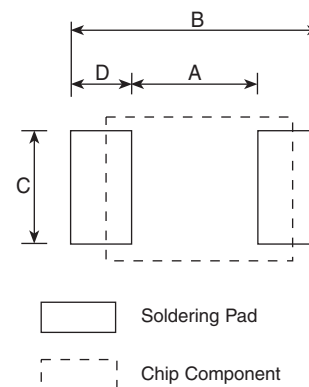


standard soldering pad dimensions

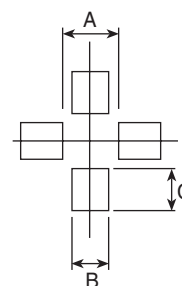
The optimum soldering pad dimensions may differ depending on soldering conditions, however, the following land dimensions are generally recommended.

Type	Style	Dimensions millimeters				
		Component Size	A	B	C	D
RK73	1H	0.6 X 0.3	0.25	0.7	0.3	0.225
SG73	1E	1.0 X 0.5	0.5	1.3	0.3	0.4
RN73	1J	1.6 X 0.8	1.0	2.0	0.6	0.5
SR73	2A	2.0 X 1.25	1.3	2.5	1.05	0.6
RK73N	2B	3.2 X 1.6	2.2	4.0	1.4	0.9
LT73	2E	3.2 X 2.5	2.2	4.0	2.3	0.9
NT73	2H	5.0 X 2.5	3.5	6.3	2.3	1.4
PT72	3A	6.4 X 3.2	4.6	8.0	3.0	1.7
LA73	1	6.3 X 3.1	4.6	8.0	3.0	1.7
RF73	2-3	11.5 X 7.0	8.0	15.0	4.0	3.5
KL73	1	7.5 X 4.5	4.0	10.0	3.0	3.0
SL/TSL	2	12.0 X 8.0	8.0	15.0	4.0	3.5
NPR	2E	3.2 X 2.5	2.2	5.0	2.0	1.4
CCP	2B	3.2 x 1.6	2.2	5.0	1.4	1.4
CCF	1	6.0 X 2.5	3.0	7.2	2.8	2.1
LPC	4045	4.5 X 4.0	1.5	5.1	3.5	1.8
	9040	9.0 X 4.8	4.0	2.6	3.0	—
	10065	10.0 X 10.4	5.0	13.0	6.0	4.0
	12065	12 X 12.4	5.0	15.0	7.5	5.0
KL	32	3.2 X 2.5	2.2	5.0	2.0	1.4
KQ	0402	1.0 X 0.5	0.46	1.18	0.66	0.36
	0603	1.6 X 1.0	0.64	1.92	1.02	0.64
	0805	2.0 X 1.5	0.76	2.8	1.78	1.02
	1008	2.5 X 2.2	1.27	3.31	2.54	1.02
CZB	1E	0.50 X 0.10	0.4	1.3	0.5	—
CZP	1J	0.80 X 1.6	0.6	2.6	0.8	—
MHL	2A	1.25 X 2.0	1.0	3.0	1.0	—
MCL	2B	1.6 X 3.2	2.2	4.4	1.4	—
SDR	0604	5.6 X 4.5	1.7	6.0	5.8	—
	0805	7.5 X 7.5	2.4	7.8	8.0	2.7
	1006	9.5 X 9.5	2.8	10.0	10.0	3.6
TF	16	1.6 X 0.8	1.0	2.0	0.6	0.5
	20	2.0 X 1.25	1.3	2.5	1.05	0.6
TLR	3A (1mΩ)	6.35 X 3.18	1.95	7.55	3.83	3.05
	3A (2mΩ)		3.45	7.55	3.83	2.05
	3A (3mΩ)		2.15	7.55	3.83	2.70
	3A (4mΩ)		3.45	7.55	3.83	2.05
	2B	3.2 X 1.6	1.4	4.0	1.8	1.3
UR73	2A	2.0 X 1.25	1.3	3.1	1.25	0.9
	2B	3.2 X 1.6	2.2	4.4	1.6	1.1

Flat Type Components



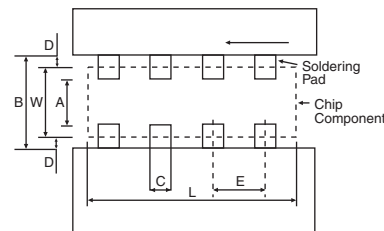
LPC 9040



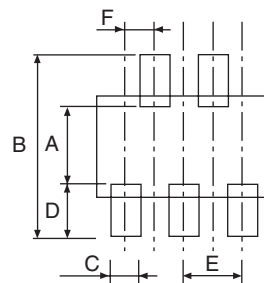
resistor arrays—CN

Type	Style	Dimensions						
		Component Size		A	B	C	D	E
		L	W					
CN	1E2K 1E4K	0.5 X n	1.0	0.5	1.5	0.4	0.25	0.67
						0.3		0.5
	1F8K	3.8	1.6	1.0	2.6	0.3	0.5	0.5
	1JA/K	0.8 X n	1.6	1.0	2.6	0.6	0.5	0.8
	2B4A	5.1	3.1	2.1	4.1	0.9	0.5	1.27
	1J	0.8 X n	1.6	0.8	2.6	0.4	0.5	0.8
	2A 2B	1.27 X n	2.0	1.0	3.0	0.65	0.5	1.27
			3.2	2.2	4.2	0.65	0.5	1.27
CND	1J10K	3.2	1.6	0.9	2.6	0.4	0.5	0.64
	2B10	6.4	3.1	2.1	4.1	0.6	0.5	1.27
CNN	2A	2.54	2.0	1.2	2.8	0.6	0.4	1.27

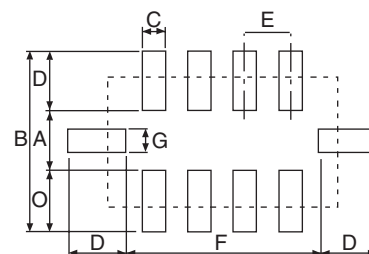
Chip Networks



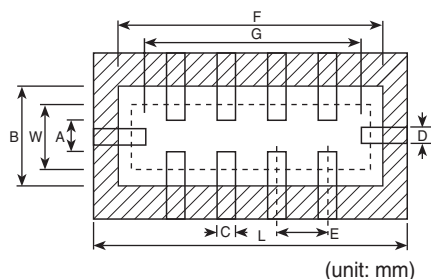
CNB2E5Z, CNB2B9Z



CND1J10Y, CND2A10Y



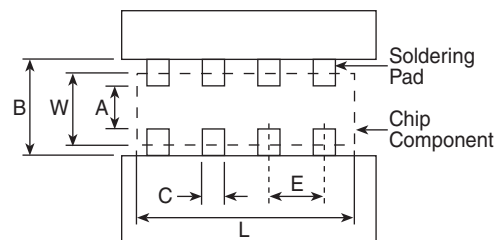
chip resistor array—CR



Dimensions inches (mm)								
L	W	A	B	C	D	E	F	G
1.6	.08	.07	.12	.02	.02	.03	.2	.14
4.0	2.1	1.7	3.1	0.4	0.4	0.8	5.1	3.5

ferrite bead array—FBA

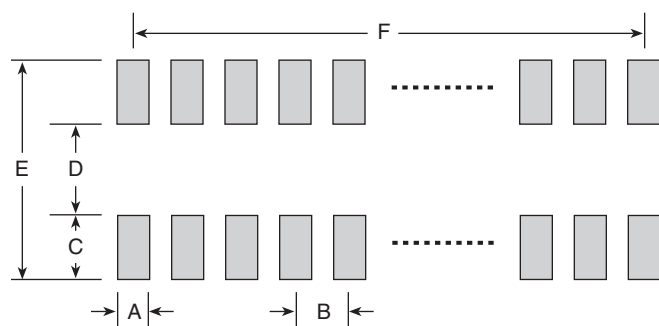
Chip Size	Dimensions inches (mm)					
	Component Size		A	B	C	E
	L	W				
1206 (3216)	.126 (3.2)	.063 (1.6)	.030 (0.762)	.120 (3.048)	.016 (0.406)	.031 (0.787)



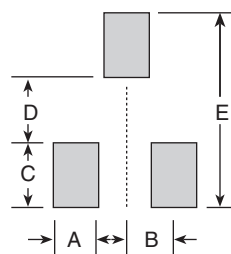
integrated passive devices—SOIC, TSSOP, QSOP & SOT23

Chip Size	Dimensions inches (mm)					
	A	B	C	D	E	F
N08	.028 (0.7)	.050 (1.27)	.094 (2.4)	.098 (2.5)	.287 (7.3)	.150 (3.81)
N14	.028 (0.7)	.050 (1.27)	.094 (2.4)	.098 (2.5)	.287 (7.3)	.300 (7.62)
N16	.028 (0.7)	.050 (1.27)	.094 (2.4)	.098 (2.5)	.287 (7.3)	.350 (8.89)
W16	.028 (0.7)	.050 (1.27)	.094 (2.4)	.272 (6.9)	.461 (11.7)	.350 (8.89)
W20	.028 (0.7)	.050 (1.27)	.094 (2.4)	.272 (6.9)	.461 (11.7)	.450 (11.43)
Q16	.012 (0.3)	.025 (0.63)	.050 (1.27)	.180 (4.56)	.280 (7.1)	.175 (4.45)
Q20	.012 (0.3)	.025 (0.63)	.050 (1.27)	.180 (4.56)	.280 (7.1)	.225 (5.72)
Q24	.012 (0.3)	.025 (0.63)	.050 (1.27)	.180 (4.56)	.280 (7.1)	.275 (6.99)
Q28	.012 (0.3)	.025 (0.63)	.050 (1.27)	.180 (4.56)	.280 (7.1)	.325 (8.26)
SOT23	.035 (0.9)	.037 (0.95)	.055 (1.4)	.035 (0.9)	.138 (3.5)	—

SOIC, TSSOP, QSOP

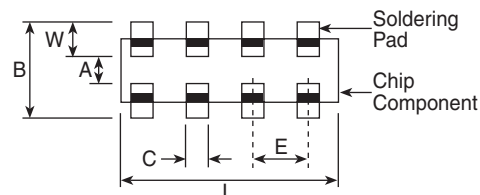


SOT23



capacitor arrays—MCA

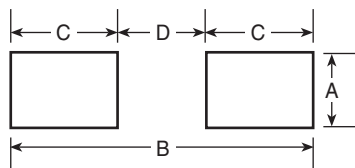
Chip Size	Dimensions inches (mm)				
	Size W	A	B	C	E
0402	.012 (0.31 ± 0.10)	—	.062 (1.59 ± 0.15)	.011 (0.28 ± 0.10)	.019 (0.50 ± 0.10)
0603	.035 (0.89 ± 0.10)	.030 (0.76 ± 0.10)	.099 (2.54 ± 0.15)	.020 (0.45 ± 0.10)	.031 (0.80 ± 0.10)



ceramic chip capacitors

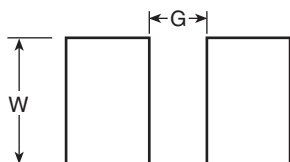
Component pads should be designed to achieve good solder fillets and minimize component movement during reflow soldering. Pad dimensions are given below for multilayer ceramic capacitors for both reflow and wave soldering. The basis for these designs is:

- Pad width equal to component width. It is permissible to decrease this to as low as 85% of component width but it is not advisable to go below this.
- Pad overlap 0.5mm beneath component
- Pad extension 0.5mm beyond components for reflow and 1.0mm for wave soldering



Case Size	Dimensions inches (mm)			
	A	B	C	D
0402	0.02 (0.50)	0.07 (1.70)	0.02 (0.60)	0.02 (0.50)
0603	0.03 (0.75)	0.09 (2.30)	0.03 (0.80)	0.03 (0.70)
0805	0.05 (1.25)	0.12 (3.00)	0.04 (1.00)	0.04 (1.00)
1206	0.06 (1.60)	0.16 (4.00)	0.04 (1.00)	0.09 (2.00)
1210	0.10 (2.50)	0.16 (4.00)	0.04 (1.00)	0.09 (2.00)
1812	0.12 (3.00)	0.22 (5.60)	0.04 (1.00)	0.14 (3.60)

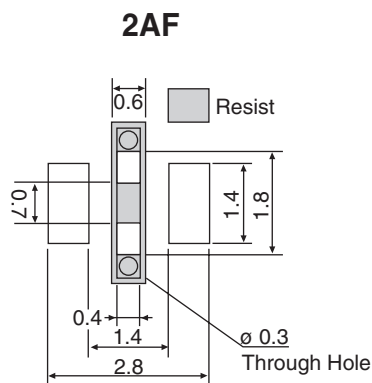
ceramic chip capacitors—HFC



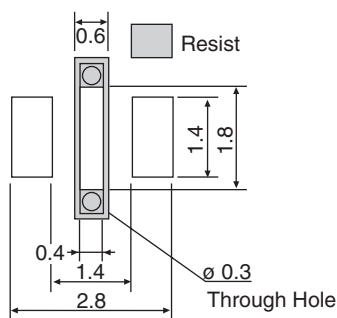
Type	Part	Dimensions inches (mm)	
		L	W
HFC	1005	0.015 (0.40)	0.020 (0.50)
	1410	0.031 (0.80)	0.039 (1.00)
	1608	0.039 (1.00)	0.031 (0.80)
	1610	0.039 (1.00)	0.039 (1.00)
	1612	0.039 (1.00)	0.047 (1.20)

three-terminal inductor/capacitor—KC

Chip Mounting Side

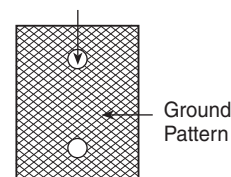


2A



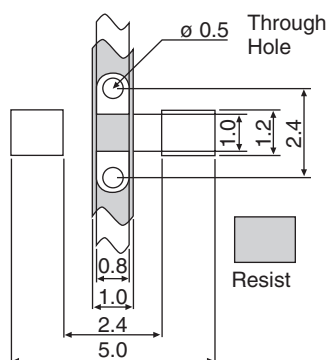
Back Side

Connect to ground pattern of mounting side



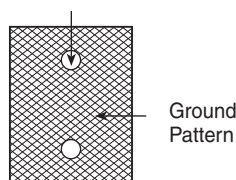
three-terminal capacitor/resistor—KCR

Chip Mounting Side



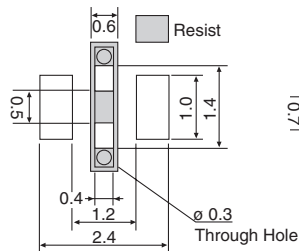
Back Side

Connect to ground pattern of mounting side

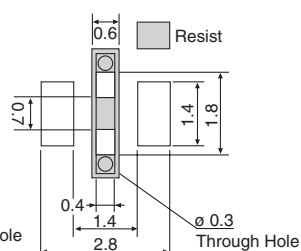


three-terminal capacitor—KGM

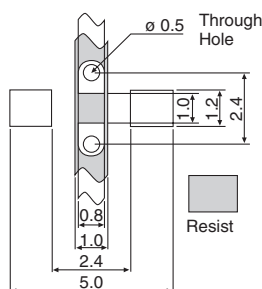
0603 Chip Mounting Side



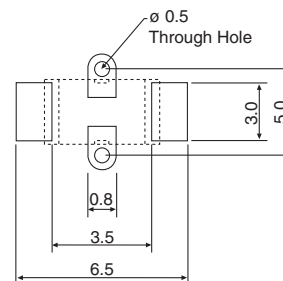
0805 Chip Mounting Side



1206 Chip Mounting Side

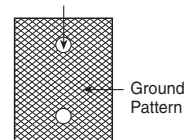


1812 Chip Mounting Side



0603, 0805, 1206, 1812 Back Side

Connect to ground pattern of mounting side



(unit: mm)