Part Numbering

Chip Monolithic Ceramic Capacitors for Automotive

(Part Number)

GC	M	18	8	R7	1H	102	K	A37	D
❶	❷	❸	❹	❺	❻	❼	❽	❾	❿

❶Product ID

❷Series

Product ID	Code	Series
GC	3	High effective capacitance & High allowable ripple current
	B	Limited to conductive glue mounting (Ni/Pd plating structure)
	D	Specially designed product to reduce shorts
	E	Specially designed product to reduce shorts & resin electrode product
	G	Limited to conductive glue mounting
	J	Soft termination type
	M	For automotive
	Q	High Q type for High frequency
GG	D	Water repellent type and specially designed product to reduce shorts
	M	Water repellent type for automotive
GR	T	Meet AEC-Q200 for infotainment
KC	3	Metal terminal type/High effective capacitance & High allowable ripple current
	A	Metel terminal type/ Safety standard certified product
	M	Metal terminal type

❸Chip Dimension (L x W)

Code	Dimension (L x W)	EIA
03	0.6 x 0.3mm	0201
15	1.0 x 0.5mm	0402
18	1.6 x 0.8mm	0603
21	2.0 x 1.25mm	0805
31	3.2 x 1.6mm	1206
32	3.2 x 2.5mm	1210
43	4.5 x 3.2mm	1812
55	5.7 x 5.0mm	2220

❹Height Dimension (T) (Except **KC**□)

Code	Dimension (T)
2	0.2mm
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.

❹Height Dimension (T) (**KC**□ Only)

Code	Dimension (T)
L	2.8mm
Q	3.7mm
T	4.8mm
W	6.4mm

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❺Temperature Characteristics

Temperature Characteristic Codes			Temperature Characteristics			Operating Temperature Range	Capacitance Change Each Temperature (%)					
							−55°C		*4		−10°C	
Code	Public STD Code		Reference Temperature	Temperature Range	Capacitance Change or Temperature Coefficient		Max.	Min.	Max.	Min.	Max.	Min.
0C	CHA	*2	20°C	20 to 150°C	0±60ppm/°C	−55 to 150°C	0.82	−0.45	0.49	−0.27	0.33	−0.18
1C	CG	JIS	20°C	20 to 125°C	0±30ppm/°C	−55 to 125°C	0.54	−0.23	0.33	−0.14	0.22	−0.09
2C	CH	JIS	20°C	20 to 125°C	0±60ppm/°C	−55 to 125°C	0.82	−0.45	0.49	−0.27	0.33	−0.18
3C	CJ	JIS	20°C	20 to 125°C	0±120ppm/°C	−55 to 125°C	1.37	−0.9	0.82	−0.54	0.55	−0.36
4C	CK	JIS	20°C	20 to 125°C	0±250ppm/°C	−55 to 125°C	2.56	−1.88	1.54	−1.13	1.02	−0.75
5C	C0G	EIA	25°C	25 to 125°C	0±30ppm/°C	−55 to 125°C	0.58	−0.24	0.4	−0.17	0.25	−0.11
5G	X8G	*2	25°C	25 to 150°C	0±30ppm/°C	−55 to 150°C	0.58	−0.24	0.4	−0.17	0.25	−0.11
7U	U2J	EIA	25°C	25 to 125°C *3	−750±120ppm/°C	−55 to 125°C	8.78	5.04	6.04	3.47	3.84	2.21
9E	ZLM	*2	20°C	−55 to −40°C	−4700+1000/−2500ppm/°C	−55 to 125°C	-	-	-	-	-	-
				−40 to 20°C	−5350±750ppm/°C		-	-	-	-	-	-
				20 to 85°C	−4700±500ppm/°C		-	-	-	-	-	-
				85 to 125°C	−4700+2000/−1000ppm/°C		-	-	-	-	-	-
C7	X7S	EIA	25°C	−55 to 125°C	±22%	−55 to 125°C	-	-	-	-	-	-
C8	X6S	EIA	25°C	−55 to 105°C	±22%	−55 to 105°C	-	-	-	-	-	-
D7	X7T	EIA	25°C	−55 to 125°C	+22%, −33%	−55 to 125°C	-	-	-	-	-	-
L8	X8L	*2	25°C	−55 to 150°C	+15%, −40%	−55 to 150°C	-	-	-	-	-	-
M8	X8M	*2	25°C	−55 to 150°C	+15%, −50%	−55 to 150°C	-	-	-	-	-	-
M9	X9M	*2	25°C	−55 to 200°C	+15%, −50%	−55 to 200°C	-	-	-	-	-	-
R1	R *1	JIS	20°C	−55 to 125°C	±15%	−55 to 125°C	-	-	-	-	-	-
R6	X5R	EIA	25°C	−55 to 85°C	±15%	−55 to 85°C	-	-	-	-	-	-
R7	X7R	EIA	25°C	−55 to 125°C	±15%	−55 to 125°C	-	-	-	-	-	-
R9	X8R	EIA	25°C	−55 to 150°C	±15%	−55 to 150°C	-	-	-	-	-	-

*1 Capacitance change is specified with 50% rated voltage applied.
*2 Murata Temperature Characteristic Code.
*3 Rated Voltage 100Vdc max: 25 to 85°C
*4 −25°C (Reference Temperature 20°C) / −30°C (Reference Temperature 25°C)

❻Rated Voltage

Code		Rated Voltage
Standard Product	Voltage Derated Product	
0E	-	DC2.5V
0G	-	DC4V
0J	EC	DC6.3V
1A	ED	DC10V
1C	EE	DC16V
1E	EF	DC25V
YA	EG	DC35V
1H	EH	DC50V
1J	-	DC63V
1K	-	DC80V
2A	EL	DC100V
2E	-	DC250V
2W	LP	DC450V
2J	LQ	DC630V
3A	-	DC1kV
MF	-	X1/Y2: AC250V (Safety Standard Certified Type MF)

❼Capacitance

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.
If any letter, other than "**R**" is included, this indicates the specific part number is a non-standard part.

Ex.)

Code	Capacitance
R50	0.50pF
1R0	1.0pF
100	10pF
103	10000pF

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❶	❷	❸	❹	❺	❻	❼	❽	❾	❿

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❽Capacitance Tolerance

Code	Capacitance Tolerance
B	±0.1pF
C	±0.25pF
D	±0.5pF (Less than 10pF)
	±0.5% (10pF and over)
F	±1%
G	±2%
J	±5%
K	±10%
M	±20%
R	Depends on individual standards.
W	±0.05pF

❾Individual Specification Code

Expressed by three figures.

❿Package

Code	Package
L	ø180mm Embossed Taping
D/W	ø180mm Paper Taping
K	ø330mm Embossed Taping
J	ø330mm Paper Taping

Please contact us if you find any part number not provided in this table.

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