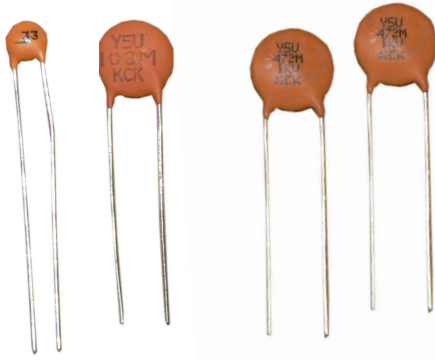


# Types GE, GH, GM, GP Disc Ceramic Capacitors

## General Purpose Capacitors



Type G general purpose disc ceramic capacitors are an ideal choice for low cost, small size and low to high DC voltage, general purpose, coupling, by-pass and filtering applications.

### Highlights

- Small size
- Conformally coated
- Radial leads
- General purpose
- Long leads



### Specifications

<b>Capacitance Range:</b>	5 pF to 22,000 pF
<b>Voltage Range:</b>	50, 100, 500, 1,000 Vdc
<b>Tolerance:</b>	See ratings tables
<b>Operating Temperature Range:</b>	-30 °C to +85 °C
<b>Insulation Resistance:</b>	10,000 MΩ minimum
<b>Dissipation Factor:</b>	2.5% max. @ 1 kHz; Y5U: 4% @ 1kHz
<b>Breakdown Voltage:</b>	2.5 x rated voltage for 5 seconds maximum
<b>Lead Length:</b>	1.0 inch minimum

Complies with the EU Directive 2002/95/EC requirement restricting the use of Lead (Pb), Mercury (Hg), Cadmium (Cd), Hexavalent chromium (Cr(VI)), PolyBrominated Biphenyls (PBB) and PolyBrominated Diphenyl Ethers (PBDE).

### Ratings

Cap	Catalog Part Number	Tol. (±)	Temp. Coef.	Size (Inches)				Size (Millimeters)			
<b>50 Vdc</b>											
5	GE050C *	.25pF	SL	.157	.118	.098	.016	4.0	3.0	2.5	.4
10	GE100D **	.5pF	SL	.157	.118	.098	.016	4.0	3.0	2.5	.4
20	GE200K **	10%	SL	.157	.118	.098	.016	4.0	3.0	2.5	.4
27	GE270K *	10%	SL	.157	.118	.098	.016	4.0	3.0	2.5	.4
33	GE330K	10%	SL	.157	.118	.098	.016	4.0	3.0	2.5	.4
68	GE680K *	10%	SL	.157	.118	.098	.016	4.0	3.0	2.5	.4
100	GE101K	10%	Y5P	.157	.118	.098	.016	4.0	3.0	2.5	.4
330	GE331K *	10%	Y5P	.157	.118	.098	.016	4.0	3.0	2.5	.4
470	GE471K *	10%	Y5P	.157	.118	.098	.016	4.0	3.0	2.5	.4
1,000	GE102K	10%	Y5P	.197	.118	.098	.016	5.0	3.0	2.5	.4
1,000	GE102M *	20%	Y5T	.157	.118	.098	.016	4.0	3.0	2.5	.4
1,500	GE152K **	10%	Y5P	.197	.118	.098	.016	5.0	3.0	2.5	.4
10,000	GE103K *	10%	Y5P	.472	.118	.197	.020	12.0	3.0	5.0	.5
<b>100 Vdc</b>											
2,200	GH222M *	20%	Y5U	.236	.157	.252	.025	6.0	3.0	6.4	.6
<b>500 Vdc</b>											
15	GM150K *	10%	SL	.236	.157	.252	.025	6.0	4.0	6.4	.6
100	GM101K	10%	Y5P	.236	.157	.252	.025	6.0	4.0	6.4	.6
330	GM331K *	10%	Y5P	.236	.157	.252	.025	6.0	4.0	6.4	.6
470	GM471K *	10%	Y5P	.236	.157	.252	.025	6.0	4.0	6.4	.6
680	GM681K **	10%	Y5P	.236	.157	.252	.025	6.0	4.0	6.4	.6
1,000	GM102K*	10%	Y5P	.236	.157	.252	.025	6.0	4.0	6.4	.6
1,000	GM102M *	20%	Y5U	.236	.157	.252	.025	6.0	4.0	6.4	.6
1,000	GM102Z **	-20+80	Y5U	.236	.157	.252	.025	6.0	4.0	6.4	.6
2,200	GM222K *	10%	Y5P	.339	.157	.250	.025	8.6	4.0	6.4	.6
3,300	GM332M **	20%	Y5U	.291	.157	.252	.025	7.4	4.0	6.4	.6
4,700	GM472K *	10%	Y5P	.492	.157	.252	.025	12.5	4.0	6.4	.6
4,700	GM472M *	20%	Y5U	.339	.157	.252	.025	8.6	4.0	6.4	.6
10,000	GM103K	10%	Y5P	.642	.157	.374	.025	16.3	4.0	9.5	.6
10,000	GM103M *	20%	Y5U	.492	.157	.252	.025	12.5	4.0	6.4	.6
10,000	GM103Z *	-20+80	Y5U	.492	.157	.252	.025	12.5	4.0	6.4	.6
22,000	GM223Z*	-20+80	Y5U	.642	.157	.374	.025	16.3	4.0	9.5	.6

\* Available only until stock is depleted

\*\* Part number obsolete

# Types GE, GH, GM, GP Disc Ceramic Capacitors

## Ratings

## RoHS Compliant

Cap (pF)	Catalog Part Number	Tol. (±)	Temp. Coef.	Size (Inches)				Size (Millimeters)			
				D	T	S	d	D	T	S	d
<b>1000 Vdc</b>											
27	GP427 *	10%	SL	.236	.177	.252	.025	6.0	4.5	6.4	.6
30	GP430 **	10%	SL	.236	.177	.252	.025	6.0	4.5	6.4	.6
47	GP447	10%	SL	.236	.177	.252	.025	6.0	4.5	6.4	.6
100	GP310	10%	Y5P	.236	.177	.252	.025	6.0	4.5	6.4	.6
220	GP322**	10%	Y5P	.236	.177	.252	.025	6.0	4.5	6.4	.6
270	GP327 *	10%	Y5P	.236	.177	.252	.025	6.0	4.5	6.4	.6
330	GP333 **	10%	Y5P	.236	.177	.252	.025	6.0	4.5	6.4	.6

Cap (pF)	Catalog Part Number	Tol. (±)	Temp. Coef.	Size (Inches)				Size (Millimeters)			
				D	T	S	d	D	T	S	d
<b>1000 Vdc</b>											
470	GP347 **	10%	Y5P	.236	.177	.252	.025	6.0	4.5	6.4	.6
560	GP356 *	10%	Y5P	.236	.177	.252	.025	6.0	4.5	6.4	.6
680	GP368 *	10%	Y5P	.236	.177	.252	.025	6.0	4.5	6.4	.6
1,000	GP210	10%	Y5P	.291	.177	.252	.025	7.4	4.5	6.4	.6
2,200	GP222	10%	Y5P	.374	.177	.252	.025	9.5	4.5	6.4	.6
4,700	GP247*	20%	Y5U	.433	.177	.252	.025	11.0	4.5	6.4	.6
22,000	GP122 **	20%	Y5U	.748	.177	.374	.025	19.0	4.5	9.5	.6

\* Available only until stock is depleted

\*\* Part number obsolete

### EIA TEMPERATURE COEFFICIENT CODES

A combination of characters designating capacitance drift over a temperature range.  
Example: Y5E could change ±4.7% over a temperature range of -30°C to +85°C.

Letter Symbol	Low Temp Requirement	Number Symbol	High Temp Requirement	Letter Symbol	Maximum Capacitance Change Over Temp Rating
X	-55°C	2	+45°C	A	±1.0%
Y	-30°C	4	+65°C	B	±1.5%
Z	+10°C	5	+85°C	C	±2.2%
		6	+105°C	D	±3.3%
		7	+125°C	E	±4.7%
				F	±7.5%
				P	±10.0%
				R	±15.0%
				S	±22.0%
				T	+22%, -33%
				U	+22%, -56%
				V	+22%, -82%

### TEMPERATURE COEFFICIENT CODES

Temperature Range -55°C +125°C	% Change Per 1°C	
NPO-(COG)	+30ppm	.0030%
N330	-330ppm	-.033%
N470	-470ppm	-.047%
N750	-750ppm	-.075%
N1000	-1000ppm	-.10%
N1500	-1500ppm	-.15%
N2200	-2200ppm	-.22%
N3300	-3300ppm	-.33%
N4700	-4700ppm	-.47%
N5600	-5600ppm	-.56%
SL	-750, +100ppm	±.075% Max

### Physical Specifications

Case: Conformal Coating

Lead material: Tinned copper wire. (Minimum lead content: 5%)

#### Tape and Reel Available upon Request

Leads are formed to .200 (5.0mm) lead spacing

For D less than .315 (8.0mm) - Quantity/Reel = 2500 pcs

For D .315 (8.0mm) to .472 (12.0mm) - Quantity/Reel = 2000 pcs

Tape and Reel not available for D greater than .472 (12mm)

