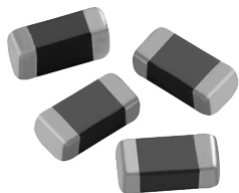


## Monolithic Chip Inductors



### MECHANICAL SPECIFICATIONS

**Solderability:** 90 % coverage after 5 s dip in 235 °C solder following 60 s preheat at 120 °C to 150 °C and type R flux dip

**Resistance to Solder Heat:** 10 s in 260 °C solder, after preheat and flux per above

**Termination:** 100 % Sn

**Terminal Strength:** 0.5 kg for 30 s

**Beam Strength:** 0.3 kg

### FEATURES

- High reliability
- Surface mountable
- Magnetically self shielded
- Nickel barrier plating virtually eliminates silver migration
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**

### ENVIRONMENTAL SPECIFICATIONS

**Operating Temperature:** -55 °C to +125 °C

**Thermal Shock:** -40 °C to +85 °C

**Humidity:** 90 % RH at 40 °C, 1000 h at full rated current

**Load Life:** 85 °C for 1000 h at full rated current

### STANDARD ELECTRICAL SPECIFICATIONS

INDUCTANCE ( $\mu$ H)	TOL.	THICKNESS "D" (INCHES [mm])	TEST FREQ. (MHz)	Q MIN.	SRF MIN. (MHz)	DCR MAX. ( $\Omega$ )	RATED DC CURRENT (mA)
			L AND Q				
0.047	20 %	0.031 $\pm$ 0.008 [0.80 $\pm$ 0.2]	50	10	260	0.15	50
0.068	20 %	0.031 $\pm$ 0.008 [0.80 $\pm$ 0.2]	50	10	250	0.25	50
0.082	20 %	0.031 $\pm$ 0.008 [0.80 $\pm$ 0.2]	50	10	245	0.25	50
0.10	10 %	0.031 $\pm$ 0.008 [0.80 $\pm$ 0.2]	25	15	276	0.50	50
0.12	10 %	0.031 $\pm$ 0.008 [0.80 $\pm$ 0.2]	25	15	236	0.50	50
0.15	10 %	0.031 $\pm$ 0.008 [0.80 $\pm$ 0.2]	25	15	207	0.60	50
0.18	10 %	0.031 $\pm$ 0.008 [0.80 $\pm$ 0.2]	25	15	190	0.60	50
0.22	10 %	0.031 $\pm$ 0.008 [0.80 $\pm$ 0.2]	25	15	173	0.80	50
0.27	10 %	0.031 $\pm$ 0.008 [0.80 $\pm$ 0.2]	25	15	157	0.80	50
0.33	10 %	0.031 $\pm$ 0.008 [0.80 $\pm$ 0.2]	25	15	144	0.85	35
0.39	10 %	0.031 $\pm$ 0.008 [0.80 $\pm$ 0.2]	25	15	127	1.00	35
0.47	10 %	0.031 $\pm$ 0.008 [0.80 $\pm$ 0.2]	25	15	121	1.35	35
0.56	10 %	0.031 $\pm$ 0.008 [0.80 $\pm$ 0.2]	25	15	110	1.55	35
0.68	10 %	0.031 $\pm$ 0.008 [0.80 $\pm$ 0.2]	25	15	104	1.70	35
0.82	10 %	0.031 $\pm$ 0.008 [0.80 $\pm$ 0.2]	25	15	98	2.10	35
1.0	10 %	0.031 $\pm$ 0.008 [0.80 $\pm$ 0.2]	10	35	87	0.60	25
1.2	10 %	0.031 $\pm$ 0.008 [0.80 $\pm$ 0.2]	10	35	74	0.80	25
1.5	10 %	0.031 $\pm$ 0.008 [0.80 $\pm$ 0.2]	10	35	69	0.80	25
1.8	10 %	0.031 $\pm$ 0.008 [0.80 $\pm$ 0.2]	10	35	64	0.95	25
2.2	10 %	0.031 $\pm$ 0.008 [0.80 $\pm$ 0.2]	10	35	58	1.15	15
2.7	10 %	0.031 $\pm$ 0.008 [0.80 $\pm$ 0.2]	10	35	52	1.35	15
3.3	10 %	0.031 $\pm$ 0.008 [0.80 $\pm$ 0.2]	10	35	46	1.55	15
3.9	10 %	0.031 $\pm$ 0.008 [0.80 $\pm$ 0.2]	10	35	41	1.70	15
4.7	10 %	0.031 $\pm$ 0.008 [0.80 $\pm$ 0.2]	10	35	38	2.10	15
5.6	10 %	0.031 $\pm$ 0.008 [0.80 $\pm$ 0.2]	4	30	22	1.55	15
6.8	10 %	0.031 $\pm$ 0.008 [0.80 $\pm$ 0.2]	4	30	20	1.70	15
8.2	10 %	0.031 $\pm$ 0.008 [0.80 $\pm$ 0.2]	4	30	18	2.10	15
10	10 %	0.031 $\pm$ 0.008 [0.80 $\pm$ 0.2]	2	30	17	2.55	15

### DESCRIPTION

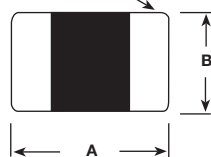
<b>ILSB-0603</b>	<b>3.3 <math>\mu</math>H</b>	<b><math>\pm</math> 10 %</b>	<b>ER</b>	<b>e3</b>
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD

### GLOBAL PART NUMBER

<b>I</b>	<b>L</b>	<b>S</b>	<b>B</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>3</b>	<b>E</b>	<b>R</b>	<b>3</b>	<b>R</b>	<b>3</b>	<b>K</b>
PRODUCT FAMILY				SIZE				PACKAGE CODE		INDUCTANCE VALUE			TOL.

**DIMENSIONS** in inches [millimeters]

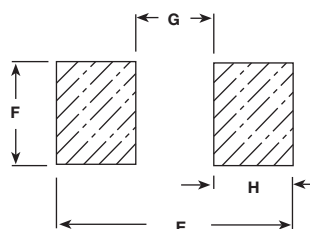
100 % Sn Termination



Ferrite Body



Dimensional Outline

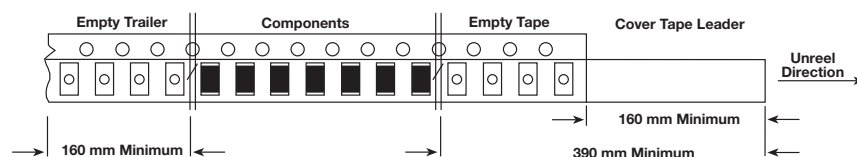
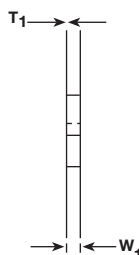
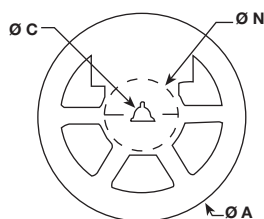
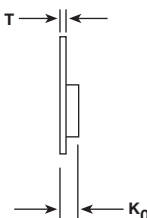
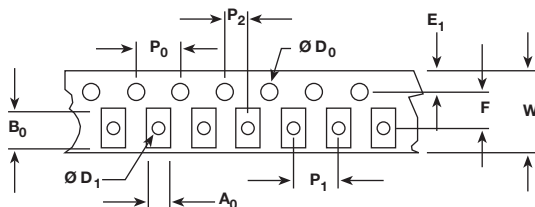


Suggested Pad Layout

A	B	C	D	E	F	G	H
0.063 ± 0.006 [1.6 ± 0.15]	0.031 ± 0.006 [0.8 ± 0.15]	0.012 ± 0.006 [0.3 ± 0.15]	0.031 ± 0.008 [0.8 ± 0.2]	0.105 [2.7]	0.035 [0.9]	0.025 [0.64]	0.040 [1.0]

**TAPE AND REEL SPECIFICATIONS 0603 SIZE PER EIA-481-1** in inches [millimeters]

4000 Piece/Reel



A <sub>0</sub>	0.045 ± 0.004 [1.14 ± 0.1]
B <sub>0</sub>	0.068 ± 0.004 [1.75 ± 0.1]
D <sub>0</sub>	0.059 + 0.005/- 0.000 [1.5 + 0.127]
D <sub>1</sub>	0.039 min. [1.0 min.]
E <sub>1</sub>	0.069 ± 0.004 [1.75 ± 0.1]
F	0.138 ± 0.002 [3.50 ± 0.05]
K <sub>0</sub>	0.045 ± 0.002 [1.15 ± 0.05]
P <sub>0</sub>	0.157 ± 0.004 [4.00 ± 0.1]
P <sub>1</sub>	0.157 ± 0.004 [4.00 ± 0.1]
P <sub>2</sub>	0.079 ± 0.002 [2.00 ± 0.05]
W	0.327 max. [8.3 max.]
T	0.008 ± 0.002 [0.2 ± 0.05]
A	7.000 ± 0.079 [178 ± 2.0]
N	2.500 [63.5]
C	0.512 ± 0.020 [13.00 ± 0.50]
W <sub>1</sub>	0.315 + 0.059/- 0.000 [8.00 + 1.5]
T <sub>1</sub>	0.079 ± 0.002 [2.00 ± 0.05]



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# Mouser Electronics

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<a href="#"><u>ILSB0603RK100K</u></a>	<a href="#"><u>ILSB0603RKR10K</u></a>	<a href="#"><u>ILSB0603RK2R7K</u></a>	<a href="#"><u>ILSB0603RKR18K</u></a>	<a href="#"><u>ILSB0603RKR12K</u></a>	<a href="#"><u>ILSB0603RK68NM</u></a>
<a href="#"><u>ILSB0603RK1R5K</u></a>	<a href="#"><u>ILSB0603RKR68K</u></a>	<a href="#"><u>ILSB0603RKR47K</u></a>	<a href="#"><u>ILSB0603RK1R8K</u></a>	<a href="#"><u>ILSB0603RK1R0K</u></a>	<a href="#"><u>ILSB0603RK6R8K</u></a>
<a href="#"><u>ILSB0603RK1R2K</u></a>	<a href="#"><u>ILSB0603RKR22K</u></a>	<a href="#"><u>ILSB0603RKR27K</u></a>	<a href="#"><u>ILSB0603RK8R2K</u></a>	<a href="#"><u>ILSB0603RK2R2K</u></a>	<a href="#"><u>ILSB0603RKR56K</u></a>
<a href="#"><u>ILSB0603ER100K</u></a>	<a href="#"><u>ILSB0603ER1R2K</u></a>	<a href="#"><u>ILSB0603ER1R5K</u></a>	<a href="#"><u>ILSB0603ER1R8K</u></a>	<a href="#"><u>ILSB0603ER2R2K</u></a>	<a href="#"><u>ILSB0603ER3R9K</u></a>
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<a href="#"><u>ILSB0603ERR12K</u></a>	<a href="#"><u>ILSB0603ERR15K</u></a>	<a href="#"><u>ILSB0603ERR18K</u></a>	<a href="#"><u>ILSB0603ERR22K</u></a>	<a href="#"><u>ILSB0603ERR33K</u></a>	<a href="#"><u>ILSB0603ERR39K</u></a>
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