

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

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

RoHS Compliant

Ratings

Cap	Catalog		Temp.	Size				Size			
Part Number	Tol.	Coef.	D	T	S	d	D	T	S	d	
(pF)		(±)		(Inches)				(Millimeters)			
50 Vdc											
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
680	GE681K *	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
10,000	GE103M *	20%	Y5U	.315	.118	.197	.020	8.0	3.0	5.0	.5
100 Vdc											
2,200	GH222M *	20%	Y5U	.236	.118	.252	.025	6.0	3.0	6.4	.6
10,000	GH103M *	20%	Y5U	.374	.118	.252	.025	9.5	3.0	6.4	.6

	Catalog		Temp.	Size				Size			
Cap	Part Number	Tol.	Coef.	D	T	S	d	D	T	S	d
(pF)		(±)		(Inches)				(Millimeters)			
500 Vdc											
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	GM223M	20%	Y5U	.642	.157	.374	.025	16.3	4.0	9.5	.6
22,000	GM223Z	-20+80	Y5U	.642	.157	.374	.025	16.3	4.0	9.5	.6

* Available only until stock is depleted

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Ratings

RoHS Compliant

Cap	Catalog	Tol.	Temp.	Size				Size			
Cap (pF)	Part Number	Tol. (±)	Coef.	D	T	S	d	D	T	S	d
				(Inches)				(Millimeters)			
1000 Vdc											
22	GP422	10%	SL	.236	.177	.252	.025	6.0	4.5	6.4	.6
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	Catalog	Tol.	Temp.	Size				Size			
Cap (pF)	Part Number	Tol. (±)	Coef.	D	T	S	d	D	T	S	d
				(Inches)				(Millimeters)			
1000 Vdc											
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
6,800	GP268P *	10%	Y5P	.669	.177	.374	.025	17.0	4.5	9.5	.6
10,000	GP110	20%	Y5U	.591	.177	.374	.025	15.0	4.5	9.5	.6
22,000	GP122 *	20%	Y5U	.748	.177	.374	.025	19.0	4.5	9.5	.6

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EIA TEMPERATURE COEFFICIENT CODES

A combination of characters designating capacitance drift over a temperature range.
Example: Y5E could change $\pm 4.7\%$ over a temperature range of -30°C to $+85^{\circ}\text{C}$.

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

TEMPERATURE COEFFICIENT CODES

Temperature Range -55°C to $+125^{\circ}\text{C}$	% Change Per 1°C
NPO-(COG)	$\pm 30\text{ppm}$
N330	-330ppm
N470	-470ppm
N750	-750ppm
N1000	-1000ppm
N1500	-1500ppm
N2200	-2200ppm
N3300	-3300ppm
N4700	-4700ppm
N5600	-5600ppm
SL	$-750, +100\text{ppm}$
	$\pm 0.075\%$ 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)

