 | | | |
| GCM21(0805) | C0G | 250V | | | | | | | | | | | 10 to 10000pF |
| GCM31(1206) | C0G | 250V | | | | | | | | | | | 10 to 22000pF |

Temperature - Characteristic (Temp.Char.C0G)



Impedance - Frequency (Temp. Char. C0G)



Load Reduction at High Frequency voltage condition:

Capacitor should be used within its allowable power capacity especially at High-Frequency voltage condition, such as snubber circuit of Power supply.

We are offering the software which can calculate capacitor's power consumption from Applied voltage form and output the suitable item list.

This soft ware can be download from our Web site.

(<http://www.murata.com/designlib/mmcsv/index.html>)

GCM series / <250V, C0G Char.>

Global Part Numbering

GC M 21 A 5C 2E 100 J X01 L
-1- -2- -3- -4- -5- -6- -7- -8- -9- -10-

-1:-Product ID **-2:-Series code**

| Code | Product and Series |
|------|--------------------|
| GCM | Tin Plated Layer |

-6:-Rated Voltage

| Code | Rated Voltage |
|------|---------------|
| 2E | DC 250V |

-8:-Capacitance Tolerance

| Code | Cap. Tol. | Cap |
|------|-----------|--------|
| J | +/-5% | >=10pF |

-3:-Dimension (LxW) **-4:-Dimension (T)**

| Code | Dimension (LxW) | Code | Dimension (T) |
|------|-----------------|------|---------------|
| 21 | 2.0x1.25mm | A | 1.0mm |
| | | B | 1.25mm |

-7:-Capacitance

| Code | Capacitance |
|------|-------------|
| 100 | 10pF |
| 101 | 100pF |

-9:-Individual Specification Code

-10:-Packaging

| Code | Packaging |
|------|-----------------------|
| D | φ180mm Paper Taping |
| L | φ180mm Plastic Taping |

-5:-Temperature Characteristics

| Code | TC | Temp. Range | Cap. Change |
|------|-----|-------------|-------------|
| 5C | C0G | -55 to 125C | 0+/-30ppm/C |

| Size (inch) | Dimension LxW (mm) | Dimension T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | Mass Production |
|-------------|--------------------|------------------|-----|------|-------|---------|--------------------|-----------|-----------------|
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 10pF | +/-5% | GCM21A5C2E100JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 12pF | +/-5% | GCM21A5C2E120JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 15pF | +/-5% | GCM21A5C2E150JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 18pF | +/-5% | GCM21A5C2E180JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 22pF | +/-5% | GCM21A5C2E220JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 27pF | +/-5% | GCM21A5C2E270JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 33pF | +/-5% | GCM21A5C2E330JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 39pF | +/-5% | GCM21A5C2E390JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 47pF | +/-5% | GCM21A5C2E470JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 56pF | +/-5% | GCM21A5C2E560JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 68pF | +/-5% | GCM21A5C2E680JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 82pF | +/-5% | GCM21A5C2E820JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 100pF | +/-5% | GCM21A5C2E101JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 120pF | +/-5% | GCM21A5C2E121JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 150pF | +/-5% | GCM21A5C2E151JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 180pF | +/-5% | GCM21A5C2E181JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 220pF | +/-5% | GCM21A5C2E221JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 270pF | +/-5% | GCM21A5C2E271JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 330pF | +/-5% | GCM21A5C2E331JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 390pF | +/-5% | GCM21A5C2E391JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 470pF | +/-5% | GCM21A5C2E471JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 560pF | +/-5% | GCM21A5C2E561JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 680pF | +/-5% | GCM21A5C2E681JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 820pF | +/-5% | GCM21A5C2E821JX01D | Available | M.P. |

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- 2) Q1 = January to March, Q2 = April to June, Q3 = July to September, Q4 = October to December
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- 4) Above individual specification code and packaging code were decided with muRata standard specification, and it may change due to the special requirement by customer's drawing.
- 5) Sample marked "-" in Sample column are built upon your request. Lead time will be around 4wks (might be extended depending on production schedule). Please contact Murata Sales or Product Engineer directly.

GCM series / <250V, C0G Char.>

Mar. 2019

| Size (inch) | Dimension LxW (mm) | Dimension T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | Mass Production |
|-------------|--------------------|------------------|-----|------|---------|---------|--------------------|-----------|-----------------|
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 1000pF | +/-5% | GCM21A5C2E102JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 1200pF | +/-5% | GCM21A5C2E122JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 1500pF | +/-5% | GCM21A5C2E152JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 1800pF | +/-5% | GCM21A5C2E182JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 2200pF | +/-5% | GCM21A5C2E222JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | C0G | 250V | 2700pF | +/-5% | GCM21A5C2E272JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1,25 | C0G | 250V | 3300pF | +/-5% | GCM21B5C2E332JX01L | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1,25 | C0G | 250V | 3900pF | +/-5% | GCM21B5C2E392JX01L | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1,25 | C0G | 250V | 4700pF | +/-5% | GCM21B5C2E472JX01L | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1,25 | C0G | 250V | 5600pF | +/-5% | GCM21B5C2E562JX0AL | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1,25 | C0G | 250V | 6800pF | +/-5% | GCM21B5C2E682JX0AL | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1,25 | C0G | 250V | 8200pF | +/-5% | GCM21B5C2E822JX0AL | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1,25 | C0G | 250V | 10000pF | +/-5% | GCM21B5C2E103JX0AL | Available | M.P. |

1) “**” of under development P/N have not fixed yet.

2) Q1 = January to March, Q2 = April to June, Q3 = July to September, Q4 = October to December

3) This is muRata’s development schedule, which may change due to progress of each development works.

4) Above individual specification code and packaging code were decided with muRata standard specification, and it may change due to the special requirement by customer’s drawing.

5) Sample marked “-” in Sample column are built upon your request. Lead time will be around 4wks (might be extended depending on production schedule). Please contact Murata Sales or Product Engineer directly.

GCM series / <250V, C0G Char.>

Global Part Numbering

GC M 31 A 5C 2E 100 J X01 D
-1- -2- -3- -4- -5- -6- -7- -8- -9- -10-

-1:-Product ID **-2:-Series code**

| Code | Product and Series |
|------|--------------------|
| GCM | Tin Plated Layer |

-6:-Rated Voltage

| Code | Rated Voltage |
|------|---------------|
| 2E | DC 250V |

-8:-Capacitance Tolerance

| Code | Cap. Tol. | Cap |
|------|-----------|--------|
| J | +/-5% | >=10pF |

-3:-Dimension (LxW) **-4:-Dimension (T)**

| Code | Dimension (LxW) | Code | Dimension (T) |
|------|-----------------|------|---------------|
| 31 | 3.2x1.6mm | A | 1.0mm |
| | | B | 1.25mm |
| | | C | 1.6mm |

-7:-Capacitance

| Code | Capacitance |
|------|-------------|
| 100 | 10pF |
| 101 | 100pF |

-9:-Individual Specification Code

-5:-Temperature Characteristics

| Code | TC | Temp. Range | Cap. Change |
|------|-----|-------------|-------------|
| 5C | C0G | -55 to 125C | 0+/-30ppm/C |

-10:-Packaging

| Code | Packaging |
|------|-----------------------|
| D | φ180mm Paper Taping |
| L | φ180mm Plastic Taping |

| Size (inch) | Dimension LxW (mm) | Dimension T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | Mass Production |
|-------------|--------------------|------------------|-----|------|-------|---------|--------------------|-----------|-----------------|
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 10pF | +/-5% | GCM31A5C2E100JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 12pF | +/-5% | GCM31A5C2E120JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 15pF | +/-5% | GCM31A5C2E150JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 18pF | +/-5% | GCM31A5C2E180JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 22pF | +/-5% | GCM31A5C2E220JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 27pF | +/-5% | GCM31A5C2E270JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 33pF | +/-5% | GCM31A5C2E330JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 39pF | +/-5% | GCM31A5C2E390JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 47pF | +/-5% | GCM31A5C2E470JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 56pF | +/-5% | GCM31A5C2E560JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 68pF | +/-5% | GCM31A5C2E680JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 82pF | +/-5% | GCM31A5C2E820JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 100pF | +/-5% | GCM31A5C2E101JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 120pF | +/-5% | GCM31A5C2E121JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 150pF | +/-5% | GCM31A5C2E151JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 180pF | +/-5% | GCM31A5C2E181JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 220pF | +/-5% | GCM31A5C2E221JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 270pF | +/-5% | GCM31A5C2E271JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 330pF | +/-5% | GCM31A5C2E331JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 470pF | +/-5% | GCM31A5C2E471JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 560pF | +/-5% | GCM31A5C2E561JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 680pF | +/-5% | GCM31A5C2E681JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 820pF | +/-5% | GCM31A5C2E821JX01D | Available | M.P. |

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GCM series / <250V, C0G Char.>

| Size (inch) | Dimension LxW (mm) | Dimension T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | Mass Production |
|-------------|--------------------|------------------|-----|------|---------|---------|--------------------|-----------|-----------------|
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 1000pF | +/-5% | GCM31A5C2E102JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 1200pF | +/-5% | GCM31A5C2E122JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 1500pF | +/-5% | GCM31A5C2E152JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 1800pF | +/-5% | GCM31A5C2E182JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 2200pF | +/-5% | GCM31A5C2E222JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 2700pF | +/-5% | GCM31A5C2E272JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 3300pF | +/-5% | GCM31A5C2E332JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 3900pF | +/-5% | GCM31A5C2E392JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 4700pF | +/-5% | GCM31A5C2E472JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 250V | 6800pF | +/-5% | GCM31A5C2E682JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.25 | C0G | 250V | 8200pF | +/-5% | GCM31B5C2E822JX01L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.25 | C0G | 250V | 10000pF | +/-5% | GCM31B5C2E103JX01L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.25 | C0G | 250V | 12000pF | +/-5% | GCM31B5C2E123JX01L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.6 | C0G | 250V | 15000pF | +/-5% | GCM31C5C2E153JX03L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.6 | C0G | 250V | 18000pF | +/-5% | GCM31C5C2E183JX03L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.6 | C0G | 250V | 22000pF | +/-5% | GCM31C5C2E223JX03L | Available | M.P. |

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3) This is muRata’s development schedule, which may change due to progress of each development works.

4) Above individual specification code and packaging code were decided with muRata standard specification, and it may change due to the special requirement by customer’s drawing.

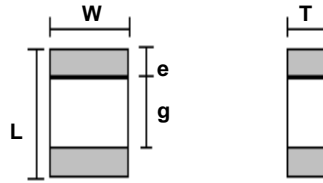
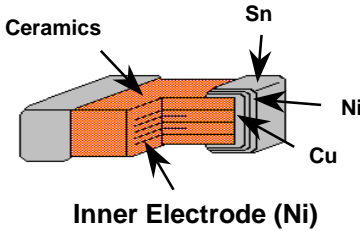
5) Sample marked “-” in Sample column are built upon your request. Lead time will be around 4wks (might be extended depending on production schedule). Please contact Murata Sales or Product Engineer directly.

GCM series / <630V, C0G Char.>

Features

1. Soldering Method / 2.0x1.25mm(0805) Size, 3.2x1.6mm(1206) Size : Flow and Reflow soldering
2. Low-loss and suitable for high frequency circuits like resonant circuit.
3. Ideal use on snubber for DC-DC converter and power supply

Chip dimension



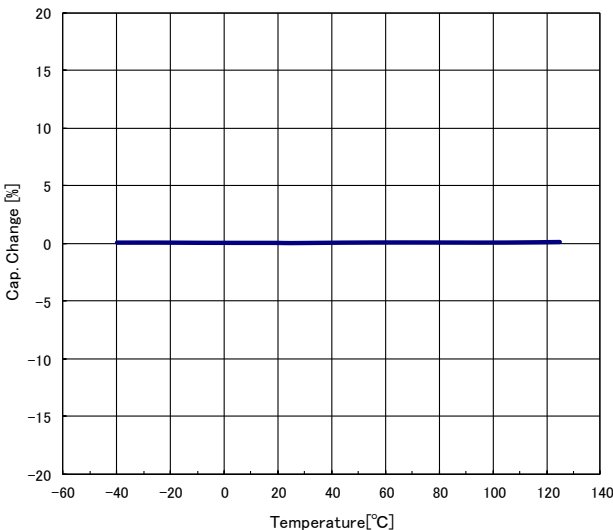
| Type | EIA size | L | W | T | e min. | g min. | (mm) |
|--------|----------|---------------|---------------|---------------|--------|--------|------|
| GCM21A | 0805 | 2.0+/-0.2 | 1.25+/-0.2 | 1.0+0/-0.3 | 0.3 | 0.7 | |
| GCM21B | 0805 | 2.0+/-0.2 | 1.25+/-0.2 | 1.25+/-0.2 | 0.3 | 0.7 | |
| GCM31A | 1206 | 3.2+/-0.2 | 1.6+/-0.2 | 1.0+0/-0.3 | 0.3 | 1.5 | |
| GCM31B | 1206 | 3.2+/-0.2 | 1.6+/-0.2 | 1.25+0/-0.3 | 0.3 | 1.5 | |
| GCM31C | 1206 | 3.2+/-0.2 | 1.6+/-0.2 | 1.6+/-0.2 | 0.3 | 1.5 | |
| GCM32D | 1210 | 3.2+/-0.2 | 2.5+/-0.2 | 2.0+0/-0.3 | 0.3 | 1.5 | |
| GCM32E | 1210 | 3.2+0.35/-0.3 | 2.5+0.35/-0.2 | 2.5+0.35/-0.2 | 0.3 | 1.5 | |

Capacitance range

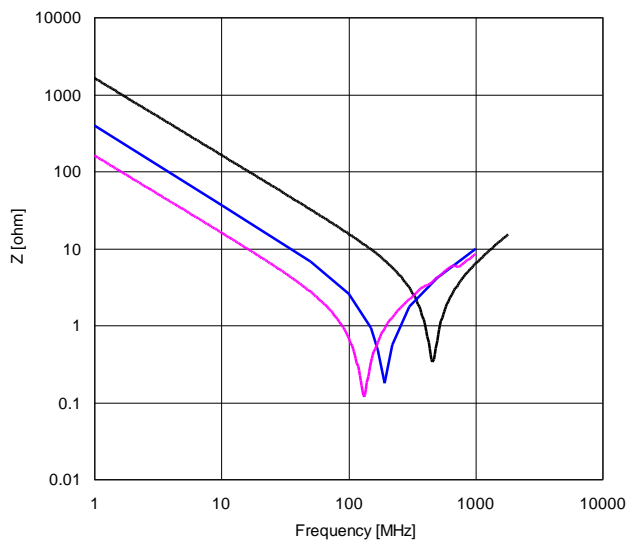
M.P. (Recommend) Under Development

| Type | TC | VV | Capacitance Range | | | | Range |
|-------------|-----|------|-------------------|-----|----|----|------------------|
| | | | pF | | nF | | |
| | | | 10 | 100 | 1 | 10 | |
| GCM21(0805) | C0G | 630V | | | | | 10 to 2200pF |
| GCM31(1206) | C0G | 630V | | | | | 10 to 10000pF |
| GCM32(1210) | C0G | 630V | | | | | 12000 to 33000pF |

Temperature - Characteristic (Temp.Char.C0G)



Impedance - Frequency (Temp. Char. C0G 630V)



Load Reduction at High Frequency voltage condition:

Capacitor should be used within its allowable power capacity especially at High-Frequency voltage condition, such as snubber circuit of Power supply.

We are offering the software which can calculate capacitor's power consumption from Applied voltage form and output the suitable item list.

This soft ware can be download from our Web site.

(<http://www.murata.com/designlib/mmcsv/index.html>)

GCM series / <630V, COG Char.>

Global Part Numbering



-1:-Product ID **-2:-Series code**

| Code | Product and Series |
|------|--------------------|
| GCM | Tin Plated Layer |

-6:-Rated Voltage

| Code | Rated Voltage |
|------|---------------|
| 2J | DC 630V |

-8:-Capacitance Tolerance

| Code | Cap. Tol. | Cap |
|------|-----------|--------|
| J | +/-5% | >=10pF |

-3:-Dimension (LxW) **-4:-Dimension (T)**

| Code | Dimension (LxW) | Code | Dimension (T) |
|------|-----------------|------|---------------|
| 21 | 2.0x1.25mm | A | 1.0mm |
| | | B | 1.25mm |

-7:-Capacitance

| Code | Capacitance |
|------|-------------|
| 100 | 10pF |
| 101 | 100pF |

-9:-Individual Specification Code

-5:-Temperature Characteristics

| Code | TC | Temp. Range | Cap. Change |
|------|-----|-------------|-------------|
| 5C | COG | -55 to 125C | 0+/-30ppm/C |

-10:-Packaging

| Code | Packaging |
|------|-----------------------|
| D | φ180mm Paper Taping |
| L | φ180mm Plastic Taping |

| Size (inch) | Dimension LxW (mm) | Dimension T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | Mass Production |
|-------------|--------------------|------------------|-----|------|--------|---------|--------------------|-----------|-----------------|
| 0805 | 2.0 x 1.25 | 1.0 | COG | 630V | 10pF | +/-5% | GCM21A5C2J100JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | COG | 630V | 12pF | +/-5% | GCM21A5C2J120JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | COG | 630V | 15pF | +/-5% | GCM21A5C2J150JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | COG | 630V | 18pF | +/-5% | GCM21A5C2J180JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | COG | 630V | 22pF | +/-5% | GCM21A5C2J220JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | COG | 630V | 27pF | +/-5% | GCM21A5C2J270JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | COG | 630V | 33pF | +/-5% | GCM21A5C2J330JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | COG | 630V | 39pF | +/-5% | GCM21A5C2J390JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | COG | 630V | 47pF | +/-5% | GCM21A5C2J470JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | COG | 630V | 56pF | +/-5% | GCM21A5C2J560JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | COG | 630V | 68pF | +/-5% | GCM21A5C2J680JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | COG | 630V | 82pF | +/-5% | GCM21A5C2J820JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | COG | 630V | 100pF | +/-5% | GCM21A5C2J101JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | COG | 630V | 120pF | +/-5% | GCM21A5C2J121JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | COG | 630V | 150pF | +/-5% | GCM21A5C2J151JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | COG | 630V | 180pF | +/-5% | GCM21A5C2J181JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | COG | 630V | 220pF | +/-5% | GCM21A5C2J221JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | COG | 630V | 270pF | +/-5% | GCM21A5C2J271JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | COG | 630V | 330pF | +/-5% | GCM21A5C2J331JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | COG | 630V | 390pF | +/-5% | GCM21A5C2J391JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | COG | 630V | 470pF | +/-5% | GCM21A5C2J471JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.0 | COG | 630V | 560pF | +/-5% | GCM21A5C2J561JX01D | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.25 | COG | 630V | 680pF | +/-5% | GCM21B5C2J681JX03L | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.25 | COG | 630V | 820pF | +/-5% | GCM21B5C2J821JX03L | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.25 | COG | 630V | 1000pF | +/-5% | GCM21B5C2J102JX03L | Available | M.P. |

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GCM series / <630V, C0G Char.>

Mar. 2019

| Size (inch) | Dimension LxW (mm) | Dimension T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | Mass Production |
|-------------|--------------------|------------------|-----|------|--------|---------|--------------------|-----------|-----------------|
| 0805 | 2.0 x 1.25 | 1.25 | C0G | 630V | 1200pF | +/-5% | GCM21B5C2J122JX03L | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.25 | C0G | 630V | 1500pF | +/-5% | GCM21B5C2J152JX0AL | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.25 | C0G | 630V | 1800pF | +/-5% | GCM21B5C2J182JX0AL | Available | M.P. |
| 0805 | 2.0 x 1.25 | 1.25 | C0G | 630V | 2200pF | +/-5% | GCM21B5C2J222JX0AL | Available | M.P. |

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GCM series / <630V, C0G Char.>

Global Part Numbering



-1:-Product ID **-2:-Series code**

| Code | Product and Series |
|------|--------------------|
| GCM | Tin Plated Layer |

-6:-Rated Voltage

| Code | Rated Voltage |
|------|---------------|
| 2J | DC 630V |

-8:-Capacitance Tolerance

| Code | Cap. Tol. | Cap |
|------|-----------|--------|
| J | +/-5% | >=10pF |

-3:-Dimension (LxW) **-4:-Dimension (T)**

| Code | Dimension (LxW) | Code | Dimension (T) |
|------|-----------------|------|---------------|
| 31 | 3.2x1.6mm | A | 1.0mm |
| | | B | 1.25mm |

-7:-Capacitance

| Code | Capacitance |
|------|-------------|
| 151 | 150pF |
| 102 | 1000pF |

-9:-Individual Specification Code

-5:-Temperature Characteristics

| Code | TC | Temp. Range | Cap. Change |
|------|-----|-------------|-------------|
| 5C | C0G | -55 to 125C | 0+/-30ppm/C |

-10:-Packaging

| Code | Packaging |
|------|-----------------------|
| D | φ180mm Paper Taping |
| L | φ180mm Plastic Taping |

| Size (inch) | Dimension LxW (mm) | Dimension T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | Mass Production |
|-------------|--------------------|------------------|-----|------|--------|---------|--------------------|-----------|-----------------|
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 630V | 10pF | +/-5% | GCM31A5C2J100JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 630V | 12pF | +/-5% | GCM31A5C2J120JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 630V | 15pF | +/-5% | GCM31A5C2J150JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 630V | 18pF | +/-5% | GCM31A5C2J180JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 630V | 22pF | +/-5% | GCM31A5C2J220JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 630V | 27pF | +/-5% | GCM31A5C2J270JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 630V | 33pF | +/-5% | GCM31A5C2J330JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 630V | 39pF | +/-5% | GCM31A5C2J390JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 630V | 47pF | +/-5% | GCM31A5C2J470JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 630V | 56pF | +/-5% | GCM31A5C2J560JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 630V | 68pF | +/-5% | GCM31A5C2J680JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 630V | 82pF | +/-5% | GCM31A5C2J820JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 630V | 100pF | +/-5% | GCM31A5C2J101JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 630V | 120pF | +/-5% | GCM31A5C2J121JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 630V | 150pF | +/-5% | GCM31A5C2J151JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 630V | 180pF | +/-5% | GCM31A5C2J181JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 630V | 220pF | +/-5% | GCM31A5C2J221JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 630V | 270pF | +/-5% | GCM31A5C2J271JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 630V | 330pF | +/-5% | GCM31A5C2J331JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 630V | 390pF | +/-5% | GCM31A5C2J391JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 630V | 470pF | +/-5% | GCM31A5C2J471JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 630V | 560pF | +/-5% | GCM31A5C2J561JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 630V | 680pF | +/-5% | GCM31A5C2J681JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 630V | 820pF | +/-5% | GCM31A5C2J821JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 630V | 1000pF | +/-5% | GCM31A5C2J102JX01D | Available | M.P. |

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GCM series / <630V, C0G Char.>

Mar. 2019

| Size (inch) | Dimension LxW (mm) | Dimension T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | Mass Production |
|-------------|--------------------|------------------|-----|------|---------|---------|--------------------|-----------|-----------------|
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 630V | 1200pF | +/-5% | GCM31A5C2J122JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 630V | 1500pF | +/-5% | GCM31A5C2J152JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 630V | 1800pF | +/-5% | GCM31A5C2J182JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.25 | C0G | 630V | 2200pF | +/-5% | GCM31B5C2J222JX01L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.25 | C0G | 630V | 2700pF | +/-5% | GCM31B5C2J272JX01L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.6 | C0G | 630V | 3300pF | +/-5% | GCM31C5C2J332JX03L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.6 | C0G | 630V | 3900pF | +/-5% | GCM31C5C2J392JX03L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.6 | C0G | 630V | 4700pF | +/-5% | GCM31C5C2J472JX03L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.6 | C0G | 630V | 5600pF | +/-5% | GCM31C5C2J562JX03L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.6 | C0G | 630V | 6800pF | +/-5% | GCM31C5C2J682JX03L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.6 | C0G | 630V | 8200pF | +/-5% | GCM31C5C2J822JX03L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.6 | C0G | 630V | 10000pF | +/-5% | GCM31C5C2J103JX03L | Available | M.P. |

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GCM series / <630V, C0G Char.>

Global Part Numbering



-1:-Product ID **-2:-Series code**

| Code | Product and Series |
|------|--------------------|
| GCM | Tin Plated Layer |

-6:-Rated Voltage

| Code | Rated Voltage |
|------|---------------|
| 2J | DC 630V |

-8:-Capacitance Tolerance

| Code | Cap. Tol. | Cap |
|------|-----------|--------|
| J | +/-5% | >=10pF |

-3:-Dimension (LxW) **-4:-Dimension (T)**

| Code | Dimension (LxW) | Code | Dimension (T) |
|------|-----------------|------|---------------|
| 32 | 3.2x2.5mm | A | 1.0mm |
| | | B | 1.25mm |

-7:-Capacitance

| Code | Capacitance |
|------|-------------|
| 123 | 12000pF |
| 333 | 33000pF |

-9:-Individual Specification Code

-5:-Temperature Characteristics

| Code | TC | Temp. Range | Cap. Change |
|------|-----|-------------|-------------|
| 5C | C0G | -55 to 125C | 0+/-30ppm/C |

-10:-Packaging

| Code | Packaging |
|------|-----------------------|
| D | φ180mm Paper Taping |
| L | φ180mm Plastic Taping |

| Size (inch) | Dimension LxW (mm) | Dimension T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | Mass Production |
|-------------|--------------------|------------------|-----|------|---------|---------|--------------------|-----------|-----------------|
| 1210 | 3.2 x 2.5 | 2.0 | C0G | 630V | 12000pF | +/-5% | GCM32D5C2J123JX**L | Available | 19_CQ2 |
| 1210 | 3.2 x 2.5 | 2.0 | C0G | 630V | 15000pF | +/-5% | GCM32D5C2J153JX**L | Available | 19_CQ2 |
| 1210 | 3.2 x 2.5 | 2.0 | C0G | 630V | 18000pF | +/-5% | GCM32D5C2J183JX**L | Available | 19_CQ2 |
| 1210 | 3.2 x 2.5 | 2.5 | C0G | 630V | 22000pF | +/-5% | GCM32E5C2J223JX**L | Available | 19_CQ2 |
| 1210 | 3.2 x 2.5 | 2.5 | C0G | 630V | 27000pF | +/-5% | GCM32E5C2J273JX**L | Available | 19_CQ2 |
| 1210 | 3.2 x 2.5 | 2.5 | C0G | 630V | 33000pF | +/-5% | GCM32E5C2J333JX**L | Available | 19_CQ2 |

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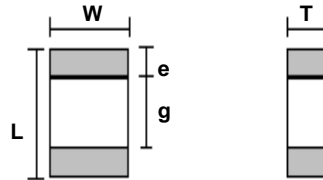
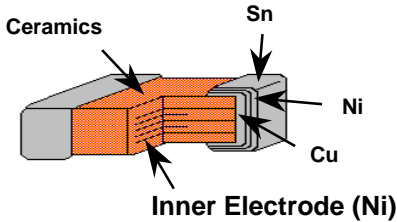
GCM series / <1000V, C0G Char.>

Mar. 2019

Features

1. Inner electrode realized with base metal (Ni) instead of Ag/Pd
2. Soldering Method / 3.2x1.6mm(1206) Size : Flow and Reflow soldering
3. Low-loss and suitable for high frequency circuits like resonant circuit.
4. Ideal use on snubber for DC-DC converter and power supply

Chip dimension



(mm)

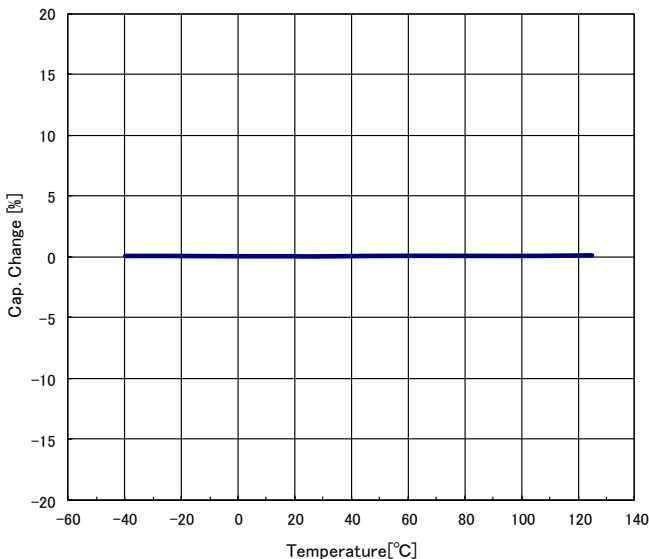
| Type | EIA size | L | W | T | e min. | g min. |
|--------|----------|-----------|-----------|-------------|--------|--------|
| GCM31A | 1206 | 3.2+/-0.2 | 1.6+/-0.2 | 1.0+0/-0.3 | 0.3 | 1.5 |
| GCM31B | 1206 | 3.2+/-0.2 | 1.6+/-0.2 | 1.25+0/-0.3 | 0.3 | 1.5 |
| GCM31C | 1206 | 3.2+/-0.2 | 1.6+/-0.2 | 1.6+/-0.2 | 0.3 | 1.5 |

Capacitance range

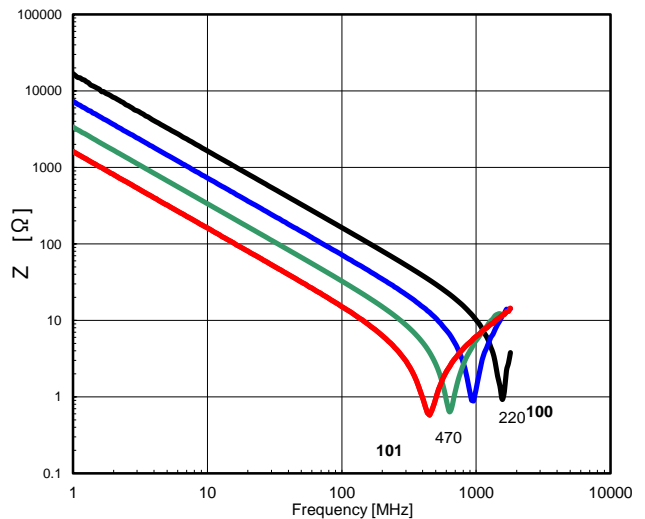
M.P. (Recommend)

| Type | TC | WV | Capacitance Range | | | | 10 to 1000pF |
|-------------|-----|-----|-------------------|-----|----|----|--------------|
| | | | pF | | nF | | |
| | | | 10 | 100 | 1 | 10 | |
| GCM31(1206) | C0G | 1kV | | | | | |

Temperature - Characteristic (Temp.Char.C0G)



Impedance - Frequency (Temp. Char. C0G 1kV)



Load Reduction at High Frequency voltage condition:

Capacitor should be used within its allowable power capacity especially at High-Frequency voltage condition, such as snubber circuit of Power supply.

We are offering the software which can calculate capacitor's power consumption from Applied voltage form and output the suitable item list.

This soft ware can be download from our Web site.

(<http://www.murata.com/designlib/mmcsv/index.html>)

GCM series / <1000V, C0G Char.>

Global Part Numbering

GC M 31 A 5C 3A 101 J W01 D
 -1- -2- -3- -4- -5- -6- -7- -8- -9- -10-

-1:-Product ID

| Code | Product and Series |
|------|--------------------|
| GCM | Tin Plated Layer |

-2:-Series code

-6:-Rated Voltage

| Code | Rated Voltage |
|------|---------------|
| 3A | DC 1kV |

-8:-Capacitance Tolerance

| Code | Cap. Tol. | Cap |
|------|-----------|--------|
| J | +/-5% | >=10pF |

-3:-Dimension (LxW)

| Code | Dimension (LxW) | Code | Dimension (T) |
|------|-----------------|------|---------------|
| 31 | 3.2x1.6mm | A | 1.0mm |
| | | B | 1.25mm |
| | | C | 1.6mm |

-4:-Dimension (T)

-7:-Capacitance

| Code | Capacitance |
|------|-------------|
| 100 | 10pF |
| 101 | 100pF |

-9:-Individual Specification Code

-10:-Packaging

| Code | Packaging |
|------|-----------------------|
| D | φ180mm Paper Taping |
| L | φ180mm Plastic Taping |

-5:-Temperature Characteristics

| Code | TC | Temp. Range | Cap. Change |
|------|-----|-------------|-------------|
| 5C | C0G | -55 to 125C | 0+/-30ppm/C |

| Size (inch) | Dimension LxW (mm) | Dimension T (mm) | TC | WV | Cap | Cap Tol | Murata Global P/N | Sample | Mass Production |
|-------------|--------------------|------------------|-----|-----|--------|---------|--------------------|-----------|-----------------|
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 1kV | 10pF | +/-5% | GCM31A5C3A100JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 1kV | 12pF | +/-5% | GCM31A5C3A120JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 1kV | 15pF | +/-5% | GCM31A5C3A150JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 1kV | 18pF | +/-5% | GCM31A5C3A180JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 1kV | 22pF | +/-5% | GCM31A5C3A220JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 1kV | 27pF | +/-5% | GCM31A5C3A270JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 1kV | 33pF | +/-5% | GCM31A5C3A330JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 1kV | 39pF | +/-5% | GCM31A5C3A390JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 1kV | 47pF | +/-5% | GCM31A5C3A470JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 1kV | 56pF | +/-5% | GCM31A5C3A560JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 1kV | 68pF | +/-5% | GCM31A5C3A680JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 1kV | 82pF | +/-5% | GCM31A5C3A820JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 1kV | 100pF | +/-5% | GCM31A5C3A101JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 1kV | 120pF | +/-5% | GCM31A5C3A121JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 1kV | 150pF | +/-5% | GCM31A5C3A151JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 1kV | 180pF | +/-5% | GCM31A5C3A181JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 1kV | 220pF | +/-5% | GCM31A5C3A221JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 1kV | 330pF | +/-5% | GCM31A5C3A331JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 1kV | 390pF | +/-5% | GCM31A5C3A391JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.0 | C0G | 1kV | 470pF | +/-5% | GCM31A5C3A471JX01D | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.25 | C0G | 1kV | 560pF | +/-5% | GCM31B5C3A561JX01L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.25 | C0G | 1kV | 680pF | +/-5% | GCM31B5C3A681JX01L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.6 | C0G | 1kV | 820pF | +/-5% | GCM31C5C3A821JX03L | Available | M.P. |
| 1206 | 3.2 x 1.6 | 1.6 | C0G | 1kV | 1000pF | +/-5% | GCM31C5C3A102JX03L | Available | M.P. |

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