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For any questions, you can email us directly:

sales@integrated-circuit.com

● Part Numbering

Chip Monolithic Ceramic Capacitors

(Part Number) **GC M 18 8 R7 1H 102 K A37 D**
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

① Product ID

② Series

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

④ Dimension (T)

Code	Dimension (T)
3	0.3mm
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
Q	1.5mm
R	1.8mm
X	Depends on individual standards.

③ Dimension (L×W)

Code	Dimension (L×W)	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

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
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

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
0J	DC6.3V
1A	DC10V
1C	DC16V
1E	DC25V
YA	DC35V
1H	DC50V
2A	DC100V
2E	DC250V
2W	DC450V
2J	DC630V
3A	DC1kV


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 that 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	1000pF

 Continued from the preceding page.

9 Capacitance Tolerance

Code	Capacitance Tolerance	TC	Series	Capacitance Step	
C	±0.25pF	C0G	GCM	≤5.0pF	E12, 1pF Step *
D	±0.5pF	C0G	GCM	6.0 to 9.0pF	E12, 1pF Step *
J	±5%	C0G	GCM	≥10pF	E12 Step
		U2J	GCM	E12 Step	
K	±10%	X7S, X7T, X7R	GCJ/GCM/GC3	E6 Step	
M	±20%	X7S, X7R	GCM	E6 Step	

* E24 series is also available.

9 Individual Specification Code

Expressed by three figures.

10 Package

Code	Package
L	ø180mm Embossed Taping
D	ø180mm Paper Taping
K	ø330mm Embossed Taping
J	ø330mm Paper Taping
B	Bulk
C	Bulk Case