

MONOLITHIC CERAMIC CAPACITORS

	Series	Dimensions (mm)	Capacitance Range (F)										
			0.1p	1p	10p	100p	1000p	0.01 μ	0.1 μ	1 μ	10 μ	100 μ	
For General Electronics Equipment	GRM36	1.0×0.5	0.5pF						0.047 μF				
	GRM39	1.6×0.8	0.5pF						0.22 μF				
	GRM40	2.0×1.25	0.5pF						1 μF				
	GRM42-6	3.2×1.6						2700pF					
	GRM42-2	3.2×2.5						6800pF	0.68 μF				
	GRM43-2	4.5×3.2						8200pF	1 μF				
	GRM44-1	5.7×5.0						0.012 μF	2.2 μF				
Low Distortion Series	GRM420	1.6×0.8						1000pF	0.01 μF				
	GRM425	2.0×1.25						1000pF	0.033 μF				
	GRM430	3.2×1.6						0.018 μF	0.1 μF				
500V Series	GRM42-6	3.2×1.6	1pF							2700pF			
	GRM42-2	3.2×2.5						130pF	6800pF				
	GRM43-2	4.5×3.2						220pF	0.015 μF				
	GRM44-1	5.7×5.0						510pF	0.039 μF				
High-Voltage Type	GHM1030	3.2×1.6						100pF	470pF				
	GHM1040	4.5×3.2	10pF							220pF			
High Frequency Series	GRH706	1.25×1.0	0.5pF						43pF				
	GRH708	2.0×1.25	0.5pF						160pF				
	GRH710	3.2×2.5	0.5pF						1000pF				
	GRH110	1.4×1.4	0.5pF						100pF				
	GRH111	2.8×2.8	0.5pF						1000pF				

Part Numbering (Please specify the part number when ordering)

(Ex.) **GRM40** **C0G** **151** **J** **50** **Omitted** **PT**
 Type ① ② ③ ④ Murata's control no. ⑤

Type: Please refer to the capacitance table.

① Temperature Characteristic

- Temperature compensating type

Code	C0G	P2H	R2H	S2H	T2H	U2J	SL	
Temp. range	-55 to 125°C						-30 to 85°C	
Temp. coeff. (ppm/°C)	0±30	-150±60	-220±60	-330±60	-470±60	-750±120	+350 to -1000	

- High dielectric constant

Code	X7R	Z5U	Y5V	B	R
Temp. range	-55 to 125°C	10 to 85°C	-30 to 85°C	-25 to 85°C	
Cap. change (%)	±15	+22 -56	+22 -82	±10	±15

- High-Voltage

Code	SL	R
Temp. range	-25 to 85°C	-55 to 125°C
Cap. change	+350 to -1000 ppm/°C	±15%

② Capacitance

Ex.

Code	Capacitance (pF)	Code	Capacitance (pF)
0R5	0.5	100	10
R75	0.75	101	100
010	1	103	10000

③ Capacitance Tolerance

- Temperature compensating type

Code	C	D	J
Cap. tolerance	±0.25pF	±0.5pF	±5%

- High dielectric constant

Code	K	M	Z
Cap. tolerance	±10%	±20%	+80% -20%

④ Rated Voltage

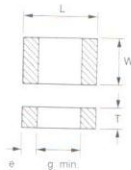
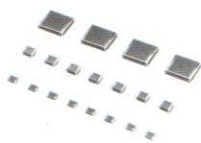
Code	Rated voltage
16	16VDC
25	25VDC
50	50VDC
630	630VDC
2K	2kVDC
3K	3.15kVDC

⑤ Packaging Code (Only for chip type)

Code	Packaging
PB	Bulk packaging in a bag
PT	Tape carrier packaging
PC	Bulk case packaging

MONOLITHIC CERAMIC CAPACITORS

Nickel Barrired Termination Type GRM Series for General Electronic Equipment



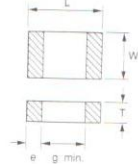
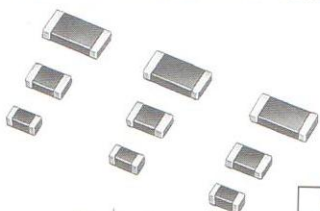
Type	e	g
GRM36	0.15-0.3	0.4
GRM39	0.2-0.5	0.5
GRM40	0.2-0.7	0.7
GRM42-6	0.3-0.8	1.5
GRM42-2	0.3 min.	1.0
GRM43-2	0.3 min.	2.0
GRM44-1	0.3 min.	2.0

(in mm)

Part Number	Temp. Char. ①/Cap. Value (pF) ②							Dimensions (mm)		
	C0G	P2H	R2H	S2H	T2H	U2J	SL	L	W	T
	GRM36	0.5-160	—	—	—	—	—	43-200	1.0±0.05	0.5±0.05
GRM39	0.5-510	3-160	3-160	3-220	3-390	3-750	62-750	1.6±0.1	0.8±0.1	0.8±0.1
GRM40	0.5-560	3-160	3-180	3-240	3-130	3-1300	330-1300	2.0±0.15	1.25±0.15	0.7 ⁺⁰ _{-0.2}
	620-1500	180-360	200-470	270-470	150-390	1500-2200	1500-2200			1.0 ⁺⁰ _{-0.2}
GRM42-6	1600-2400	390-620	510-750	510-820	430-1800	2400-3300	2400-3300	3.2±0.15	1.6±0.15	1.25±0.15
	2700-3600	680-910	820	910-1100	—	3600-6200	3600-6200			1.0 ⁺⁰ _{-0.2}
GRM42-2	3900-6200	1000-1600	910-1600	1200-2000	2000-4300	6800-8200	6800-8200	3.2±0.3	2.5±0.2	1.25±0.2
GRM43-2	6800-7500	—	—	—	—	—	—			1.5 ⁺⁰ _{-0.3}
GRM44-1	8200-11000	—	—	—	—	—	9100-12000	4.5±0.4	3.2±0.3	2.0 max.
GRM44-1	12000-36000	—	—	—	—	—	13000-16000	5.7±0.4	5.0±0.4	2.0 max.
	—	—	—	—	—	—	18000-39000			

Part Number	Temp. Char. ①/Cap. Value (pF) ②/Rated Voltage ④							Dimensions (mm)		
	X7R		Z5U		Y5V		L	W	T	
	50V	25V	16V	50V	50V	25V				16V
GRM36	220-3900	4700-6800	8200-10000	—	2200-15000	22000	33000-47000	1.0±0.05	0.5±0.05	0.5±0.05
GRM39	220-18000	22000-27000	33000-47000	1500-10000	10000-47000	68000-100000	150000-220000	1.6±0.1	0.8±0.1	0.8±0.1
GRM40	330-22000	27000-33000	39000-56000	4700-22000	10000-68000	100000-150000	—	2.0±0.15	1.25±0.15	0.7 ⁺⁰ _{-0.2}
	27000-39000	39000-68000	68000-100000	33000	100000-150000	220000	—			1.0 ⁺⁰ _{-0.2}
GRM42-6	47000-68000	82000-120000	120000-220000	47000-100000	220000	330000	470000-1000000	3.2±0.15	1.6±0.15	1.25±0.15
	82000-100000	—	—	—	330000	—	—			1.0 ⁺⁰ _{-0.2}
GRM42-2	120000-150000	180000-270000	330000	150000-220000	470000	680000-1000000	1500000-2200000	3.2±0.3	2.5±0.2	1.25±0.2
	—	—	—	330000	—	—	—			1.5 ⁺⁰ _{-0.3}
GRM43-2	180000-220000	330000	—	—	680000	—	—	4.5±0.4	3.2±0.3	2.0 max.
GRM44-1	270000-470000	—	—	470000-1000000	1000000	—	—			
GRM44-1	560000-1000000	—	—	1500000	1500000-2200000	—	—	5.7±0.4	5.0±0.4	2.0 max.

Low Distortion GRM400 Series



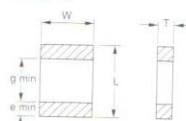
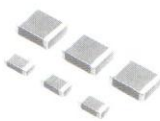
Type	e	g
GRM420	0.2-0.5	0.5
GRM425	0.2-0.7	0.7
GRM430	0.3-0.8	1.5

- Features
- Lower dissipation factor and lower distortion.
- Shock noise due to piezoelectricity reduced.

Part Number	Temp. Char. ①/Cap. Value (pF) ②		Dimensions (mm)		
	B	R	L	W	T
	50V	16V			
GRM420	1000-3300	3900-10000	1.6±0.1	0.8±0.1	0.8±0.1
GRM425	1000-10000	12000-15000	2.0±0.1	1.25±0.1	0.7 ⁺⁰ _{-0.2}
	12000-15000	18000-33000			1.0 ⁺⁰ _{-0.2}
GRM430	18000	—	3.2±0.15	1.6±0.15	0.7 ⁺⁰ _{-0.2}
	22000-39000	47000-68000			1.0 ⁺⁰ _{-0.2}
—	—	82000-100000	—	—	1.25±0.2

High-Voltage Type GHM1000 Series

NEW



Part Number	Temp. Char. ①/Cap. Value (pF) ②/Rated Voltage ④			Dimensions (mm)		
	R	SL	3.15kV	L	W	T
	630V	2kV	—			
GHM1030	100-330	—	—	3.2±0.15	1.6±0.15	1.0 ⁺⁰ _{-0.2}
	470	—	—			1.25±0.2
GHM1040	—	—	10-27	4.5±0.3	3.2±0.3	1.5 ⁺⁰ _{-0.3}
	—	120-220	33-56			2.0 ⁺⁰ _{-0.3}
	—	—	68-100			2.5 ⁺⁰ _{-0.3}

Type	e	g
GHM1030	0.3	1.5
GHM1040	0.3	2.9

(in mm)

Please see page 55 for high-frequency monolithic ceramic capacitors and page 56 for microchip capacitors.

EMI SUPPRESSION FILTERS (EMIFL)
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