

Surface Mount, Multi Layer High Frequency Ceramic Inductor



MECHANICAL SPECIFICATIONS

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

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

Terminal Strength: 0.2 kg (0.44 lbs) for 30 s

Beam Strength: 0.2 kg (0.44 lbs)

FEATURES

- High reliability
- Surface mountable
- Reflow or wave solderable
- Tape and reel packaging per EIA specifications: 4000 pieces on 7" reel
- 100 % lead (Pb)-free and RoHS compliant



RoHS
COMPLIANT

Flex: 0.0788" [2.0 mm] minimum mounted on 0.063" [1.6 mm] thick PC board

ENVIRONMENTAL SPECIFICATIONS

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

Thermal Shock: 100 cycles, - 40 °C to + 85 °C

Humidity: + 40 °C, 85 % RH, 1000 h at full rated current

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

STANDARD ELECTRICAL SPECIFICATIONS

PART NUMBER	INDUCTANCE (nH)	TOL.	Q (MIN.)	TEST FREQUENCY (MHz)	Q (TYPICAL)			DCR MAX. (Ω)	SRF (MHz)		MAX. RATED CURRENT (mA)
					100 MHz	500 MHz	1000 MHz		MIN.	TYP	
ILC0402ER1N0S	1.0	± 0.3 nH	8	100	10	21	30	0.12	10 000	18 000	300
ILC0402ER1N2S	1.2	± 0.3 nH	8	100	10	23	31	0.12	10000	17 000	300
ILC0402ER1N5S	1.5	± 0.3 nH	8	100	10	25	35	0.13	6000	11 000	300
ILC0402ER1N8S	1.8	± 0.3 nH	8	100	10	25	35	0.14	6000	11 000	300
ILC0402ER2N2S	2.2	± 0.3 nH	8	100	10	23	32	0.16	6000	8700	300
ILC0402ER2N7S	2.7	± 0.3 nH	8	100	10	21	30	0.17	6000	7800	300
ILC0402ER3N3S	3.3	± 0.3 nH	8	100	10	22	31	0.19	6000	6400	300
ILC0402ER3N9S	3.9	± 0.3 nH	8	100	10	19	26	0.22	4000	5800	300
ILC0402ER4N7S	4.7	± 0.3 nH	8	100	10	19	26	0.24	4000	5100	300
ILC0402ER5N6S	5.6	± 0.3 nH	8	100	10	20	26	0.27	4000	4700	300
ILC0402ER6N8J	6.8	± 5 %	8	100	10	19	26	0.32	3900	4200	250
ILC0402ER8N2J	8.2	± 5 %	8	100	10	22	29	0.37	3600	3800	250
ILC0402ER10NJ	10	± 5 %	8	100	10	18	23	0.42	3200	3400	250
ILC0402ER12NJ	12	± 5 %	8	100	10	18	23	0.50	2700	2900	250
ILC0402ER15NJ	15	± 5 %	8	100	10	19	24	0.55	2300	2500	250
ILC0402ER18NJ	18	± 5 %	8	100	10	20	25	0.65	2100	2400	200
ILC0402ER22NJ	22	± 5 %	8	100	10	22	26	0.80	1900	2200	200
ILC0402ER27NJ	27	± 5 %	8	100	10	22	25	0.90	1600	2000	200
ILC0402ER33NJ	33	± 5 %	8	100	10	19	20	1.00	1300	1800	200
ILC0402ER39NJ	39	± 5 %	8	100	10	21	20	1.20	1200	1600	150
ILC0402ER47NJ	47	± 5 %	8	100	10	18	15	1.30	1000	1500	150
ILC0402ER56NJ	56	± 5 %	8	100	11	21	14	1.40	750	1200	150
ILC0402ER68NJ	68	± 5 %	8	100	11	18	12	1.40	750	1250	150
ILC0402ER82NJ	82	± 5 %	8	100	11	19	8	2.00	600	1100	100
ILC0402ERR10J	100	± 5 %	8	100	11	17	2	2.00	600	1000	100

DIMENSIONS in inches [millimeters]



DESCRIPTION

ILC-0402
MODEL

10 nH
INDUCTANCE
VALUE

± 10 %
INDUCTANCE
TOLERANCE

ER
PACKAGE
CODE

e3
JEDEC LEAD (Pb)-FREE
STANDARD

GLOBAL PART NUMBER

I L C
PRODUCT FAMILY

0 4 0 2
SIZE

E R
PACKAGE
CODE

1 0 N
INDUCTANCE
VALUE

K
TOL.



Disclaimer

All product specifications and data are subject to change without notice.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.