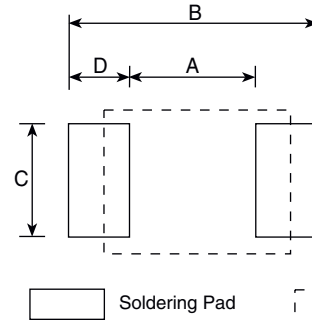


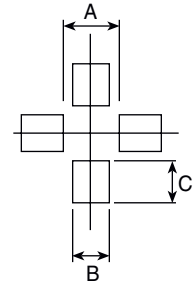
standard soldering pad dimensions

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

Flat Type Components



LPC 9040N



□ Soldering Pad □ Chip Component

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/2H2	2.5 X 5.0	1.0	3.5	5.0	1.25
	2J	3.1 X 4.6	1.6	3.9	4.75	1.15
	3A/3A3	3.1 X 6.4	1.6	3.9	6.4	1.15
RK73 SG73 RN73 RN73H SR73 LT73 NT73 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/W3W/ W3A2	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
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	3.75	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	
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	—
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

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
	2BN/2B/ 2BW/2BP (1mΩ, 1.5mΩ)	3.2 X 1.6	0.8	4.0	1.8	1.6
	2BN/2B/ 2BW/2BP (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
	3APS	6.35 X 3.18	3.45	7.55	3.83	2.05

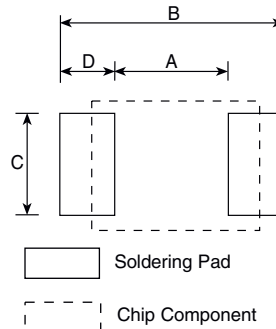
standard soldering pad dimensions (continued)

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	
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	
UR73	2A	2.0 X 1.25	1.3	2.6	1.1	0.65	
	2B	3.2 X 1.6	2.2	4.2	1.6	1.0	
UR73D	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	
	UR73V	2A	2.0 X 1.25	1.2	3.4	1.3	1.1
		2B	3.2 X 1.6	2.2	4.2	1.6	1.0
UR73VD	2A (10m-18m)	2.0 X 3.1	0.6	3.4	1.3	1.4	
	2A (20m-36m)	2.0 X 3.1	0.8	3.4	1.3	1.3	
	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		

Type	Style	Dimensions millimeters				
		Component Size	A	B	C	D
NV73DS	2L	6.1 X 5.1	4.5	7.5	4.7	1.5
PS	L	6.3 X 3.15	3.4	7	3.4	1.8
	J	10.0 X 5.2	5.6	11	6.2	2.7
	F	3.0 X 3.8				
	G	6.9 X 6.6				
	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
LCM	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
	1060	10 X 10	5.6	10.7	3.2	2.5

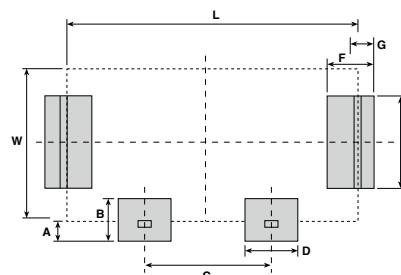
Flat Type Components



current sense resistor—CSR

Type	Dimensions inches (mm)								
	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

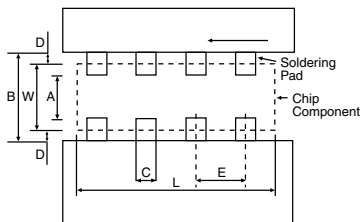


resistor arrays—CN

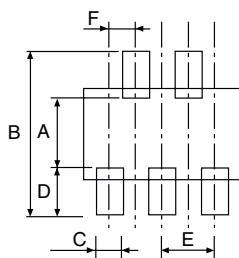
Type	Style	Dimensions								
		Component Size		A	B	C	D	E	F	G
		L*	W							
CN	1E2K	1.0	1.0	0.5	1.5	0.4	0.25	0.67	—	—
	1E4K	2.0	1.0			0.3	0.25	0.5	—	—
	1F8K	3.8	1.6	1.0	2.6	0.3	0.5	0.5	—	—
	1JA/K	0.8 X n	1.6	1.0	2.6	0.6	0.5	0.8	—	—
	1E	0.5 X n	1.0	0.5	1.5	0.3	0.5	0.5	—	—
	2B4A	5.1	3.1	2.1	4.1	0.9	0.5	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	—	—
CND	2B	1.27 X n	3.2	2.2	4.2	0.65	0.5	1.27	—	—
	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
CNB	2A10Y	4.0	2.1	1.0	3.0	0.4	1.0	0.8	3.4	0.4
	2E5Z	3.2	2.5	1.7	3.9	0.5	1.1	1.0	0.5	—
CNN	2B9Z	6.4	3.2	2.4	4.6	0.5	1.1	1.3	0.65	—
	2A	2.54	2.0	1.2	2.8	0.6	0.4	1.27	—	—

* n = number of resistors

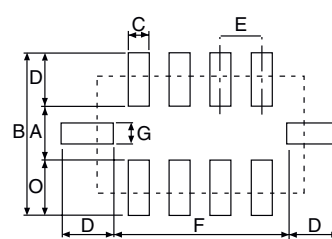
Chip Networks



CNB2E5Z, CNB2B9Z



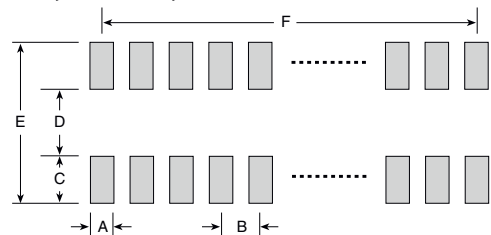
CND1J10Y, CND2A10Y



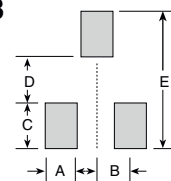
integrated passive devices—SOIC, TSSOP, QSOP & SOT23

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

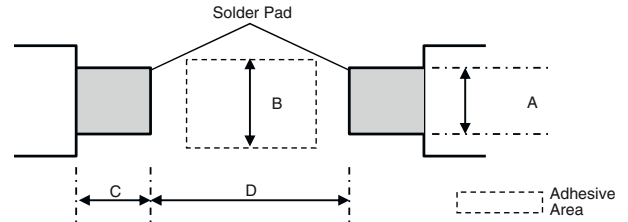


SOT23



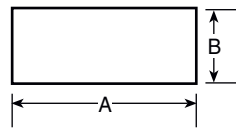
melf type components—RD41, RN41, RM41, MLT, CC

Type	Style	Dimensions millimeters				
		Component Size	A	B	C	D
RD41 RN41	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
RM41	2D 20	3.2 X 1.55	1.5	2.2	1.5	2.0
MLT CC	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

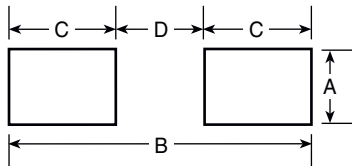
Type	Dimensions millimeters	
	A	B
RCS	4.1-4.3	1.4-1.6
RCT	2.9-3.1	1.05-1.25
RCU	2.5-2.7	0.6-0.8
RCW	4.1-4.3	1.4-1.6



ceramic chip capacitors

Component pads should be designed to achieve good solder 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:

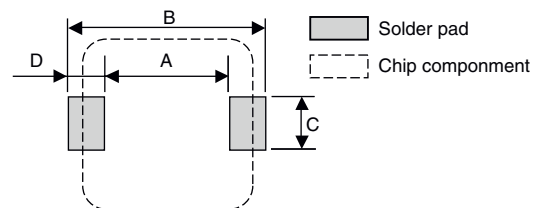
- Pad width equal to component width. It is permissible to decrease this to as low as 85% of component width but it is not advisable to go below this.
- Pad overlap 0.5mm beneath component
- Pad extension 0.5mm beyond components for reflow and 1.0mm for wave soldering



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)

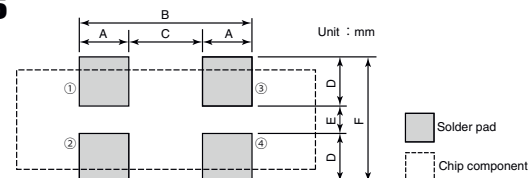
surface mount inductors—LKS

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)



Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

11/23/15