

Surface Mount, Multi Layer High Frequency Ceramic Inductor



MECHANICAL SPECIFICATIONS

Solderability: 90 % coverage after 5 s 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: 0.3 kg (0.66 lbs) for 30 s

Beam Strength: 0.3 kg (0.66 lbs)

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

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

ENVIRONMENTAL SPECIFICATIONS

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

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

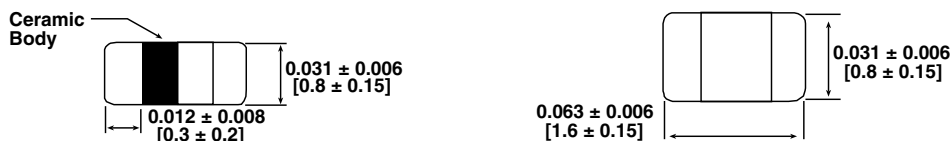
Humidity: + 40 °C, 85 % RH, 1000 hat full rated current

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	
ILC0603ER1N0S	1.0	± 0.3 nH	8	100	15	43	63	0.05	10 000	15 000	300
ILC0603ER1N2S	1.2	± 0.3 nH	8	100	14	38	55	0.05	10 000	14 000	300
ILC0603ER1N5S	1.5	± 0.3 nH	8	100	11	28	40	0.10	6000	13 000	300
ILC0603ER1N8S	1.8	± 0.3 nH	8	100	10	24	35	0.10	6000	11 000	300
ILC0603ER2N2S	2.2	± 0.3 nH	8	100	14	35	40	0.10	6000	10 000	300
ILC0603ER2N7S	2.7	± 0.3 nH	10	100	12	29	45	0.10	6000	7000	300
ILC0603ER3N3S	3.3	± 0.3 nH	10	100	16	40	47	0.12	4000	5900	300
ILC0603ER3N9S	3.9	± 0.3 nH	10	100	11	25	35	0.14	3500	4500	300
ILC0603ER4N7S	4.7	± 0.3 nH	10	100	11	26	35	0.16	3500	4500	300
ILC0603ER5N6S	5.6	± 0.3 nH	10	100	15	36	46	0.18	3500	4000	300
ILC0603ER6N8J	6.8	± 5 %	10	100	15	38	47	0.22	3000	3600	300
ILC0603ER8N2J	8.2	± 5 %	10	100	13	31	41	0.24	3000	3500	300
ILC0603ER10NJ	10	± 5 %	12	100	15	34	47	0.26	2800	3000	300
ILC0603ER12NJ	12	± 5 %	12	100	12	27	49	0.28	2000	2500	300
ILC0603ER15NJ	15	± 5 %	12	100	15	30	36	0.32	2000	2200	300
ILC0603ER18NJ	18	± 5 %	12	100	15	28	31	0.35	1800	2000	300
ILC0603ER22NJ	22	± 5 %	12	100	17	34	36	0.40	1800	1900	300
ILC0603ER27NJ	27	± 5 %	12	100	15	31	30	0.45	1500	1700	300
ILC0603ER33NJ	33	± 5 %	12	100	15	28	24	0.55	1200	1500	300
ILC0603ER39NJ	39	± 5 %	12	100	14	31	28	0.60	1100	1300	300
ILC0603ER47NJ	47	± 5 %	12	100	17	31	28	0.70	900	1300	300
ILC0603ER56NJ	56	± 5 %	12	100	19	34	26	0.75	900	1200	300
ILC0603ER68NJ	68	± 5 %	12	100	17	30	20	0.85	700	1000	300
ILC0603ER82NJ	82	± 5 %	12	100	16	29	18	0.95	600	1000	300
ILC0603ERR10J	100	± 5 %	12	100	16	24	3	1.00	600	800	300
ILC0603ERR12J	120	± 5 %	8	50	17	21	-	1.20	500	800	300
ILC0603ERR15J	150	± 5 %	8	50	19	20	-	1.20	500	700	300
ILC0603ERR18J	180	± 5 %	8	50	18	13	-	1.30	400	600	300
ILC0603ERR22J	220	± 5 %	8	50	18	-	-	1.50	400	500	300
ILC0603ERR27J	270	± 5 %	8	50	19	-	-	1.60	350	490	300

DIMENSIONS in inches [millimeters]



DESCRIPTION

ILC-0603 MODEL	10 nH INDUCTANCE VALUE	± 10 % INDUCTANCE TOLERANCE	ER PACKAGE CODE	e3 JEDEC LEAD (Pb)-FREE STANDARD
GLOBAL PART NUMBER				
I L C	0 6 0 3	E R	1 0 N	K
PRODUCT FAMILY	SIZE	PACKAGE CODE	INDUCTANCE VALUE	TOL.



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