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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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muRata
INNOVATOR IN ELECTRONICS

Chip Multilayer Ceramic Capacitors for General

2018

Contents

Product specifications are as of September 2017.

Please check the MURATA website (**https://www.murata.com/**)
if you cannot find a part number in this catalog.

EU RoHS Compliant

- All the products in this catalog comply with EU RoHS.
- EU RoHS is "the European Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment."
- For more details, please refer to our web page, "Murata's Approach for EU RoHS" (https://www.murata.com/en-eu/support/compliance/rohs).

Qualified Standards

- The products listed here have been produced by ISO 9001 certified factory.

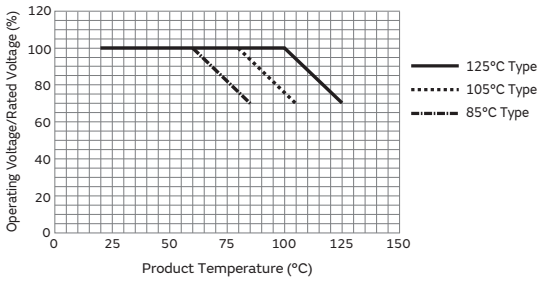
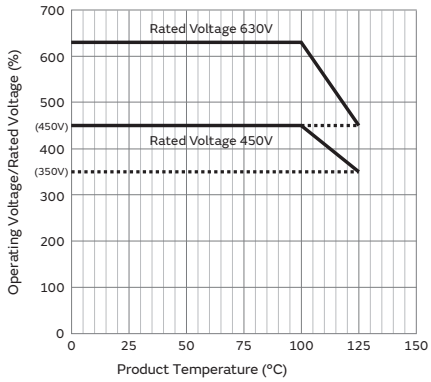
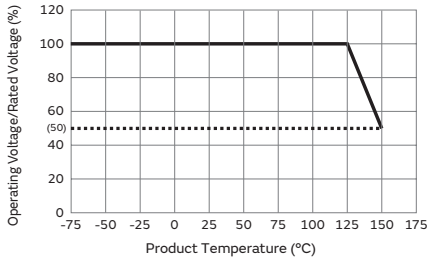
<Plant>

- Fukui Murata Mfg. Co., Ltd.
- Izumo Murata Mfg. Co., Ltd.
- Murata Electronics Singapore (Pte.) Ltd.
- Wuxi Murata Electronics Co., Ltd.
- PHILIPPINE MANUFACTURING CO. OF MURATA, INC.

Explanation of Symbols in This Catalog

WEB	Links are provided to the latest information from the PDF version of the catalog, which is available on the web.

General	For applications that do not require the particular reliability such as the general equipment
Info-tainment	Infotainment for Automotive The product for entertainment equipment like car navigations, car audios, and body control equipment like wipers, power windows.
Power-train	Powertrain/Safety for Automotive Product used for applications (running, turning, stopping and safety devices) which particularly concern human life, such as in devices for automobiles.
Medical Device	Medical-grade products for Implanted Medical Devices These products are intended for use in implanted medical devices such as cardiac pacemakers, cochlear implants, insulin pumps and gastric electrostimulators. They are suitable for use in non-critical circuits. *1 *1 Non-critical circuits This term refers to circuits in implanted medical devices that are not directly linked to life support, i.e. circuits that will not directly endanger the life of the patient should the functionality of the device be reduced or halted by failure of the circuit.
AEC-Q200	AEC-Q200 compliant product
Safety standard	Safety Standard Certified Product Products that acquired safety standard certification IEC60384-14 and products based on the Electrical Appliance and Material Safety Law of Japan.
Japanese Safety Law	Based on the Electrical Appliance and Material Safety Law of Japan Products that are based on the electrical appliance and material safety law of Japan.
High Q	Low dissipation for high frequency By devising ceramic materials and electrode materials, low dissipation is achieved in frequency bands of VHF, UHF and microwave or beyond.
Low ESL	Low inductance This capacitor is designed so that the parasitic inductance component (ESL) that the capacitor has on the high frequency side becomes lower.
Fail safe	Fail safe product This capacitor is designed to prevent failures as much as possible by short mode.
Deflecting crack	Product resistant to deflection cracking This capacitor is designed to prevent failures as much as possible by short mode caused by cracking when there is board deflection.
Soldering crack	Product with solder cracking suppression "This capacitor is configured with metal terminals and leads connected to the chip. The metal terminals and leads relieve the stress from expansion and contraction of the solder, to suppress solder cracking."
Anti-noise	Product suitable for acoustic noise reduction and low distortion This product suppresses acoustic noise, which occurs when a ceramic capacitor is used, by devising the materials and configuration.
Effective Cap	No DC bias characteristics Polymer capacitor is no capacitance change with DC bias due to aluminum oxidized film for dielectric.
EMI FIL®	Low-inductance product suitable for noise suppression. This product has extremely low ESL and is suitable for suppression of noise, including high frequencies. This product can also be used as a low-ESL, high-performance bypass capacitor.
Bonding	Product for bonding Since gold is used for the external electrodes, the capacitor can be mounted by die bonding/wire bonding.

D1 Derating 1	Derating 1 This product is suitable when a voltage continuously applied to a capacitor in an operating circuit, is used below (derated) the rated voltage of the capacitor. This model guarantees the test conditions in the endurance test, at a rated voltage x 100% at the maximum operating temperature. A reliability assurance level equivalent to a common product can be secured, by using this product within the voltage and temperature derated conditions recommended in the figure below. Recommended Conditions of the Derating Operating Voltage and Temperature 
D2 Derating 2	Derating 2 When the product temperature exceeds 105°C, please use this product within the voltage and temperature derated conditions in the figure below. 
D3 Derating 3	Derating 3 Please apply the derating curve according to the operating temperature. Please refer to detailed specifications sheet for details.
D4 Derating 4	Derating 4 When the product temperature exceeds 125°C, please use this product within the voltage and temperature derated conditions in the figure below. 
D5 Derating 5	Derating 5 Please apply the rated voltage derating over 150 °C. Please refer to detailed specifications sheet for details.

Selection Guide for Capacitors

For general

General — SMD — Solder mounting — Chip type

GRM			p40
GRM		For LCD backlight inverter circuit only	WEB
GR3	Anti-noise	High effective capacitance & high ripple current	p109
GRJ	Deflecting crack	Soft termination	p120
GXM	Water Repellent		WEB
GR4		For information devices only	p125
GR7		For camera flash circuit only	p130
GJM	High Q		p135
GQM	High Q	High power	p164
GA2	Japanese Safety Law	Based on the Electrical Appliance and Material Safety Law of Japan	p184
GA3	Safety standard		p189
LLL	Low ESL	LW reversed	p219
LLA	Low ESL	8 terminals	p222
LLM	Low ESL	10 terminals	p228
LLR	Low ESL	LW reversed controlled ESR	p232
NFM	Low ESL	3 terminals	p236
GJ4	Anti-noise	Low distortion	WEB
GJ8	Anti-noise	Low acoustic noise	WEB

On interposer board

ZRA	Anti-noise		WEB
ZRB	Anti-noise		WEB

Metal terminal type

KRM	Anti-noise, Deflecting crack, Soldering crack		p239
KR3	Anti-noise, Deflecting crack, Soldering crack	High effective capacitance & high ripple current	p243

Resin molding SMD type

DK1	Safety standard		WEB

Wire bonding mounting — Bonding — Chip type

GMA		Microchip	p249
GMD			p256

Lead type — Solder mounting

RDE	Anti-noise, Deflecting crack, Soldering crack		WEB
DEH		High temperature low loss	WEB
DEA		High temperature Class 1	WEB
DEB		Class 2	WEB
DEC			WEB
DEF		For LCD backlight inverter circuit only	WEB
DHR	Ultrahigh-voltage, Deflecting crack, Soldering crack		WEB
DEJ	Japanese Safety Law	Based on the Electrical Appliance and Material Safety Law of Japan	WEB
DE1	Safety standard	X1/Y1 Class certified product	WEB
DE2	Safety standard	X1/Y2 Class certified product	WEB

Screw termination mounting

DHS	Ultrahigh-voltage		WEB
DHK	Ultrahigh-voltage	High voltage AC rated	WEB

Infotainment for automotive

Infotainment, AEC-Q200 — SMD — Solder mounting — Chip type

GRT			WEB

Powertrain/Safety for automotive

Powertrain, AEC-Q200 — SMD — Solder mounting — Chip type

GCM			WEB
GC3	Anti-noise	High effective capacitance & high ripple current	WEB
GCJ	Fail safe, Deflecting crack	Soft termination	WEB
GGM	Water Repellent		WEB
GCQ	High Q		WEB
GCD	Fail safe, Deflecting crack	MLSC design	WEB
GCE	Fail safe, Deflecting crack	Soft termination MLSC design	WEB
GGD	Fail safe, Deflecting crack, Water Repellent	MLSC design	WEB
NFM	Low ESL	3 terminals	WEB

Metal terminal type

KCM	Anti-noise, Deflecting crack, Soldering crack		WEB
KC3	Anti-noise, Deflecting crack, Soldering crack	High effective capacitance & high ripple current	WEB
KCA	Safety standard, Anti-noise, Deflecting crack, Soldering crack		WEB

Limited to Conductive Glue Mounting — Chip type

GCB	Deflecting crack, Soldering crack	Ni plating + Pd plating termination conductive glue mounting	WEB
GCG	Deflecting crack, Soldering crack	AgPd termination conductive glue mounting	WEB

Lead type — Solder mounting

RCE	Anti-noise, Deflecting crack, Soldering crack		WEB
RHE	Anti-noise, Deflecting crack, Soldering crack	150°C operation leaded	WEB
RHS	Anti-noise, Deflecting crack, Soldering crack	200°C operation leaded	WEB
DE6	Safety standard		WEB

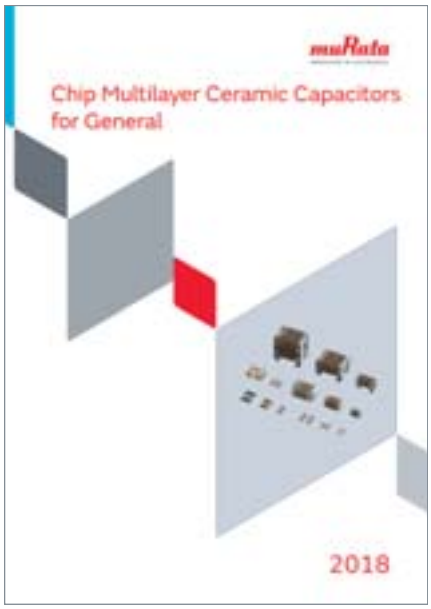
Medical-grade products for implanted medical devices

Medical Device — SMD — Solder mounting — Chip type

GCH			WEB

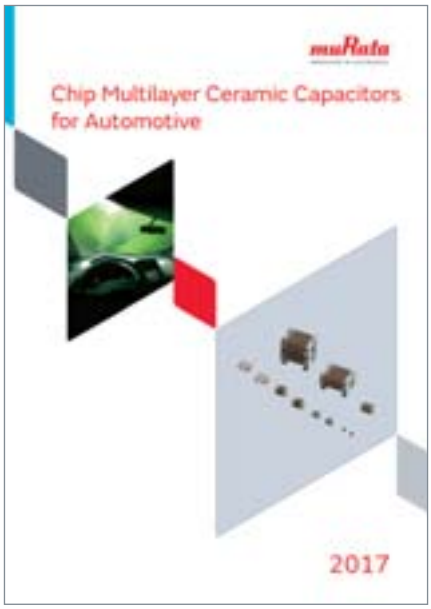
Catalog Information

Catalog relates to a multilayer ceramic capacitor is below.



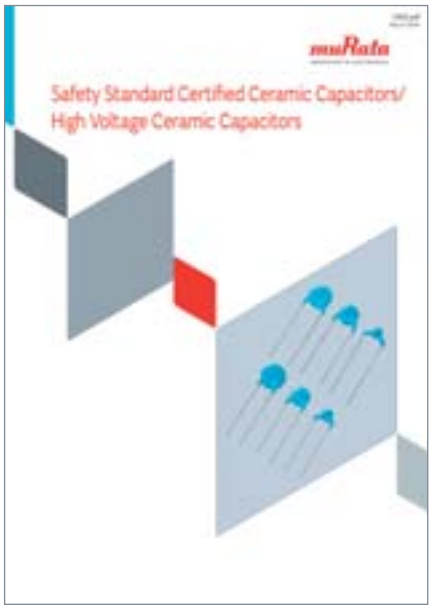
Chip Multilayer Ceramic Capacitors for General

Cat No. C02E-21



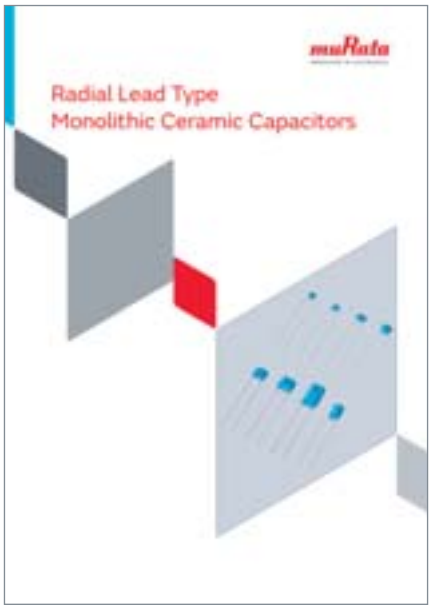
Chip Multilayer Ceramic Capacitors for Automotive

Cat No. C03E-9



Safety Certified Ceramic Capacitors/ High Voltage Ceramic Capacitors

Cat No. C85E-5



Radial Lead Type Monolithic Ceramic Capacitors

Cat No. C49E-23

Part Numbering

Chip Multilayer Ceramic Capacitors for General

WEB

(Part Number)

GR	M	18	8	B1	1H	102	K	A01	D
❶	❷	❸	❹	❺	❻	❼	❽	❾	❿

❶Product ID ❷Series

Product ID	Code	Series
GA	2	Based on the Electrical Appliance and Material Safety Law of Japan Chip Multilayer Ceramic Capacitors for General Purpose
	3	Safety Standard Certified Chip Multilayer Ceramic Capacitors for General Purpose
GJ	M	High Q Chip Multilayer Ceramic Capacitors for General Purpose
GM	A	Wire Bonding Mount Multilayer Microchip Capacitors for General Purpose
	D	Wire Bonding/AuSn Soldering Mount Chip Multilayer Ceramic Capacitors for General Purpose
GQ	M	High Q and High Power Chip Multilayer Ceramic Capacitors for General Purpose
GR	3	High Effective Capacitance & High Ripple Current Chip Multilayer Ceramic Capacitors for General Purpose
	4	Chip Multilayer Ceramic Capacitors for Camera Flash Circuit only
	7	Chip Multilayer Ceramic Capacitors for Ethernet LAN and Primary-secondary Coupling of DC-DC Converters
	J	Soft Termination Chip Multilayer Ceramic Capacitors for General Purpose
	M	Chip Multilayer Ceramic Capacitors for General Purpose
KR	3	High Effective Capacitance & High Allowable Ripple Current Metal Terminal Type Multilayer Ceramic Capacitors for General Purpose
	M	Metal Terminal Type Multilayer Ceramic Capacitors for General Purpose
LL	A	8 Terminals Low ESL Chip Multilayer Ceramic Capacitors for General Purpose
	L	LW Reversed Low ESL Chip Multilayer Ceramic Capacitors for General Purpose
	M	10 Terminals Low ESL Chip Multilayer Ceramic Capacitors for General Purpose
	R	LW Reversed Controlled ESR Low ESL Chip Multilayer Ceramic Capacitors for General Purpose

❸Chip Dimensions (LxW)

Code	Dimensions (LxW)	EIA
02	0.4x0.2mm	01005
0D	0.38x0.38mm	015015
03	0.6x0.3mm	0201
05	0.5x0.5mm	0202
08	0.8x0.8mm	0303
1U	0.6x1.0mm	02404
15	1.0x0.5mm	0402
18	1.6x0.8mm	0603
21	2.0x1.25mm	0805
22	2.8x2.8mm	1111
31	3.2x1.6mm	1206
32	3.2x2.5mm	1210
42	4.5x2.0mm	1808
43	4.5x3.2mm	1812
52	5.7x2.8mm	2211
55	5.7x5.0mm	2220

Continued on the following page.↗

(Part Number)

GR	M	18	8	B1	1H	102	K	A01	D
❶	❷	❸	❹	❺	❻	❼	❽	❾	❿

Continued from the preceding page. ↘

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

Code	Dimension (T)
2	0.2mm
3	0.3mm
4	0.4mm
5	0.5mm
6	0.6mm
7	0.7mm
8	0.8mm
9	0.85mm
A	1.0mm
B	1.25mm
C	1.6mm
D	2.0mm
E	2.5mm
M	1.15mm
Q	1.5mm
X	Depends on individual standards.

❹Height Dimension (T) (**KR**□ Only)

Code	Dimension (T)
E	1.8mm
F	1.9mm
K	2.7mm
L	2.8mm
Q	3.7mm
T	4.8mm
W	6.4mm

❺Temperature Characteristics

Temperature Characteristic Codes			Temperature Characteristics			Operating Temperature Range	Capacitance Change Each Temperature (%)					
Code	Public STD Code		Reference Temperature	Temperature Range	Capacitance Change or Temperature Coefficient		−55°C		*6		−10°C	
							Max.	Min.	Max.	Min.	Max.	Min.
1X	SL	JIS	20°C	20 to 85°C	+350 to −1000ppm/°C	−55 to 125°C	-	-	-	-	-	-
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
3U	UJ	JIS	20°C	20 to 85°C	−750±120ppm/°C	−25 to 85°C	-	-	4.94	2.84	3.29	1.89
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
B1	B *1	JIS	20°C	−25 to 85°C	±10%	−25 to 85°C	-	-	-	-	-	-
B3	B	JIS	20°C	−25 to 85°C	±10%	−25 to 85°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	-	-	-	-	-	-
D8	X6T	EIA	25°C	−55 to 105°C	+22%, −33%	−55 to 105°C	-	-	-	-	-	-
E7	X7U	EIA	25°C	−55 to 125°C	+22%, −56%	−55 to 125°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	-	-	-	-	-	-
W0	X7T	EIA	25°C	−55 to 125°C	±10% *4	−55 to 125°C	-	-	-	-	-	-
					+22%, −33% *5		-	-	-	-	-	-

*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 Apply DC350V bias.
*5 No DC bias.
*6 −25°C (Reference Temperature 20°C) / −30°C (Reference Temperature 25°C)

Continued on the following page. ↗

(Part Number)

GR	M	18	8	B1	1H	102	K	A01	D
❶	❷	❸	❹	❺	❻	❼	❽	❾	❿

Continued from the preceding page. ↘

❻Rated Voltage

Code	Rated Voltage
0E	DC2.5V
0G	DC4V
0J	DC6.3V
1A	DC10V
1C	DC16V
1E	DC25V
1H	DC50V
1J	DC63V
1K	DC80V
2A	DC100V
2D	DC200V
2E	DC250V
2W	DC450V
2H	DC500V
2J	DC630V
3A	DC1kV
3D	DC2kV
3F	DC3.15kV
BB	DC350V
E2	AC250V
GB	X2; AC250V (Safety Standard Certified Type GB)
GD	Y3; AC250V (Safety Standard Certified Type GD)
GF	Y2, X1/Y2; AC250V (Safety Standard Certified Type GF)
YA	DC35V

❼Capacitance

Expressed by three-digit alphanumerics. The unit is picofarad (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.
If any alphabet, 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

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%
W	±0.05pF

❾Individual Specification Code (Except **LLR**)

Expressed by three figures.

❾ESR (**LLR** Only)

Code	ESR
E01	100mΩ
E03	220mΩ
E05	470mΩ
E07	1000mΩ

❿Packaging

Code	Packaging
L	ø180mm Embossed Taping
D/E/W	ø180mm Paper Taping
K	ø330mm Embossed Taping
J/F	ø330mm Paper Taping
T	Bulk Tray

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

3 Terminal Low ESL Multilayer Ceramic Capacitors

WEB

(Part Number)

NF	M	3D	CC	102	R	1H	3	L
❶	❷	❸	❹	❺	❻	❼	❽	❾

❶Product ID ❷Series

Product ID	Series
NFM	3 Terminals Low ESL Chip Multilayer Ceramic Capacitors

❸Dimensions (LxW)

Code	Dimensions (LxW)	EIA
15	1.0x0.5mm	0402
18	1.6x0.8mm	0603
21	2.0x1.25mm	0805
3D	3.2x1.25mm	1205
31	3.2x1.6mm	1206
41	4.5x1.6mm	1806

❹Features

Code	Features	
CC	For General	For Signal Lines
PC		For Large Current
PS		High Insertion Loss Type for Large Current
KC		For Very Large Current

❺Capacitance

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

❻Characteristics

Code	Capacitance Temperature Characteristics
B	±10%, ±12.5%, +10/-13%
C	±22%
D	+22/-33%
F	+30/-80%, +30/-84%
R	±15%, +15/-18%

❼Rated Voltage

Code	Rated Voltage
0E	2.5V
0G	4V
0J	6.3V
1A	10V
1C	16V
1E	25V
1H	50V
2A	100V

❽Electrode

Code	Electrode
3	Sn Plating

❾Packaging

Code	Packaging
B	Bulk
L	Embossed Taping (ø180mm Reel)
D	Paper Taping (ø180mm Reel)

Capacitance Table

How to read the Capacitance Table

L×W (mm)	0.4×0.2		0.6		
T max. (mm)	0.22		0.		
Rated Voltage (Vdc)	25		50		
Cap. / TC Code	C0G	CΔ	C0G	CK	CJ
0.10pF					
0.20pF	p140	p143	p146	p146	
1.0pF	p140	p143		p146	
2.0pF	p140	p143		p146	
3.0pF	p140	p143			p146

The values can be narrowed down in the order of size, rated voltage, and temperature characteristics.

Refers to the page of the part number list.
Check the part number list for the applicable product number.

Temperature Characteristics Table

The Table is colored by temperature characteristic codes.
Refer to the following Table for the meaning of each code.

EIA: C0G U2J X7R X7S X7T X7U X6S X6T X5R
JIS: CK CJ CH SL UJ R B
Murata Temperature Characteristic: X8G

Temperature Characteristic Codes		Temperature Characteristics			Operating Temperature Range	Capacitance Change Each Temperature (%)					
Public STD Code		Reference Temperature	Temperature Range	Capacitance Change or Temperature Coefficient		−55°C		*3		−10°C	
						Max.	Min.	Max.	Min.	Max.	Min.
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
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
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
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
SL	JIS	20°C	20 to 85°C	+350 to −1000ppm/°C	−55 to 125°C	-	-	-	-	-	-
U2J	EIA	25°C	25 to 125°C *2	−750±120ppm/°C	−55 to 125°C	8.78	5.04	6.04	3.47	3.84	2.21
UJ	JIS	20°C	20 to 85°C	−750±120ppm/°C	−25 to 85°C	-	-	4.94	2.84	3.29	1.89
X8G	*1	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
X7R	EIA	25°C	−55 to 125°C	±15%	−55 to 125°C	-	-	-	-	-	-
X7S	EIA	25°C	−55 to 125°C	±22%	−55 to 125°C	-	-	-	-	-	-
X7T	EIA	25°C	−55 to 125°C	+22%, −33%	−55 to 125°C	-	-	-	-	-	-
X7U	EIA	25°C	−55 to 125°C	+22%, −56%	−55 to 125°C	-	-	-	-	-	-
R	JIS	20°C	−55 to 125°C	±15%	−55 to 125°C	-	-	-	-	-	-
X6S	EIA	25°C	−55 to 105°C	±22%	−55 to 105°C	-	-	-	-	-	-
X6T	EIA	25°C	−55 to 105°C	+22%, −33%	−55 to 105°C	-	-	-	-	-	-
X5R	EIA	25°C	−55 to 85°C	±15%	−55 to 85°C	-	-	-	-	-	-
B	JIS	20°C	−25 to 85°C	±10%	−25 to 85°C	-	-	-	-	-	-

*1 Murata Temperature Characteristic Code.
*2 Rated Voltage 100Vdc max: 25 to 85°C
*3 −25°C (Reference Temperature 20°C) / −30°C (Reference Temperature 25°C)

Capacitance Table

GRM Series Temperature Compensating Type

p00 ← Part Number List JIS: CK CJ CH SL UJ EIA: C0G U2J

L×W (mm)	0.4×0.2						0.6×0.3						1.0×0.5							1.6×0.8							
T max. (mm)	0.22						0.33						0.55							0.5						0.9	
Rated Voltage (Vdc)	50		25		16		100		50		25		100		50		10			50			10			100	
Cap. / TC Code	C0G	CΔ	C0G	CH	C0G	CH	C0G	CΔ	C0G	CΔ	C0G	CH	C0G	CΔ	C0G	CΔ	SL	U2J	UJ	SL	U2J	UJ	SL	U2J	UJ	C0G	CΔ
0.10pF							p48	p51	p55	p58			p62	p65	p69	p72											
0.20pF	p41	p44					p48	p51	p55	p58			p62	p65	p69	p72											
0.50pF	p41	p44					p48	p51	p55	p58			p62	p65	p69	p72										p76	p79
1.0pF	p41	p44					p48	p51	p55	p58			p62	p65	p69	p72										p76	p80
2.0pF	p41	p44					p48	p52	p55	p58			p62	p66	p69	p73										p77	p80
3.0pF	p41	p45					p48	p52	p55	p59			p63	p66	p69	p73										p77	p80
4.0pF	p42	p45					p49	p52	p56	p59			p63	p66	p70	p73										p77	p80
5.0pF	p42	p45					p49	p52	p56	p59			p63	p66	p70	p73										p77	p81
6.0pF	p42	p46					p49	p53	p56	p60			p63	p67	p70	p74										p78	p81
7.0pF	p43	p46					p50	p53	p57	p60			p64	p67	p71	p74										p78	p81
8.0pF	p43	p46					p50	p53	p57	p60			p64	p68	p71	p74										p79	p82
9.0pF	p43	p47					p50	p54	p57	p61			p65	p68	p71	p75										p79	p82
10pF	p44	p47					p51	p54	p58	p61			p65	p68	p72	p75										p79	p83
11pF	p44	p47																									
12pF	p44	p47					p51	p54	p58	p61			p65	p68	p72	p75										p79	p83
13pF	p44	p47																									
15pF	p44	p47					p51	p54	p58	p61			p65	p68	p72	p75										p79	p83
16pF	p44	p47																									
17pF	p44	p47																									
18pF	p44	p47					p51	p54	p58	p61			p65	p68	p72	p75										p79	p83
19pF	p44	p47																									
20pF	p44	p47					p51	p54																			
21pF	p44	p47																									
22pF	p44	p47					p51	p54	p58	p61			p65	p68	p72	p75										p79	p83
23pF	p44	p47																									
24pF	p44	p47					p51	p54																			
27pF	p44	p47					p51	p54	p58	p61			p65	p68	p72	p75										p79	p83
30pF	p44	p47					p51	p54																			
33pF	p44	p47					p51	p54	p58	p61			p65	p68	p72	p75										p79	p83
36pF	p44	p47					p51	p54																			
39pF	p44	p47					p51	p54	p58	p61			p65	p68	p72	p75										p79	p83
43pF	p44	p47					p51	p54																			
47pF	p44	p47					p51	p54	p58	p61			p65	p68	p72	p75										p79	p83
51pF	p44	p47					p51	p54																			
56pF	p44	p47					p51	p54	p58	p61			p65	p68	p72	p75										p79	p83
62pF	p44	p47					p51	p55																			
68pF	p44	p47					p51	p55	p58	p61			p65	p68	p72	p75										p79	p83
75pF	p44	p47					p51	p55																			
82pF	p44	p47					p51	p55	p58	p61			p65	p68	p72	p75										p79	p83
91pF	p44	p47					p51	p55																			
100pF	p44	p47					p51	p55	p58	p61			p65	p69	p72	p75										p79	p83
120pF			p47	p47	p47	p47			p58	p61					p72	p75										p79	p83
150pF			p47	p47	p47	p48			p58	p61					p72	p75										p79	p83
180pF			p47	p47	p47	p48			p58	p61					p72	p75										p79	p83
220pF			p47	p47	p47	p48			p58	p61					p72	p76										p79	p83
270pF											p61	p62			p72	p76										p79	p83
330pF											p61	p62			p72	p76										p79	p83
390pF											p62	p62			p72	p76										p79	p83
470pF											p62	p62			p72	p76										p79	p83
560pF											p62	p62			p72	p76										p79	p83
680pF											p62	p62			p72	p76										p79	p83
820pF											p62	p62			p72	p76										p79	p83
910pF											p62																
1000pF											p62	p62			p72	p76										p79	p83
1200pF																	p76	p76	p76							p79	p83
1500pF																	p76	p76	p76							p79	p83
1800pF																	p76	p76	p76								
2200pF																	p76	p76	p76	p76	p76	p76					
2700pF																	p76	p76	p76	p76	p76	p76					
3300pF																	p76	p76	p76	p76	p76	p76					
3900pF																	p76	p76	p76	p76	p76	p76					
4700pF																	p76	p76	p76	p76	p76	p76					
5600pF																							p76	p76	p76		
6800pF																							p76	p76	p76		
8200pF																							p76	p76	p76		
10000pF																							p76	p76	p76		
12000pF																											
15000pF																											
18000pF																											
22000pF																											
27000pF																											
33000pF																											
39000pF																											
47000pF																											
56000pF																											
68000pF																											
82000pF																											
0.10μF																											
0.12μF																											

The indication for every 0.1 pF has been omitted for less than 10 pF. Refer to the Part Number List for details.

Continued on the following page. ↗

Capacitance Table

(→ GRM Series Temperature Compensating Type)

p00 ← Part Number List JIS: CK CJ CH SL UJ EIA: C0G U2J

L×W (mm)	1.6×0.8								2.0×1.25																
T max. (mm)	0.9								0.7							0.95						1.0			
Rated Voltage (Vdc)	50					10			100		50					50					10			630	250	200
Cap. / TC Code	C0G	CΔ	SL	U2J	UJ	SL	U2J	UJ	C0G	CH	C0G	CH	SL	U2J	UJ	C0G	CH	SL	U2J	UJ	SL	U2J	UJ	C0G	C0G	U2J	C0G
0.10pF																											
0.20pF																											
0.50pF	p83	p86																									
1.0pF	p83	p86																									
2.0pF	p83	p87																									
3.0pF	p83	p87																									
4.0pF	p84	p87																									
5.0pF	p84	p87																									
6.0pF	p84	p88																									
7.0pF	p85	p88																									
8.0pF	p85	p88																									
9.0pF	p85	p89																									
10pF	p86	p89																						p91	p91		p91
11pF																											
12pF	p86	p89																						p91	p91		p92
13pF																											
15pF	p86	p89																						p91	p91		p92
16pF																											
17pF																											
18pF	p86	p89																						p91	p91		p92
19pF																											
20pF																											
21pF																											
22pF	p86	p89																						p91	p91		p92
23pF																											
24pF																											
27pF	p86	p89																						p91	p91		p92
30pF																											
33pF	p86	p89																						p91	p91		p92
36pF																											
39pF	p86	p89																						p91	p91		p92
43pF																											
47pF	p86	p89																						p91	p91		p92
51pF																											
56pF	p86	p89																						p91	p91		p92
62pF																											
68pF	p86	p89																						p91	p91		p92
75pF																											
82pF	p86	p89																						p91	p91		p92
91pF																											
100pF	p86	p89							p90	p90														p91	p91	p91	p92
120pF	p86	p89							p90	p90														p91	p91	p91	p92
150pF	p86	p89							p90	p90														p91	p91	p91	p92
180pF	p86	p89							p90	p90														p91	p91	p91	p92
220pF	p86	p89							p90	p90														p91	p91	p91	p92
270pF	p86	p89							p90	p90														p91	p91	p91	p92
330pF	p86	p89							p90	p90														p91	p91	p91	p92
390pF	p86	p89							p90	p90														p91	p91	p91	
470pF	p86	p89							p90	p90														p91	p91	p91	
560pF	p86	p89							p90	p90														p91	p91	p91	
680pF	p86	p89							p90	p90															p91	p91	
820pF	p86	p89							p90	p90															p91	p91	
910pF																											
1000pF	p86	p89			p90				p90	p90															p91	p91	
1200pF	p86	p89	p90	p90	p90				p90	p90	p90	p90													p91	p91	
1500pF	p86	p89	p90	p90	p90				p90	p90	p91	p90													p91	p91	
1800pF	p86	p89	p90	p90	p90				p90	p90	p91	p90													p91	p91	
2200pF	p86	p89	p90	p90	p90				p90	p90	p91	p90													p91	p91	
2700pF	p86	p89	p90	p90	p90				p90	p90	p91	p90													p91		
3300pF	p86	p90	p90	p90	p90				p90	p90	p91	p90															
3900pF	p86	p90	p90	p90	p90						p91	p90															
4700pF	p86	p90	p90	p90	p90						p91	p90															
5600pF	p86	p90	p90	p90	p90											p91	p91										
6800pF	p86	p90	p90	p90	p90											p91	p91										
8200pF	p86	p90	p90	p90	p90											p91	p91										
10000pF	p86	p90	p90	p90	p90										p91	p91	p91										
12000pF						p90	p90	p90					p91	p91	p91	p91	p91										
15000pF						p90	p90	p90					p91	p91	p91	p91	p91										
18000pF						p90	p90	p90					p91	p91	p91												
22000pF						p90	p90	p90										p91	p91	p91							
27000pF																		p91	p91	p91							
33000pF																											
39000pF																											
47000pF																											
56000pF																					p91	p91	p91				
68000pF																											
82000pF																											
0.10μF																											
0.12μF																											

Continued on the following page. ↗

Capacitance Table

(→ GRM Series Temperature Compensating Type)

p00 ← Part Number List JIS: CK CJ CH SL UJ EIA: C0G U2J

L×W (mm)	2.0×1.25																3.2×1.6											
T max. (mm)	1.0				1.35								1.45				0.95							1.0			
Rated Voltage (Vdc)	200	50			50					10			630	250		200	100	50						2000	1000		630
Cap. / TC Code	U2J	SL	U2J	UJ	C0G	CH	SL	U2J	UJ	SL	U2J	UJ	C0G	C0G	U2J	U2J	C0G	CH	C0G	CH	SL	UJ	U2J	U2J	C0G	U2J	C0G
0.10pF																											
0.20pF																											
0.50pF																											
1.0pF																											
2.0pF																											
3.0pF																											
4.0pF																											
5.0pF																											
6.0pF																											
7.0pF																											
8.0pF																											
9.0pF																											
10pF																								p93	p93	p93	p93
11pF																											
12pF																								p93	p93	p93	p93
13pF																											
15pF																								p93	p93	p93	p93
16pF																											
17pF																											
18pF																								p93	p93	p93	p93
19pF																											
20pF																											
21pF																											
22pF																								p93	p93	p93	p93
23pF																											
24pF																											
27pF																								p93	p93	p93	p93
30pF																											
33pF																								p93	p93	p93	p93
36pF																											
39pF																								p93	p93	p93	p93
43pF																											
47pF																								p93	p93	p93	p93
51pF																											
56pF																								p93	p93	p93	p93
62pF																											
68pF																								p93	p93	p93	p93
75pF																											
82pF																									p93	p93	p93
91pF																											
100pF	p92																								p93	p93	p93
120pF	p92																								p93	p93	p93
150pF	p92																								p93	p93	p93
180pF	p92																								p93	p93	p93
220pF	p92																								p93	p93	p93
270pF	p92																								p93	p93	p93
330pF	p92																								p93	p93	p93
390pF	p92																								p93		p93
470pF	p92																								p93		p93
560pF	p92																										p93
680pF	p92												p92														
820pF	p92												p92														
910pF																											
1000pF	p92												p92														
1200pF	p92												p92														p93
1500pF	p92																										p93
1800pF	p92																p92	p92									p93
2200pF	p92																p92	p92									
2700pF															p92	p92	p92	p92									
3300pF														p92	p92	p92	p92	p92									
3900pF														p92	p92	p92	p92	p92									
4700pF														p92	p92	p92	p92	p92									
5600pF															p92	p92	p92	p92									
6800pF																	p92	p92									
8200pF																	p92	p92									
10000pF																	p92	p92									
12000pF																	p92	p92	p93	p93							
15000pF																	p92	p92	p93	p93							
18000pF					p92	p92											p92	p93	p93	p93							
22000pF					p92	p92											p92	p93	p93	p93							
27000pF																	p92	p93	p93	p93							
33000pF		p92	p92	p92													p92	p93	p93	p93							
39000pF							p92	p92	p92								p92	p93	p93	p93							
47000pF							p92	p92	p92																		
56000pF																					p93	p93	p93				
68000pF										p92	p92	p92															
82000pF										p92	p92	p92															
0.10μF										p92	p92	p92															
0.12μF																											

Continued on the following page.↗

Capacitance Table

(→ GRM Series Temperature Compensating Type)

p00 ← Part Number List JIS: CK CJ CH SL UJ EIA: C0G U2J

L×W (mm)	3.2×1.6																												
T max. (mm)	1.0						1.25																	1.8					
Rated Voltage (Vdc)	630	500		250		200	1000		630		500		250		200	100		50					1000		630		500	
Cap. / TC Code	U2J	C0G	U2J	C0G	U2J	U2J	C0G	U2J	C0G	U2J	C0G	U2J	C0G	U2J	U2J	C0G	CH	C0G	CH	SL	U2J	UJ	C0G	U2J	C0G	U2J	U2J		
0.10pF																													
0.20pF																													
0.50pF																													
1.0pF																													
2.0pF																													
3.0pF																													
4.0pF																													
5.0pF																													
6.0pF																													
7.0pF																													
8.0pF																													
9.0pF																													
10pF	p93	p94	p94																										
11pF																													
12pF	p93	p94	p94																										
13pF																													
15pF	p93	p94	p94																										
16pF																													
17pF																													
18pF	p93	p94	p94																										
19pF																													
20pF																													
21pF																													
22pF	p93	p94	p94																										
23pF																													
24pF																													
27pF	p93	p94	p94																										
30pF																													
33pF	p93	p94	p94																										
36pF																													
39pF	p93	p94	p94																										
43pF																													
47pF	p93	p94	p94																										
51pF																													
56pF	p93	p94	p94																										
62pF																													
68pF	p94	p94	p94																										
75pF																													
82pF	p94	p94	p94																										
91pF																													
100pF	p94	p94	p94																										
120pF	p94	p94	p94																										
150pF	p94	p94	p94																										
180pF	p94	p94	p94																										
220pF	p94	p94	p94																										
270pF	p94	p94	p94																										
330pF	p94	p94	p94																										
390pF	p94	p94	p94	p94				p94																					
470pF	p94	p94	p94	p94				p94																					
560pF	p94	p94	p94	p94			p94	p94																					
680pF	p94		p94	p94			p94	p94	p94		p95																		
820pF	p94		p94	p94					p94		p95												p95	p95					
910pF																													
1000pF	p94		p94	p94					p94		p95												p95	p95					
1200pF	p94		p94	p94																									
1500pF	p94		p94	p94																									
1800pF	p94		p94	p94																									
2200pF	p94		p94	p94					p94																				
2700pF				p94	p94	p94			p94	p94		p95																	
3300pF				p94	p94	p94				p95		p95													p95				
3900pF				p94	p94	p94																				p95	p95		
4700pF				p94	p94	p94																				p95	p95		
5600pF				p94	p94	p94																							
6800pF				p94										p95	p95														
8200pF													p95	p95	p95														
10000pF													p95	p95	p95														
12000pF													p95	p95															
15000pF																													
18000pF																													
22000pF																													
27000pF																													
33000pF																													
39000pF																													
47000pF																p95	p95	p95	p95										
56000pF																p95	p95	p95	p95										
68000pF																				p95	p95	p95							
82000pF																				p95	p95	p95							
0.10μF																				p95	p95	p95							
0.12μF																													

Continued on the following page.↗

Capacitance Table

(→ GRM Series Temperature Compensating Type)

p00 ← Part Number List JIS: CK CJ CH SL UJ EIA: C0G U2J

L×W (mm)	3.2×1.6										3.2×2.5														4.5×2.0	4.5×3.2
T max. (mm)	1.8										1.0			1.25				1.5				2.0				1.0	1.5
Rated Voltage (Vdc)	250		100		50		25		16		2000	630	500	2000	1000	630	500	1000	630	500	250	1000	630	500	250	3150	1000
Cap. / TC Code	C0G	U2J	C0G	CH	C0G	CH	C0G	CH	C0G	CH	U2J	U2J	U2J	U2J	U2J	U2J	U2J	U2J	U2J	U2J	U2J	U2J	U2J	U2J	U2J	U2J	U2J
0.10pF																										
0.20pF																										
0.50pF																										
1.0pF																										
2.0pF																										
3.0pF																										
4.0pF																										
5.0pF																										
6.0pF																										
7.0pF																										
8.0pF																										
9.0pF																										
10pF																									p95	
11pF																										
12pF																									p95	
13pF																										
15pF																									p95	
16pF																										
17pF																										
18pF																									p95	
19pF																										
20pF																										
21pF																										
22pF																									p95	
23pF																										
24pF																										
27pF																									p95	
30pF																										
33pF																									p96	
36pF																										
39pF																									p96	
43pF																										
47pF																									p96	
51pF																										
56pF																									p96	
62pF																										
68pF																									p96	
75pF																										
82pF											p95														p96	
91pF																										
100pF											p95														p96	
120pF											p95															
150pF											p95															
180pF														p95												
220pF														p95												
270pF																										
330pF																										
390pF																										
470pF																										
560pF																										
680pF																										
820pF																										
910pF																										
1000pF																										
1200pF												p95	p95		p95											
1500pF												p95	p95					p95								
1800pF												p95	p95									p95				
2200pF												p95	p95									p95				
2700pF																										p96
3300pF																										p96
3900pF																										
4700pF																										
5600pF																p95	p95									
6800pF																			p95	p95						
8200pF																							p95	p95		
10000pF																							p95	p95		
12000pF																										
15000pF	p95	p95																								
18000pF		p95																								
22000pF		p95																								
27000pF																					p95					
33000pF																								p95		
39000pF																								p95		
47000pF																								p95		
56000pF																										
68000pF			p95	p95	p95	p95																				
82000pF			p95	p95	p95	p95																				
0.10μF			p95	p95	p95	p95																				
0.12μF							p95	p95	p95	p95																

Continued on the following page.↗

Capacitance Table

(→ GRM Series Temperature Compensating Type)

p00 ← Part Number List JIS: CK CJ CH SL UJ EIA: C0G U2J

L×W (mm)	4.5×3.2					5.7×5.0					
T max. (mm)	1.5		2.0			1.5			2.0		
Rated Voltage (Vdc)	630	500	1000	630	500	1000	630	500	1000	630	500
Cap. / TC Code	U2J	U2J	U2J	U2J	U2J	U2J	U2J	U2J	U2J	U2J	U2J
0.10pF											
0.20pF											
0.50pF											
1.0pF											
2.0pF											
3.0pF											
4.0pF											
5.0pF											
6.0pF											
7.0pF											
8.0pF											
9.0pF											
10pF											
11pF											
12pF											
13pF											
15pF											
16pF											
17pF											
18pF											
19pF											
20pF											
21pF											
22pF											
23pF											
24pF											
27pF											
30pF											
33pF											
36pF											
39pF											
43pF											
47pF											
51pF											
56pF											
62pF											
68pF											
75pF											
82pF											
91pF											
100pF											
120pF											
150pF											
180pF											
220pF											
270pF											
330pF											
390pF											
470pF											
560pF											
680pF											
820pF											
910pF											
1000pF											
1200pF											
1500pF											
1800pF											
2200pF											
2700pF											
3300pF											
3900pF			p96								
4700pF			p96								
5600pF						p96					
6800pF						p96					
8200pF									p96		
10000pF									p96		
12000pF	p96	p96									
15000pF				p96	p96						
18000pF				p96	p96						
22000pF				p96	p96						
27000pF							p96	p96			
33000pF										p96	p96
39000pF										p96	p96
47000pF										p96	p96
56000pF											
68000pF											
82000pF											
0.10μF											
0.12μF											

Capacitance Table

GRM Series High Dielectric Constant Type

p00 ← Part Number List JIS: R B EIA: X7R X7S X7T X7U X6S X6T X5R

L×W (mm)	0.4×0.2							0.6×0.3													1.0×0.5		
T max. (mm)	0.22							0.33													0.22		
Rated Voltage (Vdc)	16	10		6.3	4		2.5	50		35	25			16		10		6.3			4	10	6.3	
Cap. / TC Code	X7R	X7R	X5R, B	X5R, B	X6T	X5R	X6T	X7R	X5R, B	X5R	X7R, R	X6S	X5R, B	X7Δ, R	X6S	X5R, B	X7Δ, R	X5R, B	X7R, R	X6S	X5R, B	X6S	X5R, B	X6S	X5R, B
100pF	p97	p97	p97 p97					p98	p98		p98														
150pF	p97	p97	p97 p97					p98	p98		p98														
220pF	p97	p97	p97 p97					p98	p98		p98														
330pF	p97	p97	p97 p97					p98	p98		p98														
470pF	p97	p97	p97 p97					p98	p98 p98		p98														
680pF		p97	p97 p97					p98	p98		p98														
820pF		p97																							
1000pF	p97	p97	p97 p97	p97 p97				p98	p98		p98 p98		p98												
1500pF			p97 p97	p97 p97				p98	p98		p98 p98		p98												
2200pF			p97 p97	p97 p97							p98		p98	p98	p98	p99									
3300pF			p97 p97	p97 p97							p98		p98	p98	p98	p99									
4700pF			p97 p97	p97 p97							p98		p98	p98			p99	p99 p99	p99 p99	p99 p99	p99		p99		
6800pF			p97 p97	p97 p97							p98		p98	p98			p99	p99 p99	p99 p99	p99 p99	p99		p99		
10000pF			p97 p97	p97 p97							p98		p98 p98	p98		p98 p99	p99	p99 p99		p99 p99					
15000pF				p97		p97										p98 p99			p99 p99		p99		p99		
22000pF				p97		p97										p98 p99			p99 p99		p99		p99		
33000pF				p97		p98										p98 p99			p99 p99		p99		p99		
47000pF				p97		p98										p99 p99			p99 p99		p99				
68000pF				p97		p98										p99 p99			p99 p99		p99				
0.10μF				p97	p97	p98	p98			p98		p98	p98	p98	p98	p99 p99	p99		p99 p99		p99		p99 p100	p100	p100 p100
0.15μF																									
0.22μF																		p99			p99	p99	p99	p100 p100	p100 p100
0.33μF																									
0.47μF																									p100 p100
0.68μF																									
1.0μF																									p100
2.2μF																									
4.7μF																									
10μF																									
22μF																									
47μF																									
100μF																									
150μF																									
220μF																									

Continued on the following page.↗

Capacitance Table

(→ GRM Series High Dielectric Constant Type)

p00 ← Part Number List JIS: R B EIA: X7R X7S X7T X7U X6S X6T X5R

L×W (mm)	1.0×0.5																								
T max. (mm)	0.22				0.3							0.33				0.55									
Rated Voltage (Vdc)	4			2.5	50		25		16		10	10	6.3		4	100	50			35		25			16
Cap. / TC Code	X7T	X6Δ	X5R	X7T	X7R, R	B	X7R	B	X7R	B	X5R	X5R, B	X6T	X5R, B	X6T	X7R	X7R, R	X6S	X5R, B	X6S	X5R	X7R, R	X6S	X5R, B	X7R, R
100pF																									
150pF																									
220pF					p100	p100	p100									p100	p101	p100	p101						
330pF					p100	p100	p100									p100	p101	p100	p101						
470pF					p100	p100	p100									p100	p101	p100	p101						
680pF					p100	p100	p100									p100	p101	p100	p101						
820pF																									
1000pF					p100	p100	p100									p100	p101	p100	p101						
1500pF					p100	p100	p100									p100	p101	p100	p101						
2200pF							p100	p100								p100	p101	p100	p101			p101		p101	
3300pF									p100	p100						p100	p101	p101	p101						
4700pF									p100	p100						p100	p101	p101	p101						p102
6800pF									p100	p100							p101	p101	p101			p101			
10000pF									p100	p100							p101	p101	p101			p101		p101	p102
15000pF											p100						p101		p101			p101		p101	
22000pF											p100						p101		p101			p101		p101	
33000pF											p100						p101	p101	p101			p101		p101	
47000pF																	p101	p101	p101			p101		p102	
68000pF																	p101	p101				p101		p101	p102 p102
0.10μF	p100	p100		p100													p101		p101			p101		p101	p102
0.15μF																									p102
0.22μF	p100	p100		p100																p101	p101		p101	p101	p102
0.33μF																									
0.47μF		p100																			p101			p101	
0.68μF																									
1.0μF		p100	p100									p100	p100	p100	p100	p100	p100		p101					p101	p102
2.2μF																									
4.7μF																									
10μF																									
22μF																									
47μF																									
100μF																									
150μF																									
220μF																									

Continued on the following page. ↗

Capacitance Table

(→ GRM Series High Dielectric Constant Type)

p00 ← Part Number List JIS: R B EIA: X7R X7S X7T X7U X6S X6T X5R

L×W (mm)	1.0×0.5																										
T max. (mm)	0.55											0.6							0.65							0.7	
Rated Voltage (Vdc)	16		10			6.3			4			50	35	25	16	6.3	4	2.5	25	16		10		6.3	25	
Cap. / TC Code	X6S	X5R, B	X7R	X6S	X5R, B	X7R	X6S	X5R, B	X7R	X6S	X5R	X5R	X5R	X6S	X6S	X5R, B	X5R, B	X6T	X6T	X7T	X6T	X7T	X5R	X6S	X5R		
100pF																											
150pF																											
220pF																											
330pF																											
470pF																											
680pF																											
820pF																											
1000pF																											
1500pF																											
2200pF																											
3300pF																											
4700pF																											
6800pF																											
10000pF		p102																									
15000pF																											
22000pF																											
33000pF					p102																						
47000pF																											
68000pF																											
0.10μF					p102			p102																			
0.15μF					p102 p102			p102 p102																			
0.22μF		p102	p102		p102 p102		p102	p102 p102		p102																	
0.33μF					p102 p102			p102 p102																			
0.47μF	p102		p102		p102 p102			p102 p102				p102															
0.68μF					p102 p102			p102 p102																			
1.0μF		p102 p102		p102	p102 p102	p102		p102 p102	p102		p102		p102	p102	p102												
2.2μF					p102		p102	p102											p102	p103	p103	p103			p103		
4.7μF																p102	p102	p102	p102	p102			p103	p103			
10μF																											
22μF																											
47μF																											
100μF																											
150μF																											
220μF																											

Continued on the following page.↗

Capacitance Table

(→ GRM Series High Dielectric Constant Type)

p00 ← Part Number List JIS: R B EIA: X7R X7S X7T X7U X6S X6T X5R

L×W (mm)	1.0×0.5							1.6×0.8																
T max. (mm)	0.7							0.5				0.55				0.9								
Rated Voltage (Vdc)	16		10		6.3	4	2.5	25	16	6.3	4	16	10	6.3		250	200	25		16		10		6.3
Cap. / TC Code	X6S	X5R	X7S	X6S	X7S	X5R	X5R	X5R, B	X5R, B	X5R	X5R	X5R	X6S	X5R	X7T	X6S	X7R	X7R	X7R	X5R, B	X6S	X5R, B	X7R	X5R	X6S
100pF																									
150pF																									
220pF																	p103	p103							
330pF																	p103	p103							
470pF																	p103	p103							
680pF																	p103	p103							
820pF																									
1000pF																	p103	p103							
1500pF																	p103	p103							
2200pF																	p103	p103							
3300pF																									
4700pF																									
6800pF																									
10000pF																									
15000pF																									
22000pF																									
33000pF																									
47000pF																									
68000pF																									
0.10μF																									
0.15μF																									
0.22μF																									
0.33μF																									
0.47μF																									
0.68μF																									
1.0μF								p103	p103	p103	p103								p103						
2.2μF	p103	p103	p103	p103	p103															p103	p103	p103	p103	p103	
4.7μF												p103	p103	p103	p103	p103								p103	p103
10μF						p103	p103			p103	p103														
22μF																									
47μF																									
100μF																									
150μF																									
220μF																									

Continued on the following page.↗

Capacitance Table

(→ GRM Series High Dielectric Constant Type)

p00 ← Part Number List JIS: R B EIA: X7R X7S X7T X7U X6S X6T X5R

L×W (mm)	1.6×0.8							2.0×1.25				
T max. (mm)	0.9		0.95				1.0				0.7	0.95			
Rated Voltage (Vdc)	6.3	4	25	16	10	50	35	25	16	10	6.3	4	16	50	35	25
Cap. / TC Code	X5R, B	X5R	X5R	X6S	X5R, B	X7S	X5R, B	X5R	X6S	X5R	X7S	X6S	X5R	X7T	X7T	X5R, B	X6S	X5R, B	X6S	X5R	X7R
100pF																					
150pF																					
220pF																					
330pF																					
470pF																					
680pF																					
820pF																					
1000pF																					
1500pF																					
2200pF																					
3300pF																					
4700pF																					
6800pF																					
10000pF																					
15000pF																					
22000pF																					
33000pF																					
47000pF																					
68000pF																					
0.10μF																					
0.15μF																					
0.22μF																					
0.33μF																					
0.47μF																					
0.68μF																					
1.0μF																			p104	p104 p104	p104
2.2μF						p103	p103	p103	p103	p103										p104 p104	p104
4.7μF			p103	p103	p103 p103 p103			p103		p103	p103										p104
10μF	p103 p103	p103			p103		p103 p103			p103		p103	p103	p103							
22μF															p104 p104	p104	p104 p104				
47μF																					
100μF																					
150μF																					
220μF																					

Continued on the following page.↗

Capacitance Table

(→ GRM Series High Dielectric Constant Type)

p00 ← Part Number List JIS: R B EIA: X7R X7S X7T X7U X6S X6T X5R

L×W (mm)	2.0×1.25																							
T max. (mm)	0.95											1.0							1.35				1.4	
Rated Voltage (Vdc)	25		16		10		6.3		4		2.5	500	250	200	35	25		16	25		16		50	25
Cap. / TC Code	X6S	X5R, B	X7R	X5R, B	X7Δ	X5R, B	X6S	X5R, B	X6S	X5R	X6T	X7R	X7R	X7R	X6S	X7S	X6S	X7S	X6S	X5R, B	X7R	X5R, B	X5R, B	X7R
100pF																								
150pF																								
220pF																								
330pF																								
470pF																								
680pF																								
820pF																								
1000pF												p104	p104	p104										
1500pF												p104	p104	p104										
2200pF												p104	p104	p104										
3300pF												p104	p104	p104										
4700pF												p104	p104	p104										
6800pF												p104	p104	p104										
10000pF																								
15000pF																								
22000pF																								
33000pF																								
47000pF																								
68000pF																								
0.10μF																								
0.15μF																								
0.22μF																								
0.33μF																								
0.47μF																								
0.68μF																								
1.0μF																								
2.2μF	p104	p104	p104		p104														p104	p104		p104	p104	p104
4.7μF		p104		p104	p104										p104	p104	p104	p104	p104	p104		p104	p104	
10μF		p104	p104	p104			p104		p104													p104	p104	
22μF						p104		p104										p104						
47μF										p104	p104													
100μF																								
150μF																								
220μF																								

Continued on the following page.↗

Capacitance Table

(→ GRM Series High Dielectric Constant Type)

p00 ← Part Number List JIS: R B EIA: X7R X7S X7T X7U X6S X6T X5R

L×W (mm)	2.0×1.25																								
T max. (mm)	1.4							1.45																	
Rated Voltage (Vdc)	25	16	10	6.3		4		500	250	200	50		35			25			16			10			6.3
Cap. / TC Code	X5R, B	X6S	B	X7R	X6S	X7U	X6S	X7R	X7R	X7R	X7S	X6S	X7S	X6S	X5R	X7S	X6S	X5R	X7S	X6S	X5R	X7T	X6S	X5R	X7T
100pF																									
150pF																									
220pF																									
330pF																									
470pF																									
680pF																									
820pF																									
1000pF																									
1500pF																									
2200pF																									
3300pF																									
4700pF																									
6800pF																									
10000pF								p105	p105	p105															
15000pF									p105	p105															
22000pF									p105	p105															
33000pF																									
47000pF																									
68000pF																									
0.10μF																									
0.15μF																									
0.22μF																									
0.33μF																									
0.47μF																									
0.68μF																									
1.0μF																									
2.2μF																									
4.7μF											p105	p105	p105			p105									
10μF	p105	p105	p105		p105									p105	p105	p105	p105		p105						
22μF			p105			p105	p105	p105										p105		p105	p105	p105	p105	p105	p105
47μF																								p105	
100μF																									
150μF																									
220μF																									

Continued on the following page.↗

Capacitance Table

(→ GRM Series High Dielectric Constant Type)

p00 ← Part Number List JIS: R B EIA: X7R X7S X7T X7U X6S X6T X5R

L×W (mm)	2.0×1.25				3.2×1.6																				
T max. (mm)	1.45				0.95					1.0	1.25							1.8							
Rated Voltage (Vdc)	6.3	4		2.5	35	16	10	6.3		630	1000	630	500	250	200	50	25	1000	630	500	250	200	100	50	
Cap. / TC Code	X5R, B	X6S	X5R, B	X6S	X5R	X5R, B	X5R, B	X6S	X5R, B	X7R	X7R	X7R	X7R	X7R	X7R	B	X5R	X7R	X7R	X7R	X7R	X7R	X7R	X7R	X5R, B
100pF																									
150pF																									
220pF																									
330pF																									
470pF											p105														
680pF											p105														
820pF																									
1000pF										p105	p105														
1500pF										p105	p105														
2200pF										p105	p105														
3300pF										p105	p105														
4700pF										p105	p105														
6800pF										p105		p105						p105							
10000pF										p105								p105							
15000pF													p105	p105	p105				p105						
22000pF													p105	p105	p105				p105						
33000pF																				p105	p105	p105			
47000pF																				p105	p105	p105			
68000pF														p105	p105										
0.10μF																					p105	p105			
0.15μF																									
0.22μF																									
0.33μF																									
0.47μF																									
0.68μF																									
1.0μF																p105							p105		
2.2μF																									
4.7μF																								p105	p106
10μF					p105	p105	p105										p105								p106 p106
22μF						p105	p105	p105	p105	p105															
47μF	p105	p105	p105	p105	p105																				
100μF	p105	p105		p105																					
150μF																									
220μF																									

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