

Lead-Free Surface Mount Ceramic Capacitors

Surface Mount Multilayer Ceramic (SMC) capacitors come in case sizes ranging from 01005 to 2225. The most popular case sizes are listed in the table below. Parts on tape and reel are available on paper tape or plastic

tape. Larger size reels are available upon special request. Practical Components has lead-free PCB test boards available for the 01005 through 1206 case sizes.

SMC Surface Mount Ceramic Capacitors—Plastic Tape

Part Description	Body Size	Body Size	Tape Width	Tape Pitch	Quantity 7" Reel	Lead-Free Plating
0805SMC-PL-Sn	.08" x .05"	2.0 x 1.2mm	8mm	4mm	4,000	Sn
1206SMC-PL-Sn	.12" x .06"	3.2 x 1.6mm	8mm	4mm	3,000	Sn
1210SMC-PL-Sn	.12" x .10"	3.2 x 2.6mm	8mm	4mm	4,000	Sn
1812SMC-PL-Sn	.18" x .12"	4.5 x 3.2mm	12mm	8mm	1,100	Sn
1825SMC-PL-Sn	.18" x .25"	4.5 x 6.4mm	12mm	8mm	1,000	Sn

SMC Surface Mount Ceramic Capacitors—Paper Tape

Part Description	Body Size	Body Size	Tape Width	Tape Pitch	Quantity 7" Reel	Lead-Free Plating
01005SMC-PA-Sn	.01" x .005"	0.4 x 0.2mm	8mm	2mm	15K~20K	Sn
0201SMC-PA-Sn	.02" x .01"	0.6 x 0.3mm	8mm	2mm	15,000	Sn
0402SMC-PA-Sn	.04" x .02"	1.0 x 0.5mm	8mm	2mm	10,000	Sn
0603SMC-PA-Sn	.06" x .03"	1.6 x 0.8mm	8mm	4mm	4,000	Sn
0805SMC-PA-Sn	.08" x .05"	2.0 x 1.2mm	8mm	4mm	5,000	Sn
1206SMC-PA-Sn	.12" x .06"	3.2 x 1.6mm	8mm	4mm	4,000	Sn

Notes

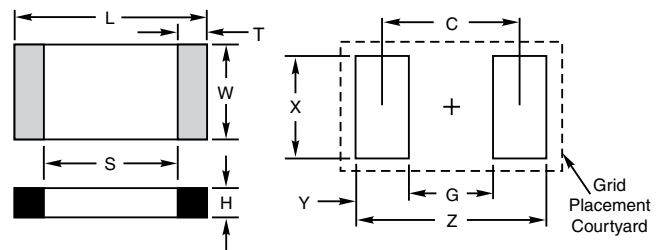
- Surface mount capacitors come on standard 7" reels (larger quantity reels are available upon request).
- Plastic carrier tape is non-standard for some carrier sizes.
- The numeric section of the part number refers to the physical body size (in inches) of the component. For example: Part number 0805SMC-PL has a body size of .08" length by .05" width.
- Chip capacitor arrays are available. Call for details.
- Capacitors are now only available standard lead-free with 100% Sn over Ni. SnPb is available upon request based on availability.

Part Description System

Body Size in Inches — 0402SMC-PA — Tape Type

Surface Mount Ceramic Capacitor

- Tape Type: PA = Paper Tape, PL = Plastic Tape



For kits see pages 88, 105, 106 and 107.

SMC Component Dimensions

Component Dimensions (mm) (in)	L (mm)		S (mm)		W (mm)		T (mm)		H (mm) Max
	Min	Max	Min	Max	Min	Max	Min	Max	
0603 (0201)	0.57	0.63	—	—	0.27	0.33	—	—	0.33
1005 (0402)	0.90	1.10	0.30	0.65	0.40	0.60	0.10	0.30	0.60
1608 (0603)	1.45	1.75	0.45	0.97	0.65	0.95	0.20	0.50	0.85
2012 (0805)	1.80	2.20	0.30	1.11	1.05	1.45	0.25	0.75	1.10
3216 (1206)	3.00	3.40	1.50	2.31	1.40	1.80	0.25	0.75	1.35
3225 (1210)	3.00	3.40	1.50	2.31	2.30	2.70	0.25	0.75	1.35
4532 (1812)	4.20	4.80	2.30	3.46	3.00	3.40	0.25	0.95	1.35

SMC Land Pattern Dimensions

Component Identifier (mm) (in)	Z (mm)	G (mm)	X (mm)	Y (mm) Ref	C (mm) Ref	Placement Grid (No. of Grid Elements)
0603 (0201)	0.72	0.26	0.32	0.23	0.49	—
1005 (0402)	2.20	0.40	0.70	0.90	1.40	2 x 6
1608 (0603)	2.80	0.60	1.00	1.10	1.70	4 x 6
2012 (0805)	3.20	0.60	1.50	1.30	1.90	4 x 8
3216 (1206)	4.40	1.20	1.80	1.60	2.80	4 x 10
3225 (1210)	4.40	1.20	2.70	1.60	2.80	6 x 10
4532 (1812)	5.80	2.00	3.40	1.60	3.90	8 x 12