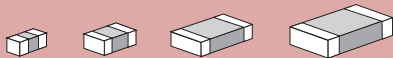


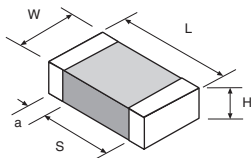
**MURATA type GRM**

An extensive range of surface mount, multilayer ceramic capacitors from Murata offering a choice of chip size, dielectric and in numerous cases voltage. Terminations have a nickel barrier for improved solderability. Supplied taped and reeled.



- ◆ High performance & reliability
- ◆ Choice of dielectric : **NP0 (C0G), X7R, X5R or Y5V**
- ◆ Choice of voltage in numerous cases
- ◆ Suitable for wave & reflow soldering
- ◆ Values from **0.1pF to 1µF**
- ◆ Nickel barrier terminations
- ◆ Industry standard chip sizes : **0201, 0402, 0603 & 0805**
- ◆ Supplied taped & reeled

**Dimensions (mm)**



Chip Size	L	W	H max.	a	S
<b>0201</b>	0.6	0.3	0.33	0.1 min.	0.2 min.
<b>0402</b>	1.0	0.5	0.55	0.15 min.	0.4 min.
<b>0603</b>	1.6	0.8	0.9	0.2 min.	0.5 min.
<b>0805</b>	2.0	1.25	0.6 – 1.35	0.2 min.	0.7 min.

**Specification**

**GRM**

**Marking and Packaging**

Working rating	As listed
Capacitance tolerance	NP0 ±5% (except B: ±0.1pF, C: ±0.25pF, D: ±0.5pF) X7R ±10% X5R ±10% (4V: ±20%) Y5V -20, +80%
Temperature coefficient	NP0 ±30ppm/°C X7R ±15% over -55°C to +125°C X5R ±15% over -55°C to +85°C Y5V +22%, +82% over -30°C to +85°C
Operating temperature range	NP0/X7R -55°C to +125°C X5R -55°C to +85°C Y5V -30°C to +85°C
Insulation resistance (whichever is less)	≥10,000MΩ or 500MΩ/µF (all dielectrics)

Marking	No marking appears on the product
Tape	8mm wide, 4mm pitch (2mm pitch: 0201 & 0402 chip sizes) Order codes ending in 'D' denotes paper tape, 'L' denotes embossed tape
Reel	178mm dia.

N.B. Some popular Murata parts are also available to order in larger quantities on 330mm dia. reels, indicated by an asterisk (\*) next to the value.

**DIELECTRIC PERFORMANCE & APPLICATION**

**NP0 (C0G):** Low K temperature compensation type. Extremely stable over wide variations of temperature, voltage, frequency and time. Very low dissipation factor. Used for precision timing, active and passive filtering, frequency setting and tuning circuits.

**X5R/X7R:** Medium K semi-stable types offering greater volumetric efficiency. Used for by-pass, coupling and filtering in audio & video equipment, computers, telecommunications, etc, where moderate capacitance variations are permissible and dissipation factor is not critical.

**Y5V:** High K general purpose type for by-pass and decoupling applications where temperature stability is not of major importance. Offer highest volumetric efficiency.

**Order Codes for Murata type GRM** are listed on the following four pages > > >

**MURATA type GRM (0201)**

**ORDER CODES**

**NP0 (C0G) dielectric**

Value (pF)	Tolerance	Order Code
<b>50 Volt</b>		
0.1	0.1pF	GRM0335C1HR10BD01D
0.2	0.1pF	GRM0335C1HR20BD01D
0.3	0.1pF	GRM0335C1HR30BD01D
0.4	0.1pF	GRM0335C1HR40BD01D
0.5	0.1pF	GRM0335C1HR50BD01D
0.6	0.1pF	GRM0335C1HR60BD01D
0.7	0.1pF	GRM0335C1HR70BD01D
0.8	0.1pF	GRM0335C1HR80BD01D
0.9	0.1pF	GRM0335C1HR90BD01D
1.0	0.25pF	GRM0335C1HR20CD01D
1.2	0.25pF	GRM0335C1H1R2CD01D
1.5	0.25pF	GRM0335C1H1R5CD01D
1.8	0.25pF	GRM0335C1H1R8CD01D
2.0	0.25pF	GRM0335C1H3R3CD01D
2.2	0.25pF	GRM0335C1H2R2CD01D
2.7	0.25pF	GRM0335C1H2R7CD01D
3.0	0.25pF	GRM0335C1H3R0CD01D
3.3	0.25pF	GRM0335C1H3R3CD01D
3.9	0.25pF	GRM0335C1H3R9CD01D
4.0	0.25pF	GRM0335C1H4R0CD01D
4.7	0.25pF	GRM0335C1H4R7CD01D
5.0	0.25pF	GRM0335C1H5R0CD01D
5.6	0.5pF	GRM0335C1H5R6DD01D
6.0	0.5pF	GRM0335C1H6R0DD01D
6.8	0.5pF	GRM0335C1H6R8DD01D
7.0	0.5pF	GRM0335C1H7R0DD01D
8.0	0.5pF	GRM0335C1H8R0DD01D
8.2	0.5pF	GRM0335C1H8R2DD01D
9.0	0.5pF	GRM0335C1H9R0DD01D
10	5%	GRM0335C1H100JD01D
12	5%	GRM0335C1H120JD01D
15	5%	GRM0335C1H150JD01D
18	5%	GRM0335C1H180JD01D
22	5%	GRM0335C1H220JD01D
27	5%	GRM0335C1H270JD01D
33	5%	GRM0335C1H330JD01D
39	5%	GRM0335C1H390JD01D
47	5%	GRM0335C1H470JD01D
56	5%	GRM0335C1H560JD01D
68	5%	GRM0335C1H680JD01D
82	5%	GRM0335C1H820JD01D
100	5%	GRM0335C1H101JD01D

**NP0 (C0G) dielectric**

Value (pF)	Tolerance	Order Code
<b>25 Volt</b>		
0.1	0.1pF	GRM0335C1ER10BZ01D
0.2	0.1pF	GRM0335C1ER20BZ01D
0.3	0.1pF	GRM0335C1ER30BZ01D
0.4	0.1pF	GRM0335C1ER40BZ01D
0.5	0.1pF	GRM0335C1ER50BZ01D
0.6	0.1pF	GRM0335C1ER60BZ01D
0.7	0.1pF	GRM0335C1ER70BZ01D
0.8	0.1pF	GRM0335C1ER80BZ01D
0.9	0.1pF	GRM0335C1ER90BZ01D
1.0	0.25pF	GRM0335C1E1R0CD01D
1.2	0.25pF	GRM0335C1E1R2CD01D
1.5	0.25pF	GRM0335C1E1R5CD01D
1.8	0.25pF	GRM0335C1E1R8CD01D
2.0	0.25pF	GRM0335C1E2R0CD01D
2.2	0.25pF	GRM0335C1E2R2CD01D
2.7	0.25pF	GRM0335C1E2R7CD01D
3.0	0.25pF	GRM0335C1E3R0CD01D
3.3	0.25pF	GRM0335C1E3R3CD01D
3.9	0.25pF	GRM0335C1E3R9CD01D
4.0	0.25pF	GRM0335C1E4R0CD01D
4.7	0.25pF	GRM0335C1E4R7CD01D
5.0	0.25pF	GRM0335C1E5R0CD01D
5.6	0.5pF	GRM0335C1E5R6DD01D
6.0	0.5pF	GRM0335C1E6R0DD01D
6.8	0.5pF	GRM0335C1E6R8DD01D
7.0	0.5pF	GRM0335C1E7R0DD01D
8.0	0.5pF	GRM0335C1E8R0DD01D
8.2	0.5pF	GRM0335C1E8R2DD01D
9.0	0.5pF	GRM0335C1E9R0DD01D
10	5%	GRM0335C1E100JD01D
12	5%	GRM0335C1E120JD01D
15	5%	GRM0335C1E150JD01D
18	5%	GRM0335C1E180JD01D
22	5%	GRM0335C1E220JD01D
27	5%	GRM0335C1E270JD01D
33	5%	GRM0335C1E330JD01D
39	5%	GRM0335C1E390JD01D
47	5%	GRM0335C1E470JD01D
56	5%	GRM0335C1E560JD01D
68	5%	GRM0335C1E680JD01D
82	5%	GRM0335C1E820JD01D
100	5%	GRM0335C1E101JD01D

**X7R dielectric : 10% tol.**

Value (pF)	Order Code
<b>25 Volt</b>	
100	GRM033R71E101KA01D
150	GRM033R71E151KA01D
220	GRM033R71E221KA01D
330	GRM033R71E331KA01D
470	GRM033R71E471KA01D
680	GRM033R71E681KA01D
1000	GRM033R71E102KA01D
1500	GRM033R71E152KA01D
<b>16 Volt</b>	
2200	GRM033R71C222KA88D
3300	GRM033R71C332KA88D
<b>10 Volt</b>	
4700	GRM033R71A472KA01D
6800	GRM033R71A682KA01D
0.01 (µF)	GRM033R71A103KA01D

**X5R dielectric : 10% tol.**

Value (µF)	Order Code
<b>6.3 Volt</b>	
0.015	GRM033R60J153KE01D
0.022	GRM033R60J223KE01D
0.033	GRM033R60J333KE01D
0.047	GRM033R60J473KE19D
0.068	GRM033R60J683KE19D
0.1	GRM033R60J104KE19D

**X5R dielectric : 20% tol.**

Value (µF)	Order Code
<b>4 Volt</b>	
0.22	GRM033R60G224ME15D

**MURATA type GRM (0402)**

**ORDER CODES**

**NP0 (C0G) dielectric**

Value (pF)	Tolerance	Order Code
<b>50 Volt</b>		
0.5	0.25pF	GRM1555C1HR50CZ01D
1.0	0.25pF	GRM1555C1H1R0CZ01D
1.1	0.25pF	GRM1555C1H1R1CZ01D
1.2	0.25pF	GRM1555C1H1R2CZ01D
1.3	0.25pF	GRM1555C1H1R3CZ01D
1.5	0.25pF	GRM1555C1H1R5CZ01D
1.6	0.25pF	GRM1555C1H1R6CZ01D
1.8	0.25pF	GRM1555C1H1R8CZ01D
2.0	0.25pF	GRM1555C1H2R0CZ01D
2.2	0.25pF	GRM1555C1H2R2CZ01D
2.4	0.25pF	GRM1555C1H2R4CZ01D
2.7	0.25pF	GRM1555C1H2R7CZ01D
3.0	0.25pF	GRM1555C1H3R0CZ01D
3.3	0.25pF	GRM1555C1H3R3CZ01D
3.6	0.25pF	GRM1555C1H3R6CZ01D
3.9	0.25pF	GRM1555C1H3R9CZ01D
4.3	0.25pF	GRM1555C1H4R3CZ01D
4.7	0.25pF	GRM1555C1H4R7CZ01D
5.1	0.5pF	GRM1555C1H5R1DZ01D
5.6	0.5pF	GRM1555C1H5R6DZ01D
6.8	0.5pF	GRM1555C1H6R8DZ01D
7.5	0.5pF	GRM1555C1H7R5DZ01D
8.2	0.5pF	GRM1555C1H8R2DZ01D
9.1	0.5pF	GRM1555C1H9R1DZ01D
10	5%	GRM1555C1H10JZ01D
11	5%	GRM1555C1H11JZ01D
12	5%	GRM1555C1H12JZ01D
13	5%	GRM1555C1H13JZ01D
15	5%	GRM1555C1H15JZ01D
16	5%	GRM1555C1H16JZ01D
18	5%	GRM1555C1H18JZ01D
20	5%	GRM1555C1H20JZ01D
22	5%	GRM1555C1H22JZ01D
24	5%	GRM1555C1H24JZ01D
27	5%	GRM1555C1H27JZ01D
30	5%	GRM1555C1H30JZ01D
33	5%	GRM1555C1H33JZ01D
36	5%	GRM1555C1H36JZ01D
39	5%	GRM1555C1H39JZ01D
43	5%	GRM1555C1H43JZ01D
47	5%	GRM1555C1H47JZ01D
51	5%	GRM1555C1H51JZ01D
56	5%	GRM1555C1H56JD01D
62	5%	GRM1555C1H62JD01D
68	5%	GRM1555C1H68JD01D
75	5%	GRM1555C1H75JD01D
82	5%	GRM1555C1H82JD01D
91	5%	GRM1555C1H91JD01D
100	5%	GRM1555C1H101JD01D
110	5%	GRM1555C1H111JA01D
120	5%	GRM1555C1H121JA01D
130	5%	GRM1555C1H131JA01D
150	5%	GRM1555C1H151JA01D
160	5%	GRM1555C1H161JA01D
180	5%	GRM1555C1H181JA01D
220	5%	GRM1555C1H221JA01D
270	5%	GRM1555C1H271JA01D
330	5%	GRM1555C1H331JA01D
390	5%	GRM1555C1H391JA01D
470	5%	GRM1555C1H471JA01D
560	5%	GRM1555C1H561JA01D
680	5%	GRM1555C1H681JA01D
820	5%	GRM1555C1H821JA01D
1000	5%	GRM1555C1H102JA01D

**X7R dielectric : 10% tol.**

Value (pF)	Order Code
<b>100 Volt</b>	
220	GRM155R72A221KA01D
330	GRM155R72A331KA01D
470	GRM155R72A471KA01D
680	GRM155R72A681KA01D
1000	GRM155R72A102KA01D
1500	GRM155R72A152KA01D
2200	GRM155R72A222KA01D
3300	GRM155R72A332KA01D
4700	GRM155R72A472KA01D
<b>50 Volt</b>	
220	GRM155R71H221KA01D
270	GRM155R71H271KA01D
330	GRM155R71H331KA01D
390	GRM155R71H391KA01D
470	GRM155R71H471KA01D
560	GRM155R71H561KA01D
680	GRM155R71H681KA01D
820	GRM155R71H821KA01D
1000	GRM155R71H102KA01D
1200	GRM155R71H122KA01D
1500	GRM155R71H152KA01D
1800	GRM155R71H182KA01D
2200	GRM155R71H222KA01D
2700	GRM155R71H272KA01D
3300	GRM155R71H332KA01D
3900	GRM155R71H392KA01D
4700	GRM155R71H472KA01D
6800	GRM155R71H682KA88D
<b>(µF)</b>	
0.01	GRM155R71H103KA88D
0.015	GRM155R71H153KA12D
<b>(pF)</b>	
<b>25 Volt</b>	
4700	GRM155R71E472KA01D
5600	GRM155R71E562KA01D
6800	GRM155R71E682KA01D
<b>(µF)</b>	
<b>25 Volt</b>	
0.022	GRM155R71H223KA12D
0.01	GRM155R71E103KA01D
0.015	GRM155R71E153KA61D
0.022	GRM155R71E223KA61D
0.033	GRM155R71E333KA88D
0.047	GRM155R71E473KA88D
<b>(pF)</b>	
<b>16 Volt</b>	
8200	GRM155R71C822KA01D
<b>(µF)</b>	
0.01	GRM155R71C103KA01D
0.015	GRM155R71C153KA01D
0.022	GRM155R71C223KA01D
0.068	GRM155R71C683KA88D
0.1	GRM155R71C104KA88D
<b>10 Volt</b>	
0.047	GRM155R71A473KA01D
0.068	GRM155R71A683KA01D

**Y5V dielectric : -20, +80% tol.**

Value (pF)	Order Code
<b>50 Volt</b>	
2200	GRM155F51H222ZA01D
3300	GRM155F51H332ZA01D
3900	GRM155F51H392ZA01D
4700	GRM155F51H472ZA01D
5600	GRM155F51H562ZA01D
6800	GRM155F51H682ZA01D
8200	GRM155F51H822ZA01D
<b>(µF)</b>	
0.01	GRM155F51H103ZA01D
0.012	GRM155F51H123ZA01D
0.015	GRM155F51H153ZA01D
<b>25 Volt</b>	
0.022	GRM155F51E223ZA01D
<b>16 Volt</b>	
0.033	GRM155F51C333ZA01D
0.039	GRM155F51C393ZA01D
0.047	GRM155F51C473ZA01D
0.056	GRM155F51C563ZA01D
0.068	GRM155F51C683ZA01D
0.082	GRM155F51C823ZA01D
0.1	GRM155F51C104ZA01D
<b>10 Volt</b>	
0.22	GRM155F51A224ZA01D
0.33	GRM155F51A334ZE01D
0.47	GRM155F51A474ZE01D
<b>6.3 Volt</b>	
1.0	GRM155F50J105ZE01D

**CAPACITANCE CONVERSION GUIDE**

Pico-Farad (pF)	Nano-Farad (nF)	Micro-Farad (µF)
1000	1.0	0.001
1500	1.5	0.0015
2200	2.2	0.0022
3300	3.3	0.0033
4700	4.7	0.0047
6800	6.8	0.0068
10000	10	0.01
15000	15	0.015
22000	22	0.022
33000	33	0.033
47000	47	0.047
68000	68	0.068
100000	100	0.1
150000	150	0.15
220000	220	0.22
330000	330	0.33
470000	470	0.47
680000	680	0.68

MURATA type GRM (0603)

ORDER CODES

NP0 (C0G) dielectric

Value (pF)	Tolerance	Order Code
<b>200 Volt</b>		
1.0	0.25pF	GRM1885C2D1R0CV01D
1.1	0.25pF	GRM1885C2D1R1CZ01D
1.2	0.25pF	GRM1885C2D1R2CV01D
1.3	0.25pF	GRM1885C2D1R3CZ01D
1.5	0.25pF	GRM1885C2D1R5CV01D
1.6	0.25pF	GRM1885C2D1R6CZ01D
1.8	0.25pF	GRM1885C2D1R8CV01D
2.0	0.25pF	GRM1885C2D2R0CZ01D
2.2	0.25pF	GRM1885C2D2R2CV01D
2.4	0.25pF	GRM1885C2D2R4CZ01D
2.7	0.25pF	GRM1885C2D2R7CV01D
3.0	0.25pF	GRM1885C2D3R0CZ01D
3.3	0.25pF	GRM1885C2D3R3CV01D
3.6	0.25pF	GRM1885C2D3R6CZ01D
3.9	0.25pF	GRM1885C2D3R9CV01D
4.3	0.25pF	GRM1885C2D4R3CV01D
4.7	0.25pF	GRM1885C2D4R7CV01D
5.1	0.5pF	GRM1885C2D5R1DZ01D
5.6	0.5pF	GRM1885C2D5R6DV01D
6.2	0.5pF	GRM1885C2D6R2DZ01D
6.8	0.5pF	GRM1885C2D6R8DV01D
7.5	0.5pF	GRM1885C2D7R5DZ01D
8.2	0.5pF	GRM1885C2D8R2DV01D
9.1	0.5pF	GRM1885C2D9R1DZ01D
10	0.5pF	GRM1885C2D100DZ01D
<b>100 Volt</b>		
11	5%	GRM1885C2A110JZ01D
12	5%	GRM1885C2A120JA01D
13	5%	GRM1885C2A130JZ01D
15	5%	GRM1885C2A150JZ01D
16	5%	GRM1885C2A160JZ01D
18	5%	GRM1885C2A180JZ01D
20	5%	GRM1885C2A200JZ01D
22	5%	GRM1885C2A220JZ01D
24	5%	GRM1885C2A240JZ01D
27	5%	GRM1885C2A270JZ01D
30	5%	GRM1885C2A300JZ01D
33	5%	GRM1885C2A330JZ01D
36	5%	GRM1885C2A360JZ01D
39	5%	GRM1885C2A390JZ01D
43	5%	GRM1885C2A430JZ01D
47	5%	GRM1885C2A470JZ01D
51	5%	GRM1885C2A510JZ01D
56	5%	GRM1885C2A560JZ01D
62	5%	GRM1885C2A620JZ01D
68	5%	GRM1885C2A680JZ01D
75	5%	GRM1885C2A750JZ01D
82	5%	GRM1885C2A820JZ01D
91	5%	GRM1885C2A910JZ01D
100	5%	GRM1885C2A101JA01D
110	5%	GRM1885C2A111JZ01D
120	5%	GRM1885C2A121JD01D
130	5%	GRM1885C2A131JD01D
150	5%	GRM1885C2A151JD01D
160	5%	GRM1885C2A161JD01D
180	5%	GRM1885C2A181JA01D
220	5%	GRM1885C2A221JA01D
270	5%	GRM1885C2A271JA01D
330	5%	GRM1885C2A331JA01D
390	5%	GRM1885C2A391JA01D
470	5%	GRM1885C2A471JA01D
560	5%	GRM1885C2A561JA01D
680	5%	GRM1885C2A681JA01D
820	5%	GRM1885C2A821JA01D
1000	5%	GRM1885C2A102JA01D
1200	5%	GRM1885C2A122JA01D
1500	5%	GRM1885C2A152JA01D

NP0 (C0G) dielectric

Value (pF)	Tolerance	Order Code
<b>50 Volt</b>		
0.5	0.25pF	GRM1885C1HR50CZ01D
1.0	0.25pF	GRM1885C1H1R0CZ01D
1.1	0.25pF	GRM1885C1H1R1CZ01D
1.2	0.25pF	GRM1885C1H1R2CZ01D
1.3	0.25pF	GRM1885C1H1R3CZ01D
1.5	0.25pF	GRM1885C1H1R5CZ01D
1.6	0.25pF	GRM1885C1H1R6CZ01D
1.8	0.25pF	GRM1885C1H1R8CZ01D
2.0	0.25pF	GRM1885C1H2R0CZ01D
2.2	0.25pF	GRM1885C1H2R2CZ01D
2.4	0.25pF	GRM1885C1H2R4CZ01D
2.7	0.25pF	GRM1885C1H2R7CZ01D
3.0	0.25pF	GRM1885C1H3R0CZ01D
3.3	0.25pF	GRM1885C1H3R3CZ01D
3.6	0.25pF	GRM1885C1H3R6CZ01D
3.9	0.25pF	GRM1885C1H3R9CZ01D
4.3	0.25pF	GRM1885C1H4R3CZ01D
4.7	0.25pF	GRM1885C1H4R7CZ01D
5.1	0.5pF	GRM1885C1H5R1DZ01D
5.6	0.5pF	GRM1885C1H5R6DZ01D
6.2	0.5pF	GRM1885C1H6R2DZ01D
6.8	0.5pF	GRM1885C1H6R8DZ01D
7.5	0.5pF	GRM1885C1H7R5DZ01D
8.2	0.5pF	GRM1885C1H8R2DZ01D
9.1	0.5pF	GRM1885C1H9R1DZ01D
10	5%	GRM1885C1H100JA01D
11	5%	GRM1885C1H110JZ01D
12	5%	GRM1885C1H120JA01D
13	5%	GRM1885C1H130JZ01D
15	5%	GRM1885C1H150JA01D
16	5%	GRM1885C1H160JA01D
18	5%	GRM1885C1H180JA01D
20	5%	GRM1885C1H200JZ01D
22	5%	GRM1885C1H220JA01D
24	5%	GRM1885C1H240JZ01D
27	5%	GRM1885C1H270JA01D
30	5%	GRM1885C1H300JA01D
33	5%	GRM1885C1H330JA01D
36	5%	GRM1885C1H360JZ01D
39	5%	GRM1885C1H390JA01D
43	5%	GRM1885C1H430JZ01D
47	5%	GRM1885C1H470JA01D
51	5%	GRM1885C1H510JZ01D
56	5%	GRM1885C1H560JA01D
62	5%	GRM1885C1H620JZ01D
68	5%	GRM1885C1H680JA01D
75	5%	GRM1885C1H750JZ01D
82	5%	GRM1885C1H820JA01D
91	5%	GRM1885C1H910JZ01D
100	5%	GRM1885C1H101JA01D
110	5%	GRM1885C1H111JA01D
120	5%	GRM1885C1H121JA01D
130	5%	GRM1885C1H131JA01D
150	5%	GRM1885C1H151JA01D
160	5%	GRM1885C1H161JA01D
180	5%	GRM1885C1H181JA01D
200	5%	GRM1885C1H201JA01D
220	5%	GRM1885C1H221JA01D
240	5%	GRM1885C1H241JA01D
270	5%	GRM1885C1H271JA01D
300	5%	GRM1885C1H301JA01D
330	5%	GRM1885C1H331JA01D
360	5%	GRM1885C1H361JA01D
390	5%	GRM1885C1H391JA01D
430	5%	GRM1885C1H431JA01D
470	5%	GRM1885C1H471JA01D
510	5%	GRM1885C1H511JA01D
560	5%	GRM1885C1H561JA01D
680	5%	GRM1885C1H681JA01D
820	5%	GRM1885C1H821JA01D
1000	5%	GRM1885C1H102JA01D
1200	5%	GRM1885C1H122JA01D
1500	5%	GRM1885C1H152JA01D
1800	5%	GRM1885C1H182JA01D
2200	5%	GRM1885C1H222JA01D
2700	5%	GRM1885C1H272JA01D
3300	5%	GRM1885C1H332JA01D
3900	5%	GRM1885C1H392JA01D

X7R dielectric : 10% tol.

Value (pF)	Order Code
<b>200 Volt</b>	
220	GRM188R72D221KY21D
270	GRM188R72D271KY21D
330	GRM188R72D331KY21D
390	GRM188R72D391KY21D
470	GRM188R72D471KY21D
560	GRM188R72D561KY21D
680	GRM188R72D681KY21D
820	GRM188R72D821KY21D
1000	GRM188R72D102KY21D
1200	GRM188R72D122KY21D
1500	GRM188R72D152KY21D
1800	GRM188R72D182KY21D
<b>100 Volt</b>	
220	GRM188R72A221KA01D
330	GRM188R72A331KA01D
470	GRM188R72A471KA01D
680	GRM188R72A681KA01D
1000	GRM188R72A102KA01D
1500	GRM188R72A152KA01D
2200	GRM188R72A222KD01D
2700	GRM188R72A272KD01D
3300	GRM188R72A332KD01D
4700	GRM188R72A472KA01D
6800	GRM188R72A682KA01D
(pF)	GRM188R72A103KA01D
0.1	GRM188R72A104KA35D
<b>50 Volt</b>	
220	GRM188R71H221KD01D
270	GRM188R71H271KD01D
330	GRM188R71H331KA01D
390	GRM188R71H391KA01D
470	GRM188R71H471KA01D
560	GRM188R71H561KA01D
680	GRM188R71H681KA01D
820	GRM188R71H821KA01D
1000	GRM188R71H102KA01D
1200	GRM188R71H122KA01D
1500	GRM188R71H152KA01D
1800	GRM188R71H182KA01D
2200	GRM188R71H222KA01D
2700	GRM188R71H272KA01D
3300	GRM188R71H332KA01D
3900	GRM188R71H392KA01D
4700	GRM188R71H472KA01D
5600	GRM188R71H562KA01D
6800	GRM188R71H682KA01D
8200	GRM188R71H822KA01D
(pF)	GRM188R71H103KA01D
0.01	GRM188R71H123KA01D
0.012	GRM188R71H153KA01D
0.015	GRM188R71H183KA01D
0.018	GRM188R71H223KA01D
0.022	GRM188R71H273KA01D
0.033	GRM188R71H333KA01D
0.047	GRM188R71H473KA01D
0.068	GRM188R71H683KA01D
0.1	GRM188R71H104KA93D
<b>25 Volt</b>	
0.022	GRM188R71E223KA01D
0.027	GRM188R71E273KA01D
0.033	GRM188R71E333KA01D
0.039	GRM188R71E393KA01D
0.047	GRM188R71E473KA01D
0.068	GRM188R71E683KA01D
0.1	GRM188R71E104KA01D
0.15	GRM188R71E154KA01D
0.22	GRM188R71E224KA88D
0.47	GRM188R71E474KA12D

X7R dielectric : 10% tol.

Value (pF)	Order Code
<b>16 Volt</b>	
0.033	GRM188R71C333KA01D
0.039	GRM188R71C393KA01D
0.047	GRM188R71C473KA01D
0.056	GRM188R71C563KA01D
0.068	GRM188R71C683KA01D
0.082	GRM188R71C823KA01D
0.1	GRM188R71C104KA01D
0.15	GRM188R71C154KA01D
0.22	GRM188R71C224KA01D
0.33	GRM188R71C334KA01D
0.47	GRM188R71C474KA88D
<b>10 Volt</b>	
0.12	GRM188R71A124KA01D
0.15	GRM188R71A154KA01D
0.18	GRM188R71A184KA01D
0.22	GRM188R71A224KA01D
0.47	GRM188R71A474KA61D
0.68	GRM188R71A684KA61D
<b>Y5V dielectric : -20,+80% tol.</b>	
<b>Value (pF)</b>	
<b>Order Code</b>	
<b>50 Volt</b>	
0.01	GRM188F51H103ZA01D
0.015	GRM188F51H153ZA01D
0.022	GRM188F51H223ZA01D
0.033	GRM188F51H333ZA01D
0.047	GRM188F51H473ZA01D
<b>25 Volt</b>	
0.068	GRM188F51E683ZA01D
0.1	GRM188F51E104ZA01D
0.1*	GRM188F51E104ZA01J
<b>16 Volt</b>	
0.15	GRM188F51C154ZA01D
0.22	GRM188F51C224ZA01D
0.33	GRM188F51C334ZA01D
<b>10 Volt</b>	
0.47	GRM188F51A474ZA01D
1.0	GRM188F51A105ZC01D

\* Supplied in larger quantity, 330mm dia. reels

MURATA type GRM (0805)

ORDER CODES

NP0 (COG) dielectric

Value (pF)	Tol.	Order Code
<b>200 Volt</b>		
1.0	0.25pF	GRM2195C2D1R0CY21D
1.1	0.25pF	GRM2195C2D1R1CY51D
1.2	0.25pF	GRM2195C2D1R2CY21D
1.3	0.25pF	GRM2195C2D1R3CY21D
1.5	0.25pF	GRM2195C2D1R5CY21D
1.6	0.25pF	GRM2195C2D1R6CY51D
1.8	0.25pF	GRM2195C2D1R8CY21D
2.0	0.25pF	GRM2195C2D2R0CY51D
2.2	0.25pF	GRM2195C2D2R2CY21D
2.4	0.25pF	GRM2195C2D2R4CY21D
2.7	0.25pF	GRM2195C2D2R7CY21D
3.0	0.25pF	GRM2195C2D3R0CY21D
3.3	0.25pF	GRM2195C2D3R3CY21D
3.6	0.25pF	GRM2195C2D3R6CY51D
3.9	0.25pF	GRM2195C2D3R9CY21D
4.3	0.25pF	GRM2195C2D4R3CY21D
4.7	0.25pF	GRM2195C2D4R7CY21D
5.1	0.5pF	GRM2195C2D5R1DY21D
5.6	0.5pF	GRM2195C2D5R6DV01D
6.2	0.5pF	GRM2195C2D6R2DY21D
6.8	0.5pF	GRM2195C2D6R8DY21D
7.5	0.5pF	GRM2195C2D7R5DY21D
8.2	0.5pF	GRM2195C2D8R2DV01D
9.1	0.5pF	GRM2195C2D9R1DY21D
10	5%	GRM2195C2D100JV01D
11	5%	GRM2195C2D110JV71D
12	5%	GRM2195C2D120JV01D
13	5%	GRM2195C2D130JV01D
15	5%	GRM2195C2D150JV21D
16	5%	GRM2195C2D160JV90D
18	5%	GRM2195C2D180JV01D
20	5%	GRM2195C2D200JV71D
22	5%	GRM2195C2D220JV01D
24	5%	GRM2195C2D240JV71D
27	5%	GRM2195C2D270JV01D
30	5%	GRM2195C2D300JV71D
33	5%	GRM2195C2D330JV01D
36	5%	GRM2195C2D360JV71D
39	5%	GRM2195C2D390JV01D
43	5%	GRM2195C2D430JV71D
47	5%	GRM2195C2D470JV01D
51	5%	GRM2195C2D510JV71D
56	5%	GRM2195C2D560JV01D
62	5%	GRM2195C2D620JV71D
68	5%	GRM2195C2D680JV01D
75	5%	GRM2195C2D750JV71D
82	5%	GRM2195C2D820JV01D
91	5%	GRM2195C2D910JV71D
100	5%	GRM2195C2D101JV01D
110	5%	GRM2195C2D111JD01D
120	5%	GRM2195C2D121JV01D
130	5%	GRM2195C2D131JV71D
150	5%	GRM2195C2D151JV01D
160	5%	GRM2195C2D161JD01D
180	5%	GRM2195C2D181JV21D
200	5%	GRM2195C2D201JV21D
220	5%	GRM2195C2D221JV21D

Value (pF)	Tol.	Order Code
<b>100 Volt</b>		
10	5%	GRM2195C2A100JZ01D
12	5%	GRM2195C2A120JZ01D
15	5%	GRM2195C2A150JZ01D
18	5%	GRM2195C2A180JZ01D
22	5%	GRM2195C2A220JZ01D
27	5%	GRM2195C2A270JZ01D
33	5%	GRM2195C2A330JZ01D
39	5%	GRM2195C2A390JZ01D
47	5%	GRM2195C2A470JZ01D
56	5%	GRM2195C2A560JZ01D
62	5%	GRM2195C2A620JD51D
68	5%	GRM2195C2A680JZ01D
75	5%	GRM2195C2A750JZ01D
82	5%	GRM2195C2A820JZ01D
91	5%	GRM2195C2A910JZ01D
100	5%	GRM2195C2A101JA01D
110	5%	GRM2195C2A111JZ01D
120	5%	GRM2195C2A121JZ01D
130	5%	GRM2195C2A131JZ01D
150	5%	GRM2195C2A151JZ01D
160	5%	GRM2195C2A161JZ01D
180	5%	GRM2195C2A181JZ01D
200	5%	GRM2195C2A201JZ01D
220	5%	GRM2195C2A221JZ01D
240	5%	GRM2195C2A241JZ01D
270	5%	GRM2195C2A271JA01D
300	5%	GRM2195C2A301JZ01D
330	5%	GRM2195C2A331JA01D
360	5%	GRM2195C2A361JZ01D

(cont.)

NP0 (COG) dielectric

Value (pF)	Tol.	Order Code
<b>100 Volt (cont.)</b>		
390	5%	GRM2195C2A391JZ01D
430	5%	GRM2195C2A431JZ01D
470	5%	GRM2195C2A471JZ01D
510	5%	GRM2195C2A511JD01D
560	5%	GRM2195C2A561JA01D
620	5%	GRM2195C2A621JD01D
680	5%	GRM2195C2A681JD01D
820	5%	GRM2195C2A821JA01D
1000	5%	GRM2195C2A102JA01D
1200	5%	GRM2195C2A122JA01D
1500	5%	GRM2195C2A152JA01D
1800	5%	GRM2195C2A182JA01D
2200	5%	GRM2195C2A222JA01D
2700	5%	GRM2195C2A272JA01D
3300	5%	GRM2195C2A332JA01D

Value (pF)	Tol.	Order Code
<b>50 Volt</b>		
0.5	0.25pF	GRM2165C1HR50CD01D
1.0	0.25pF	GRM2165C1HR0CD01D
1.1	0.25pF	GRM2165C1HR1CD01D
1.2	0.25pF	GRM2165C1HR2CD01D
1.3	0.25pF	GRM2165C1HR3CD01D
1.5	0.25pF	GRM2165C1HR5CD01D
1.6	0.25pF	GRM2165C1HR6CD01D
1.8	0.25pF	GRM2165C1HR8CD01D
2.0	0.25pF	GRM2165C1HR0CD01D
2.2	0.25pF	GRM2165C1HR2CD01D
2.4	0.25pF	GRM2165C1HR4CD01D
2.7	0.25pF	GRM2165C1HR7CD01D
3.0	0.25pF	GRM2165C1HR3CD01D
3.3	0.25pF	GRM2165C1HR6CD01D
3.6	0.25pF	GRM2165C1HR9CD01D
3.9	0.25pF	GRM2165C1HR3CD01D
4.3	0.25pF	GRM2165C1HR4CD01D
4.7	0.25pF	GRM2165C1HR7CD01D
5.1	0.5pF	GRM2165C1H5R1DD01D
5.6	0.5pF	GRM2165C1H5R6DD01D
6.2	0.5pF	GRM2165C1H6R2DD01D
6.8	0.5pF	GRM2165C1H6R8DD01D
7.5	0.5pF	GRM2165C1H7R5DD01D
8.2	0.5pF	GRM2165C1H8R2DD01D
9.1	0.5pF	GRM2165C1H9R1DD01D
10	5%	GRM2165C1H100JZ01D
11	5%	GRM2165C1H110JZ01D
12	5%	GRM2165C1H120JZ01D
13	5%	GRM2165C1H130JZ01D
15	5%	GRM2165C1H150JZ01D
16	5%	GRM2165C1H160JZ01D
18	5%	GRM2165C1H180JZ01D
20	5%	GRM2165C1H200JZ01D
22	5%	GRM2165C1H220JZ01D
24	5%	GRM2165C1H240JZ01D
27	5%	GRM2165C1H270JZ01D
30	5%	GRM2165C1H300JZ01D
33	5%	GRM2165C1H330JZ01D
36	5%	GRM2165C1H360JZ01D
39	5%	GRM2165C1H390JZ01D
43	5%	GRM2165C1H430JZ01D
47	5%	GRM2165C1H470JZ01D
51	5%	GRM2165C1H510JZ01D
56	5%	GRM2165C1H560JZ01D
62	5%	GRM2165C1H620JZ01D
68	5%	GRM2165C1H680JD01D
75	5%	GRM2165C1H750JZ01D
82	5%	GRM2165C1H820JZ01D
91	5%	GRM2165C1H910JZ01D
100	5%	GRM2165C1H101JA01D
110	5%	GRM2165C1H111JD01D
120	5%	GRM2165C1H121JA01D
130	5%	GRM2165C1H131JZ01D
150	5%	GRM2165C1H151JA01D
160	5%	GRM2165C1H161JD51D
180	5%	GRM2165C1H181JA01D
200	5%	GRM2165C1H201JA01D
220	5%	GRM2165C1H221JA01D
240	5%	GRM2165C1H241JD01D
270	5%	GRM2165C1H271JA01D
300	5%	GRM2165C1H301JZ01D
330	5%	GRM2165C1H331JA01D
360	5%	GRM2165C1H361JZ01D

(cont.)

NP0 (COG) dielectric

Value (pF)	Tol.	Order Code
<b>50 Volt (cont.)</b>		
2400	5%	GRM2165C1H242JD01L
4700	5%	GRM2165C1H472JA01D
5600	5%	GRM2195C1H562JA01D
6800	5%	GRM2195C1H682JA01D
8200	5%	GRM2195C1H822JA01D
(μF)		
0.01	5%	GRM2195C1H103JA01D
0.012	5%	GRM2195C1H123JA01D
0.015	5%	GRM2195C1H153JA01D
0.018	5%	GRM2195C1H183JA01L
0.022	5%	GRM2195C1H223JA01L

X7R dielectric : 10% tol.

Value (pF)	Order Code
<b>200 Volt</b>	
220	GRM219R72D221KY21D
270	GRM219R72D271KY21D
330	GRM219R72D331KY21D
390	GRM219R72D391KD01D
470	GRM219R72D471KY21D
560	GRM219R72D561KY21D
680	GRM219R72D681KY21D
820	GRM219R72D821KY21D
1000	GRM219R72D102KY21D
1200	GRM219R72D122KY21D
1500	GRM219R72D152KY21D
1800	GRM219R72D182KY21D
2200	GRM219R72D222KY21L
2700	GRM219R72D272KY21L
3300	GRM219R72D332KY21L
3900	GRM219R72D392KY21L
4700	GRM219R72D472KY21L
5600	GRM219R72D562KY21L
6800	GRM219R72D682KY21L
8200	GRM219R72D822KY21L

Value (pF)	Order Code
<b>100 Volt</b>	
220	GRM219R72A221KA01D
330	GRM219R72A331KA01D
470	GRM219R72A471KA01D
680	GRM219R72A681KA01D
1000	GRM219R72A102KA01D
1200	GRM219R72A122KA01D
1500	GRM219R72A152KA01D
1800	GRM219R72A182KA01D
2200	GRM219R72A222KA01D
2700	GRM219R72A272KA01D
3300	GRM219R72A332KA01D
3900	GRM219R72A392KA01D
4700	GRM219R72A472KA01D
5600	GRM219R72A562KA01D
6800	GRM219R72A682KA01D
8200	GRM219R72A822KA01L

Value (pF)	Order Code
<b>50 Volt</b>	
0.01	GRM219R72A103KA01L
0.012	GRM219R72A123KA01L
0.015	GRM219R72A153KA01L
0.022	GRM219R72A223KA01L
0.033	GRM219R72A333KA01L
0.047	GRM219R72A473KA01L
0.068	GRM219R72A683KA01L
0.1	GRM219R72A823KA01L
0.15	GRM219R72A104KA01L
0.22	GRM219R72A124KA01L
0.33	GRM219R72A154KA01L
0.47	GRM219R72A184KA01L
0.68	GRM219R72A224KA01L
1.0	GRM219R72A274KA01L

Value (pF)	Order Code
<b>50 Volt</b>	
330	GRM216R71H331KD01D
390	GRM216R71H391KD01D
470	GRM216R71H471KA01D
560	GRM216R71H561KA01D
680	GRM216R71H681KA01D
820	GRM216R71H821KA01D
1000	GRM216R71H102KA01D
1200	GRM216R71H122KA01D
1500	GRM216R71H152KA01D
1800	GRM216R71H182KA01D
2200	GRM216R71H222KA01D
2700	GRM216R71H272KA01D
3300	GRM216R71H332KA01D
3900	GRM216R71H392KA01D
4700	GRM216R71H472KA01D
5600	GRM216R71H562KA01D
6800	GRM216R71H682KA01D
8200	GRM216R71H822KA01D

(cont.)

X7R dielectric : 10% tol.

Value (μF)	Order Code
<b>50 Volt (cont.)</b>	
0.039	GRM219R71H393KA01D
0.047	GRM219R71H473KA01L
0.056	GRM219R71H563KA01L
0.068	GRM219R71H683KA01L
0.1	GRM219R71H104KA01L
0.1*	GRM219R71H104KA01K
0.15	GRM219R71H154KA01L
0.22	GRM219R71H224KA01L
0.33	GRM219R71H334KA88D
0.47	GRM219R71H474KA88L

Value (μF)	Order Code
<b>75 Volt</b>	
0.022	GRM216R71E223KA01D
0.033	GRM216R71E333KA01D
0.047	GRM219R71E473KA01D
0.056	GRM219R71E563KA01L
0.068	GRM219R71E683KA01D
0.1	GRM219R71E104KA01L
0.082	GRM219R71E823KA01L
0.1	GRM219R71E104KA01L
0.1*	GRM219R71E104KA01K
0.12	GRM219R71E124KA01L
0.15	GRM219R71E154KA01L
0.22	GRM219R71E224KA01D
0.33	GRM219R71E334KA01L
0.47	GRM219R71E474KA88D
0.68	GRM219R71E684KA88D

Value (μF)	Order Code
<b>160 Volt</b>	
0.1	GRM216R71C473KA01D
0.1	GRM219R71C104KA01D
0.18	GRM219R71C184KA01L