

## ● Part Numbering

### Chip Monolithic Ceramic Capacitors

(Part Number) 

GC	M	18	8	R7	1H	102	K	A01	K
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

#### ① Product ID

#### ② Series

Product ID	Code	Series
GC	M	Power-train, Safety Equipment
GR	M	for Ultrasonic Sensors

#### ③ Dimension (L×W)

Code	Dimension (L×W)	EIA
15	1.0×0.5mm	0402
18	1.6×0.8mm	0603
21	2.0×1.25mm	0805
31	3.2×1.6mm	1206
32	3.2×2.5mm	1210

#### ④ Dimension (T)

Code	Dimension (T)
5	0.5mm
6	0.6mm
8	0.8mm
9	0.85mm
A	1.0mm
B	1.25mm
C	1.6mm
D	2.0mm
E	2.5mm
M	1.15mm
N	1.35mm
R	1.8mm
X	Depends on individual standards.

#### ⑤ Temperature Characteristics

Temperature Characteristic Codes			Temperature Characteristics			Operating Temperature Range
Code	Public STD Code		Reference Temperature	Temperature Range	Capacitance Change or Temperature Coefficient	
5C	C0G	EIA	25°C	25 to 125°C	0±30ppm/°C	-55 to 125°C
7U	U2J	EIA	25°C	25 to 125°C	-750±120ppm/°C	-55 to 125°C
C7	X7S	EIA	25°C	-55 to 125°C	±22%	-55 to 125°C
R7	X7R	EIA	25°C	-55 to 125°C	±15%	-55 to 125°C
9E	ZLM	*1	20°C	-25 to 20°C	-4700+1000/-2500ppm/°C	-25 to 85°C
				20 to 85°C	-4700+500/-1000ppm/°C	

\*1 Murata Temperature Characteristic Code.

#### ● Capacitance Change from each temperature

Murata Code	Capacitance Change from 25°C (%)					
	-55°C		-30°C		-10°C	
	Max.	Min.	Max.	Min.	Max.	Min.
5C	0.58	-0.24	0.40	-0.17	0.25	-0.11
7U	8.78	5.04	6.04	3.47	3.84	2.21

#### ⑥ Rated Voltage

Code	Rated Voltage
1A	DC10V
1C	DC16V
1E	DC25V
1H	DC50V
2A	DC100V
2E	DC250V
2J	DC630V


#### ⑦ Capacitance


Expressed by three-digit alphanumerics. The unit is pico-farad (pF). The first and second figures are significant digits, and the third figure expresses the number of zeros which follow the two numbers.

If there is a decimal point, it is expressed by the capital letter "R". In this case, all figures are significant digits.

Ex.)

Code	Capacitance
R50	0.5pF
1R0	1.0pF
100	10pF
103	10000pF

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#### ⑧ Capacitance Tolerance

Code	Capacitance Tolerance	TC	Series	Capacitance Step	
<b>C</b>	±0.25pF	C0G	<b>GCM</b>	≤5pF	E12+1pF *
<b>D</b>	±0.5pF	C0G	<b>GCM</b>	6.0 to 9.0pF	E12+1pF *
<b>J</b>	±5%	C0G	<b>GCM</b>	≥10pF	E12 Series
		U2J	<b>GCM</b>	E6 Series	
<b>K</b>	±10%	X7S, X7R, ZLM	<b>GCM, GRM</b> (only ZLM)	E6 Series	
<b>M</b>	±20%	X7S, X7R	<b>GCM</b>	E6 Series	

\* E24 series is also available.

#### ⑨ Individual Specification Code

Expressed by three figures.

#### ⑩ Packaging

Code	Packaging
<b>L</b>	ø180mm Embossed Taping
<b>D</b>	ø180mm Paper Taping
<b>K</b>	ø330mm Embossed Taping
<b>J</b>	ø330mm Paper Taping
<b>B</b>	Bulk
<b>C</b>	Bulk Case