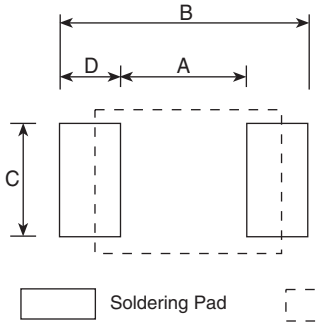
standard soldering pad dimensions

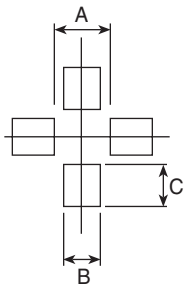
The optimum soldering pad dimensions may differ depending on soldering conditions, however, the following land dimensions are generally recommended.

Type	Style	Dimensions millimeters				
		Component Size	A	B	C	D
WK73 WU73	2B	1.6 X 3.2	0.7	2.3	3.2	0.8
	2H	2.5 X 5.0	1.0	35	5.0	1.25
	2J	3.1 X 4.6	1.6	3.9	4.75	1.15
	3A	3.1 X 6.4	1.6	3.9	6.4	1.15
RK73 SG73 RN73 RN73H SR73 LT73 NT73 PT72 LA73 RF73 KL73 HV73 LP73 SDT73	1F	0.4 X 0.2	0.12	0.48	0.18	0.18
	1H	0.6 X 0.3	0.25	0.7	0.3	0.225
	1E	1.0 X 0.5	0.5	1.3	0.3	0.4
	1J	1.6 X 0.8	1.0	2.0	0.6	0.5
	2A	2.0 X 1.25	1.3	2.5	1.05	0.6
	2B	3.2 X 1.6	2.2	4.0	1.4	0.9
	2E	3.2 X 2.5	2.2	4.0	2.3	0.9
	2H	5.0 X 2.5	3.3	6.1	2.3	1.4
	3A	6.4 X 3.2	4.6	8.0	3.0	1.7
SL/TSL	07, W07	5.0 X 2.5	2.3	7.0	2.6	2.35
	1, W1	6.3 X 3.1	3.4	8.0	3.0	2.3
	2-3	11.5 X 7.0	5.4	15.0	5.0	4.8
SLN	2, 3, 5	11.5 X 7.0	5.0	15.0	6.0	5.0
CCP	2E	3.2 X 2.5	2.2	5.0	2.0	1.4
	2B	3.2 x 1.6	2.2	5.0	1.4	1.4
CCF	1N	6.0 X 2.5	3.0	7.2	2.8	2.1
	1F	6.0 X 2.5	3.2	8.8	5.0	2.8
LPC	4045	4.5 X 4.0	1.5	5.1	3.5	1.8
	4235	4.5 X 4.2	1.9	5.5	2.6	1.8
	4545	4.1 X 4.6	2.9	5.3	4.7	1.2
	9040N	9.0 X 4.8	4.0	2.6	3.0	—
	9040E	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
KQT	0402	1.0 X 0.5	0.46	1.18	0.66	0.36
KQ KQC	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 CZP MHL	1E	0.50 X 0.10	0.4	1.6	0.6	—
	1J	0.80 X 1.6	0.55	2.6	0.94	—
	2A	1.25 X 2.0	0.66	3.0	1.45	—
	2B	1.6 X 3.2	1.5	4.4	1.8	—
SDR	0603,0604	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	10	1.0 X 0.5	0.5	1.3	0.3	0.4
	16	1.6 X 0.8	1.0	2.0	0.6	0.5

Flat Type Components



LPC 9040N



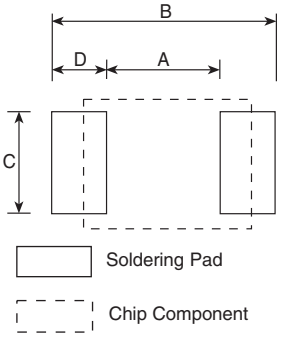
Type	Style	Dimensions millimeters				
		Component Size	A	B	C	D
TLR	1E	1.0 X 0.5	0.2	1.3	0.6	0.55
	2A	2.0 X 1.25	0.5	2.5	1.3	1.0
	2B, 2BW (1mΩ)	3.2 X 1.6	0.8	4.0	1.8	1.6
	2B, 2BW (2mΩ~20mΩ)	3.2 X 1.6	1.4	4.0	1.8	1.3
	2H, 2HW (1mΩ)	5.0 X 2.5	1.0	6.1	3.0	2.55
	2H, 2HW (2mΩ~6mΩ)	5.0 X 2.5	1.3	6.1	3.0	2.4
	2H, 2HW (7mΩ~10mΩ)	5.0 X 2.5	3.3	6.1	3.0	1.4
	3A(1mΩ)	6.35 X 3.18	1.45	7.55	3.83	3.05
	3A(2mΩ)	6.35 X 3.18	3.45	7.55	3.83	2.05
	3A(3mΩ)	6.35 X 3.18	2.15	7.55	3.83	2.70
	3A(4mΩ)	6.35 X 3.18	3.45	7.55	3.83	2.05
	3AW (0.5~0.82mΩ)	6.35 X 3.18	0.8	7.55	3.83	3.375
	3AW (1mΩ~4mΩ)	6.35 X 3.18	1.45	7.55	3.83	3.05
	3AW (5mΩ~8mΩ)	6.35 X 3.18	3.45	7.55	3.83	2.05
	3AW (9mΩ~10mΩ)	6.35 X 3.18	4.40	7.55	3.83	1.575
	3AP (0.5~0.82mΩ)	6.35 X 3.18	0.80	7.55	3.83	3.375
	3AP (1mΩ)	6.35 X 3.18	1.45	7.55	3.83	3.05
	3AP (2mΩ)	6.35 X 3.18	1.05	7.55	3.83	3.25
	3AP (3mΩ~4mΩ)	6.35 X 3.18	1.45	7.55	3.83	3.05
	3AP (5mΩ~8mΩ)	6.35 X 3.18	3.45	7.55	3.83	2.05
	3AP (9mΩ~10mΩ)	6.35 X 3.18	4.40	7.55	3.83	1.575
TLRH	2A	2.0 X 1.25	0.5	2.5	1.3	1.0
	3AW	6.3 X 3.2	4.4	7.5	3.7	1.55
	3AP	6.3 X 3.2	2.15	7.55	3.83	2.7
TLRZ	1J	1.6 X 0.8	0.5	2.0	0.9	0.75
	2A	2.0 X 1.25	0.5	2.5	1.45	1.0
	2B	3.2 X 1.6	2.2	3.8	1.8	0.8

standard soldering pad dimensions (continued)

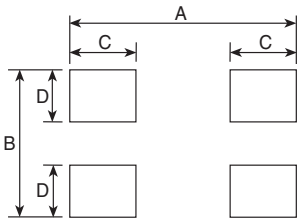
The optimum soldering pad dimensions may differ depending on soldering conditions, however, the following land dimensions are generally recommended.

Type	Style	Dimensions millimeters				
		Component Size	A	B	C	D
UR73 UR73D UR73V	1E	1.0 X 0.5	0.5	1.8	0.5	0.65
	1J	1.6 X 0.8	0.5	2.5	0.9	1.0
	2A	2.0 X 1.25	0.8	3.4	1.3	1.3
	2B	3.2 X 1.6	1.2	4.6	1.8	1.7
	2H (10mΩ~30mΩ)	5.0 X 2.5	1.8	6.1	2.6	2.15
	2H (33mΩ~100mΩ)	5.0 X 2.5	3.3	6.1	2.5	1.4
	3A (10mΩ~30mΩ)	6.3 X 3.1	2.3	8.0	3.3	2.85
	3A (33mΩ~100mΩ)	6.3 X 3.1	4.6	8.0	3.2	1.7
UR73VD	2B (10m~13m)	3.2 X 1.6	0.7	4.4	1.6	1.85
	2B (15m~16m)	3.2 X 1.6	0.9	4.4	1.6	1.75
	2B (18m~20m)	3.2 X 1.6	1.0	4.4	1.6	1.7
	2B (22m~27m)	3.2 X 1.6	1.1	4.4	1.6	1.65
NV73 NV73DL	1H	0.6 X 0.3	0.25-0.35	0.65-0.95	0.25-0.35	0.2-0.3
	1E	1.0 X 0.5	0.51	1.73	0.51	0.61
	1J	1.6 X 0.8	1.0	3.0	1.2	1.0
	2A	2.0 X 1.25	1.2	4.0	1.0	1.4
	2B	3.2 X 1.6	2.2	5.0	1.3	1.4
	2E	3.2 X 2.5	2.2	5.0	2.2	1.4
	2J	4.5 X 3.2	3.0	5.8	2.9	1.4
	2L	5.7 X 5.0	4.5	7.5	4.7	1.5
NV73DS	2L	6.1 X 5.1	4.5	7.5	4.7	1.5
SDS	0804 0805	8.0 X 10.5	5.7	10.5	2.2	2.4
	1003 1005	10.0 X 12.7	7.3	13.3	2.8	3.0
	0908	9.5 X 10.5	10.3	14.7	9.0	2.2
	1205 1206 1208	12.7 X 12.7	6.0	14.0	7.0	4.0
PS	J(0.5mΩ)	10.0 X 5.2	5.6	11	6.2	2.7
	J(1mΩ)	10.0 X 5.2	5.6	11	6.2	2.7
	G(0.5mΩ)	6.9 X 6.6	5	9.4	5.6	3.7
	G(1mΩ)	6.9 X 6.6	5	9.4	5.6	3.7
	B(0.2mΩ)	10.0 X 8.4	2.2	10.8	9.0	4.30
	B(0.75mΩ)	10.0 X 8.4	2.8	10.7	8.9	3.95
	B(1mΩ)	10.0 X 8.4	3.8	10.7	8.9	3.45
	I	10.0 X 5.2	5.6	11.0	6.2	2.7
	E	6.4 X 6.4	1.4	7.6	7.0	3.1
SLF	0905	—	9.5	3.74	2.0	1.2
LCM	1060	10 X 10	5.6	10.7	3.2	2.5

Flat Type Components



SLF

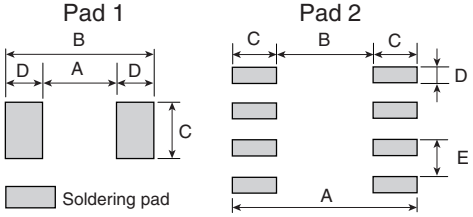


surface mount inductor—SDR

Dimensions millimeters						
Style	Pad	A	B	C	D	E
SDR0603, SDR0604	1	1.7	6.0	5.8	2.15	—
SDR0805	1	2.4	7.8	8.0	2.7	—
SDR1006	1	2.8	10.0	10.0	3.6	—
SDR0906	2	14.7	10.3	2.2	1.0	2.5

These pad dimensions are only for standard pattern and the characteristics are not guaranteed, which you are suggested to confirm before use.

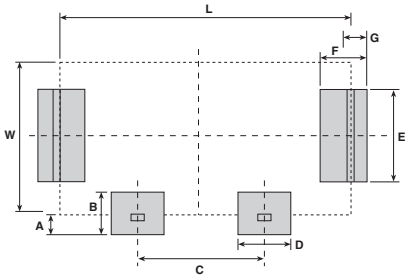
SDR



current sense resistor—CSR

Dimensions inches (mm)									
Type	L	W	A	B	C	D	E	F	G
CSR1	.393 (10.0)	.236 (6.0)	.039 (1.0)	.078 (2.0)	.196 (5.0)	.062 (1.6)	.118 (3.0)	.078 (2.0)	.039 (1.0)
CSR2	.472 (12.0)	.314 (8.0)	.062 (1.6)	.125 (3.2)	.236 (6.0)	.086 (2.2)	.208 (5.3)	.090 (2.3)	.045 (1.15)

CSR



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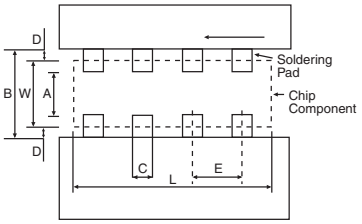
resistor arrays—CN

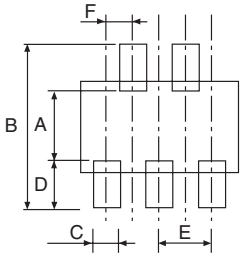
Type	Style	Dimensions								
		Component Size		A	B	C	D	E	F	G
		L*	W							
CN	1E2K	1.0	1.0	0.5	1.5	0.4	0.25	0.67	—	—
	1E4K	2.0	1.0			0.3	0.25	0.5	—	—
	1F8K	3.8	1.6	1.0	2.6	0.3	0.5	0.5	—	—
	1JA/K	0.8 X n	1.6	1.0	2.6	0.6	0.5	0.8	—	—
	1E	0.5 X n	1.0	0.5	1.5	0.3	0.5	0.5	—	—
	2B4A	5.1	3.1	2.1	4.1	0.9	0.5	1.27	—	—
	1J	0.8 X n	1.6	0.8	2.6	0.4	0.5	0.8	—	—
	2A	1.27 X n	2.0	1.0	3.0	0.65	0.5	1.27	—	—
	2B	1.27 X n	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	—	—
	1J10Y	3.2	1.6	0.9	2.3	0.3	0.7	0.635	2.45	0.4
	2A10Y	4.0	2.1	1.0	3.0	0.4	1.0	0.8	3.4	0.4
CNB	2E5Z	3.2	2.5	1.7	3.9	0.5	1.1	1.0	0.5	—
	2B9Z	6.4	3.2	2.4	4.6	0.5	1.1	1.3	0.65	—
CNN	2A	2.54	2.0	1.2	2.8	0.6	0.4	1.27	—	—

* n = number of resistors

Chip Networks



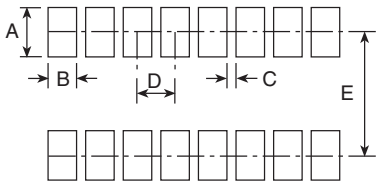
CNB2E5Z, CNB2B9Z



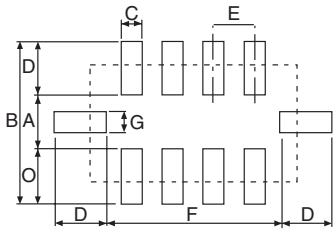
thick film resistor—MRGF

Type	Dimensions					
	Component Size	A	B	C	D	E
MRGF16	11.0 X 7.7	1.27	0.76	0.51	1.27	7.62

MRGF



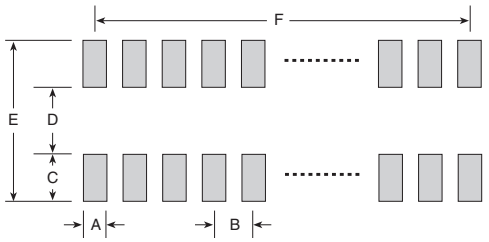
CND1J10Y, CND2A10Y



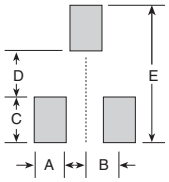
integrated passive devices—SOIC, TSSOP, QSOP & SOT23

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)
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)
SOT23	.035 (0.9)	.037 (0.95)	.055 (1.4)	.031 (0.8)	.141 (3.6)	—

SOIC, TSSOP, QSOP

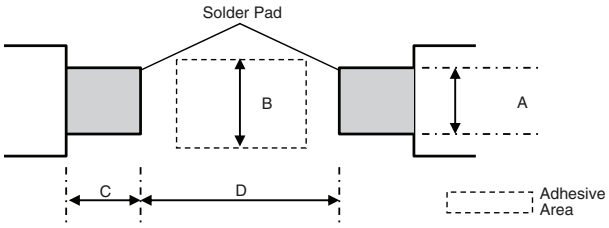


SOT23



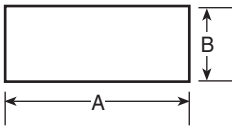
melf type components—RD41, RN41, RM41, MLT, CC

Type	Style	Dimensions millimeters				
		Component Size	A	B	C	D
RD41 RN41 RM41 MLT CC	2A 10	2.0 X 1.25	1.3	1.3	2.0	1.3
	2ES 12M	3.5 X 1.40	1.5	2.2	1.5	2.0
	2D 20	3.2 X 1.55	1.5	2.2	1.5	2.0
	2E 25	5.9 X 2.2	2.0	3.0	3.0	4.0
	2H	5.9 X 2.2	2.0	3.0	3.0	4.0



other chips—RCS, RCT, RCU, RCW

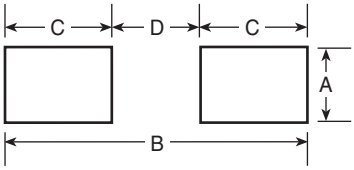
Type	Dimensions millimeters	
	A	B
RCS	4.1-4.3	1.4-1.6
RCT	2.9-3.1	1.05-1.25
RCU	2.5-2.7	0.6-0.8
RCW	4.1-4.3	1.4-1.6



ceramic chip capacitors

Component pads should be designed to achieve good solder filets 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:

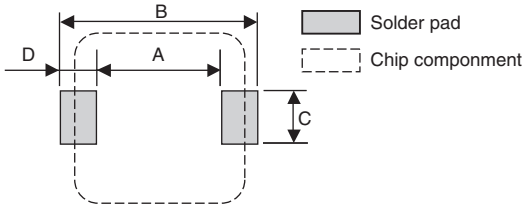
- Pad width equal to component width. It is permissible to decrease this to as low as 85% of component width but it is not advisable to go below this.
- Pad overlap 0.5mm beneath component
- Pad extension 0.5mm beyond components for reflow and 1.0mm for wave soldering



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)

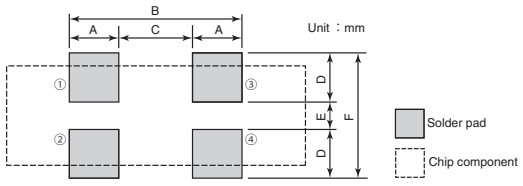
surface mount inductors—LKS

Case Size	Dimensions inches (mm)			
	A	B	C	D
0745	0.22 (5.5)	0.34 (8.70)	0.09 (2.30)	0.06 (1.60)
1045	0.22 (5.5)	0.42 (10.7)	0.14 (3.60)	0.10 (2.60)
1260	0.37 (9.5)	0.55 (13.9)	0.21 (5.30)	0.09 (2.20)



surface mount inductors—KT11835

Case Size	Dimensions inches (mm)					
	A	B	C	D	E	F
11835	0.07 (1.90)	0.27 (6.80)	0.12 (3.00)	0.07 (1.90)	0.03 (0.80)	0.18 (4.60)



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