Chip Inductors

Laird Technolgies, two-terminal surface mount chip inductors provide a cost effective solution for densely packed PC board designs.

Features:

• Small footprint • Economical • Rugged construction • Lead Free

Applications:

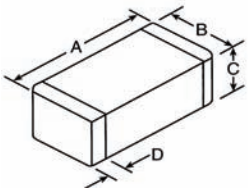
• RF and wireless communication • Information technology equipment including; computers, telecommunications, radar detectors, automotive electronics, cellular phones, pagers, audio equipment, PDAs, keyless remote systems and low-voltage power supply modules • Filters

Specifications:

• Inductance is rated at ± 10% at rated frequency • Rated operating current is based on the maximum sustained current applied while maintaining a the specified minimum inductance (L).

PART NUMBERING SYSTEM EXAMPLE

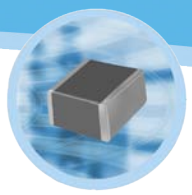
IC	0603	A	102	R	-10
Product Series Code	Part Size Code	Rated Current Code	Inductance Value Code	Packaging Code	Additional Description



FERRITE CHIP INDUCTORS					
Part Number	L (nH) ± 10% @ 25 Mhz	Q (min)	Self-Resonant Frequency (MHz)	DCR MAX (Ω)	RATED (operating) mA
IC0603A102R-10	1,000	30	70	0.6	25
IC0603A103R-10	10,000	30	17	2.55	15
IC0603A182R-10	1,800	30	50	0.95	25
IC0603A681R-10	680	15	80	1.70	35
IC0603B181R-10	180	15	165	0.60	50
IC0603B470R-10	47	10	260	0.30	200
IC0603B820R-10	82	10	245	0.3	200
IC0805A103R-10	10,000	45	24	1.15	15
IC0805A153R-10	15,000	30	19	0.80	5
IC0805A183R-10	18,000	30	18	0.90	5
IC0805A223R-10	22,000	30	16	1.10	5
IC0805A272R-10	2,700	45	45	0.75	30
IC0805A333R-10	33,000	30	13	1.25	5
IC0805A472R-10	4,700	45	35	1.00	30
IC0805A681R-10	680	25	105	0.80	150

FERRITE CHIP INDUCTORS					
Part Number	L (nH) ± 10% @ 25 Mhz	Q (min)	Self-Resonant Frequency (MHz)	DCR MAX (Ω)	RATED (operating) mA
IC0805A822R-10	8,200	45	26	1.10	15
IC0805B101R-10	100	20	235	0.30	250
IC0805B102R-10	1,000	45	75	0.40	50
IC0805B182R-10	1,800	45	55	0.60	50
IC0805B222R-10	2,200	45	50	0.65	30
IC0805C470R-10	47	15	320	0.20	300
IC0805C680R-10	68	15	280	0.2	300
IC1206A103R-10	10,000	50	24	1.00	25
IC1206A332R-10	3,330	45	41	0.70	50
IC1206A333R-10	33,000	35	13	1.05	5
IC1206A472R-10	4,700	45	35	0.90	50
IC1206B153R-10	15,000	35	19	0.70	5
IC1206B183R-10	18,000	35	21	0.70	5
IC1206B331R-10	330	20	145	0.50	250
IC1206B821R-10	820	25	100	0.90	150

Surface Mount Power Inductor



DI2220V301R-10 is a surface mount, high current power inductor (in the industry's smallest package) with exceptional performance under DC Bias. Very low DCR provides superior thermal performance under DC bias. This compact, monolithic component produces flat inductance over the driven current range (from 3 to 8 amps) comparable to a larger, heavier, wire-wound toroidal inductor.

Features:

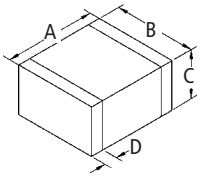
Low Profile (height is 3.61mm / 0.142") • EMI resistant, fully shielded printed coil • Small footprint (one fourth the footprint of an equivalent performance, old style, wire wound inductor assembly) • Superior performance under DC Bias • Rugged, vibration resistant monolithic construction • Maximum performance at 8 amps will yield > 250nH • Distributed power multiphase DC-DC converters that use Laird Technologies' new power inductor can operate faster, cooler and cleaner • New high performance, multiphase designs (with the new power inductor) require significantly less total pc board space and usually have lower system cost

Applications:

• Power inductor for DC-DC Converter • Specifically tuned to work with the new generation of high frequency multiphase DC-DC converters • Mounting can be on back side of pc boards • Applications with Voltage Regulator Modules

PART NUMBERING SYSTEM EXAMPLE

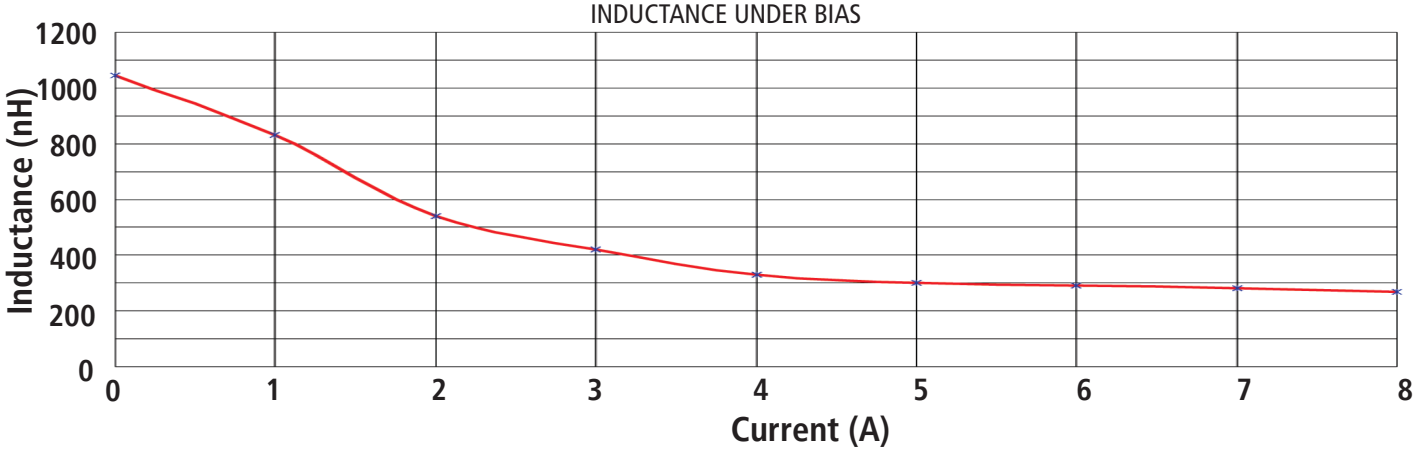
DI	2220	V	301	R	-10
Product Series Code	Part Size Code	Rated Continuous Current Code	Inductance Value Code	Packaging Code	Additional Description



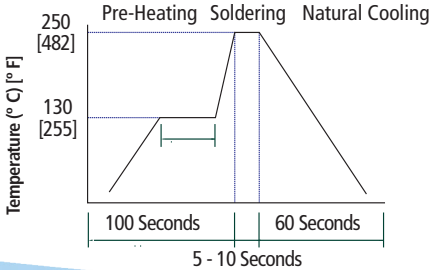
PART NUMBER	A mm (inches)	B mm (inches)	C mm (inches)	D mm (inches)	L @ 2 MHz TYPICAL nH (± 10%)		DCR MAX (Ohms)	RATED I MAX (continuous) mA
					5 AMPS	8 AMPS		
DI2220V301R-10	5.59 (0.220)	5.08 (0.200)	3.61 (0.142)	0.76 (0.030)	300	270	0.010	8000

DI2220V301R-10

INDUCTANCE UNDER BIAS



Recommended Lead Free Soldering Conditions



Equivalent Circuit

Land Pattern