## Part Numbering

## **Chip Monolithic Ceramic Capacitors**

(Part Number)

GC M 18 8 R7 1H 102 K A37 D

#### 1 Product ID

#### 2 Series

Product ID	Code	Series		
GC -	J	Soft Termination Type Power-train, Safety Equipme		
	М	Power-train, Safety Equipment		
	3	Large Capacitance and High Allowable Ripple Current Power-train, Safety Equipment		

#### 3Dimension (LXW)

Code	Dimension (LXW)	EIA
03	0.6×0.3mm	0201
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
43	4.5×3.2mm	1812
55	5.7×5.0mm	2220

#### 4Dimension (T)

Code	Dimension (T)
3	0.3mm
5	0.5mm
6	0.6mm
8	0.8mm
9	0.85mm
Α	1.0mm
В	1.25mm
С	1.6mm
D	2.0mm
E	2.5mm
М	1.15mm
N	1.35mm
Q	1.5mm
R	1.8mm
Х	Depends on individual standards.

### **5**Temperature Characteristics

Temperature Characteristic Codes			Temperature Characteristics			Operating	
Code	Public STD Code		Reference Temperature	Temperature Range	Capacitance Change or Temperature Coefficient	Temperature Range	
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	
<b>C7</b>	X7S	EIA	25°C	–55 to 125°C	±22%	–55 to 125°C	
D7	X7T	EIA	25°C	–55 to 125°C	+22, -33%	–55 to 125°C	
R7	X7R	EIA	25°C	–55 to 125°C	±15%	–55 to 125°C	

## ● Capacitance Change from each temperature

	Capacitance Change from 25°C (%)					
Murata Code	−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
0J	DC6.3V
1A	DC10V
1C	DC16V
1E	DC25V
YA	DC35V
1H	DC50V
2A	DC100V
2E	DC250V
2W	DC450V
2J	DC630V
3A	DC1kV

### 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 that follow the two

If there is a decimal point, it is expressed by the capital letter  ${}^{\tt m}{\bf R}.{}^{\tt m}$ In this case, all figures are significant digits.

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

Continued on the following page.



## **8**Capacitance Tolerance

Code	Capacitance Tolerance	TC	Series	Capacitance Step	
С	±0.25pF	COG	GCM	≦5.0pF	E12, 1pF Step *
D	±0.5pF	COG	GCM	6.0 to 9.0pF	E12, 1pF Step *
	150/	COG	GCM	≥10pF	E12 Step
J	±5%	U2J	GCM	E1	2 Step
K	±10%	X7S, X7T, X7R	GCJ/GCM/GC3	E6 Step	
M	±20%	X7S, X7R	GCM	E6 Step	

<sup>\*</sup> E24 series is also available.

## 9Individual Specification Code

Expressed by three figures.

# Package

Code	Package
L	ø180mm Embossed Taping
D	ø180mm Paper Taping
K	ø330mm Embossed Taping
J	ø330mm Paper Taping
В	Bulk
С	Bulk Case