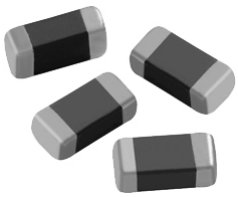
Monolithic Chip Inductors



FEATURES

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

Pb-free

RoHS COMPLIANT

HALOGEN FREE

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

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

DESCRIPTION

ILSB-0603	3.3 µH	± 10 %	ER	e3
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD

GLOBAL PART NUMBER

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

For technical questions, contact: magnetics@vishay.com

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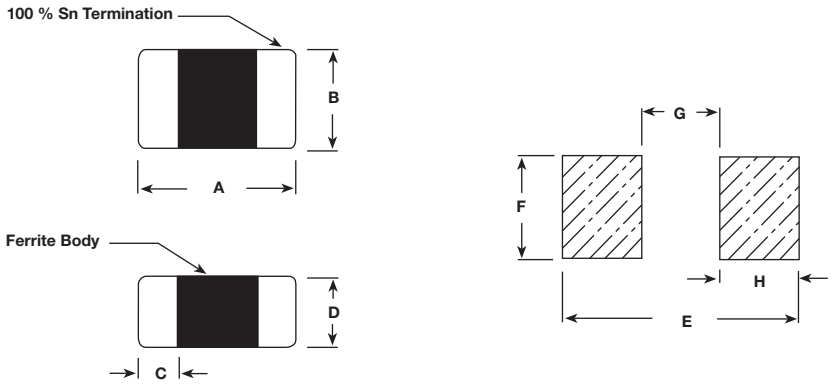
DIMENSIONS in inches [millimeters]

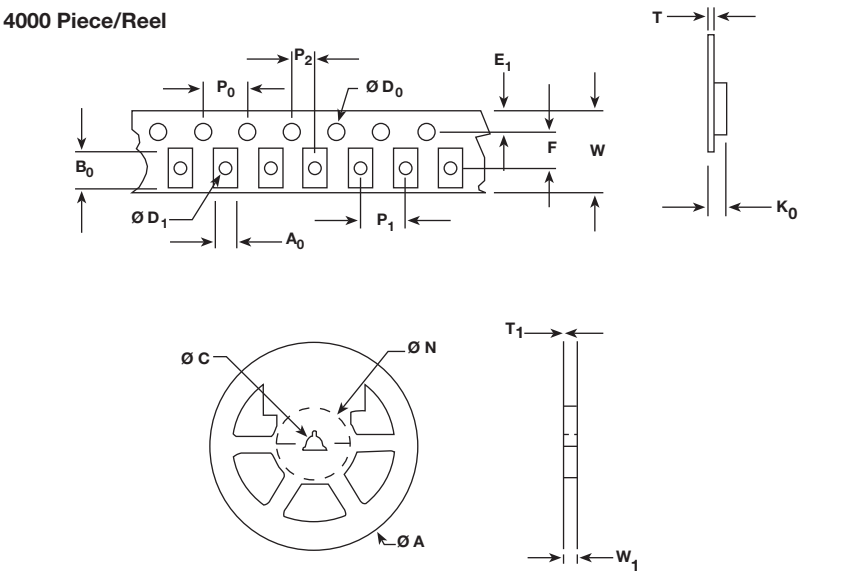


Dimensional Outline — Suggested Pad Layout

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_0	0.045 ± 0.004 [1.14 ± 0.1]
B_0	0.068 ± 0.004 [1.75 ± 0.1]
D_0	0.059 + 0.005/- 0.000 [1.5 + 0.127]
D_1	0.039 min. [1.0 min.]
E_1	0.069 ± 0.004 [1.75 ± 0.1]
F	0.138 ± 0.002 [3.50 ± 0.05]
K_0	0.045 ± 0.002 [1.15 ± 0.05]
P_0	0.157 ± 0.004 [4.00 ± 0.1]
P_1	0.157 ± 0.004 [4.00 ± 0.1]
P_2	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_1	0.315 + 0.059/- 0.000 [8.00 + 1.5]
T_1	0.079 ± 0.002 [2.00 ± 0.05]

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