



# Surface Mount, Multi Layer High Frequency Ceramic Inductors



## FEATURES

- High reliability
- Surface mountable
- Reflow or wave solderable
- Tape and reel packaging per EIA specifications: 10 000 pieces on 7" reel
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



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

## MECHANICAL SPECIFICATIONS

**Solderability:** 95 % coverage after 4 s ± 1 s dip in 245 °C ± 5 °C solder following 60 s preheat at 150 °C and type R flux dip

**Resistance to Solder Heat:** 10 s ± 1 s in 260 °C ± 5 °C solder, after preheat and flux above

**Terminal Strength:** 0.5 kg for 60 s ± 1 s

**Flex:** 0.8 mm min. mounted on 0.8 mm thick PC board

## ENVIRONMENTAL SPECIFICATIONS

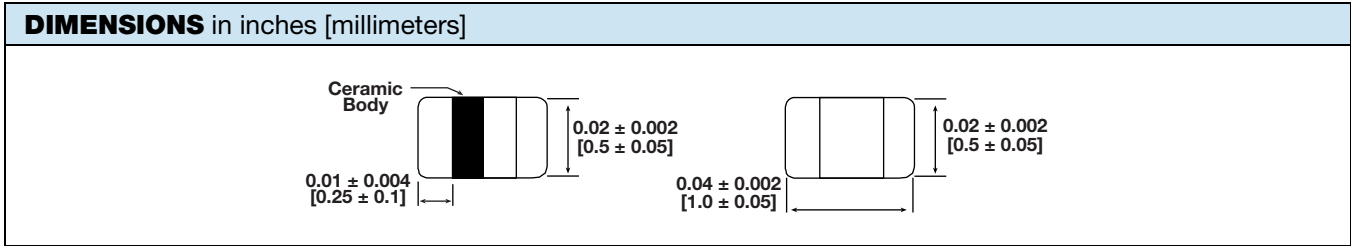
**Operating Temperature:** -40 °C to +105 °C

**Thermal Shock:** 500 cycles, -40 °C to +105 °C

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

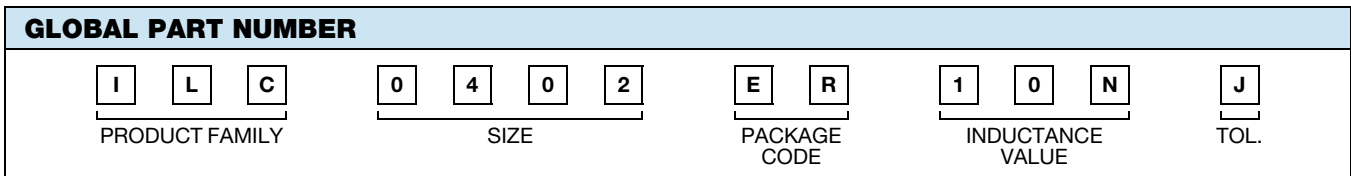
**Load Life:** 105 °C for 1000 h at full rated current

STANDARD ELECTRICAL SPECIFICATIONS											
PART NUMBER	IND. (nH)	TOL.	TEST FREQUENCY (MHz)	Q MIN.	Q TYPICAL			SRF (MHz)		DCR MAX. (Ω)	RATED DC CURRENT MAX. (mA)
					100 MHz	500 MHz	1000 MHz	MIN.	TYP.		
ILC0402ER1N0S	1.0	0.3 nH	100	8	11	34	52	10 000	> 13 000	0.08	300
ILC0402ER1N2S	1.2	0.3 nH	100	8	11	35	52	10 000	> 13 000	0.09	300
ILC0402ER1N5S	1.5	0.3 nH	100	8	11	33	48	6000	> 13 000	0.10	300
ILC0402ER1N8S	1.8	0.3 nH	100	8	11	30	42	6000	11 000	0.12	300
ILC0402ER2N2S	2.2	0.3 nH	100	8	10	25	36	6000	10 000	0.13	300
ILC0402ER2N7S	2.7	0.3 nH	100	8	10	24	34	6000	9000	0.13	300
ILC0402ER3N3S	3.3	0.3 nH	100	8	10	24	35	6000	8000	0.16	300
ILC0402ER3N9S	3.9	0.3 nH	100	8	10	24	35	4000	7000	0.21	300
ILC0402ER4N7S	4.7	0.3 nH	100	8	10	24	34	4000	6000	0.21	300
ILC0402ER5N6S	5.6	0.3 nH	100	8	10	24	35	4000	5700	0.23	300
ILC0402ER6N8J	6.8	5 %	100	8	10	23	32	3900	5500	0.25	300
ILC0402ER8N2J	8.2	5 %	100	8	10	23	31	3600	4900	0.28	300
ILC0402ER10NJ	10	5 %	100	8	10	23	31	3200	4300	0.31	300
ILC0402ER12NJ	12	5 %	100	8	11	23	31	2700	3900	0.40	300
ILC0402ER15NJ	15	5 %	100	8	11	23	30	2300	3500	0.46	300
ILC0402ER18NJ	18	5 %	100	8	11	23	30	2100	3100	0.55	300
ILC0402ER22NJ	22	5 %	100	8	11	22	27	1900	2800	0.60	300
ILC0402ER27NJ	27	5 %	100	8	11	21	26	1600	2300	0.70	300
ILC0402ER33NJ	33	5 %	100	8	11	20	22	1300	1900	0.80	200
ILC0402ER39NJ	39	5 %	100	8	11	20	21	1200	1700	0.90	200
ILC0402ER47NJ	47	5 %	100	8	11	19	18	1000	1500	1.00	200
ILC0402ER56NJ	56	5 %	100	8	11	18	16	750	1300	1.00	200
ILC0402ER68NJ	68	5 %	100	8	11	17	11	750	1200	1.20	180
ILC0402ER82NJ	82	5 %	100	8	10	16	6	600	1100	1.30	150
ILC0402ERR10J	100	5 %	100	8	10	14	-	600	1000	1.50	150
ILC0402ERR12J	120	5 %	100	8	10	10	-	600	950	1.60	150
ILC0402ERR15J	150	5 %	100	8	12	17	-	550	920	3.20	140
ILC0402ERR18J	180	5 %	100	8	12	-	-	500	810	3.70	130
ILC0402ERR22J	220	5 %	100	8	12	-	-	450	700	4.20	120
ILC0402ERR27J	270	5 %	100	8	12	-	-	400	600	4.80	110



**DESCRIPTION**

<b>ILC-0402</b>	<b>10 nH</b>	<b>± 5 %</b>	<b>ER</b>	<b>e3</b>
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD





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