



Surface Mount Inductors for Signal Applications

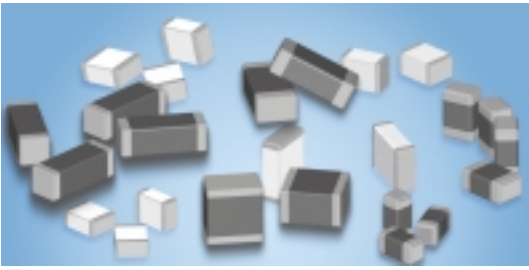
Steward



www.steward.com

ISO 9001 and QS 9000 Certified

Chip Inductors



Steward's two-terminal surface mount chip inductors provide a cost effective solution for densely packed PC board designs. Our proprietary SMT construction yields rugged components with superior inductance vs. frequency characteristics.

Features:

• Small footprint • Economical • Rugged construction • Superior inductance vs. frequency characteristics • Parts available in broad band and high frequency materials

Application:

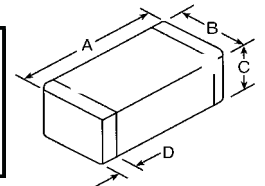
• RF and wireless communication • Information technology equipment including; computers, telecommunications, radar detectors, automotive electronics, cellular phones, pagers, audio equipment, PDAs, keyless remote systems and low-voltage power supply modules • Filters

Test Specifications:

• HP4396A (100KHz - 1.8 GHz) or HP8753 (to 6 GHz) Network/Spectrum Analyzer • HP43961A Impedance Test Kit • HP16192A Test Fixture or Inter-Continental Microwave custom fixtures • HP16200A DC Bias Adapter • Philips PM2811 DC Power Supply • Ambient Temperature $23.5^{\circ}\text{C} \pm 2^{\circ}$ • Bandwidth 3 kHz • Sweep Time 423 ms • Inductance is rated at $\pm 10\%$ at rated frequency • Maximum current ratings are determined by testing to a maximum temperature rise of 40°C with continuous current • Ambient Operating Temperature Range: -55°C to $+125^{\circ}\text{C}$

STEWARD PART NUMBERING SYSTEM					
<u>IC</u>	<u>0603</u>	<u>D</u>	<u>470</u>	<u>R</u>	<u>- K0</u>
PRODUCT SERIES CODE	PART SIZE CODE	RATED CURRENT CODE	IMPEDANCE VALUE CODE	PACKAGING CODE	ADDITIONAL DESCRIPTION

Tolerance Code K = $\pm 10\%$, J = $\pm 5\%$, S = $\pm 0.3\text{nH}$



Ferrite Chip Inductors					
PART NUMBER	Inductance (L) (nH)	Q (min)	Self-Resonant Frequency (MHz)	DCR MAX OHMS	RATED I MAX (continuous) mA
IC0603D470R-K0	47.00	10	260	0.15	400
IC0603C820R-K0	82.00	10	245	0.25	300
IC0603B101R-K0	100.00	15	276	0.50	200
IC0603B121R-K0	120.00	15	236	0.50	200
IC0603B151R-K0	150.00	15	207	0.60	200
IC0603B181R-K0	180.00	15	190	0.60	200
IC0603A221R-K0	220.00	15	173	0.80	100
IC0603A271R-K0	270.00	15	157	0.80	100
IC0603A331R-K0	330.00	15	144	0.85	100
IC0603A391R-K0	390.00	15	127	1.00	100
IC0603A471R-K0	470.00	15	121	1.35	75
IC0603A561R-K0	560.00	15	110	1.55	75
IC0603A681R-K0	680.00	15	104	1.70	75
IC0603A821R-K0	820.00	15	98	2.10	50

Ferrite Chip Inductors					
PART NUMBER	Inductance (L) (nH)	Q (min)	Self-Resonant Frequency (MHz)	DCR MAX OHMS	RATED I MAX (continuous) mA
IC0603B102R-K0	1,000.00	35	87	0.60	200
IC0603A182R-K0	1,800.00	35	64	0.95	100
IC0805C470R-K0	47.00	15	320	0.20	300
IC0805C560R-K0	56.00	15	300	0.20	300
IC0805C680R-K0	68.00	15	280	0.20	300
IC0805C820R-K0	82.00	15	255	0.20	300
IC0805B101R-K0	100.00	20	279	0.30	250
IC0805B151R-K0	150.00	20	230	0.40	250
IC0805B221R-K0	220.00	20	196	0.50	250
IC0805B331R-K0	330.00	20	167	0.55	250
IC0805A561R-K0	560.00	25	133	0.75	150
IC0805B102R-K0	1,000.00	45	87	0.40	250
IC0805B152R-K0	1,500.00	45	69	0.50	250
IC0805B182R-K0	1,800.00	45	64	0.60	250

Ferrite Chip Inductors					
PART NUMBER	Inductance (L) (nH)	Q (min)	Self-Resonant Frequency (MHz)	DCR MAX OHMS	RATED I MAX (continuous) mA
IC0805B222R-K0	2,200.00	45	78	0.65	200
IC0805A272R-K0	2,700.00	45	52	0.75	150
IC0805A332R-K0	3,300.00	45	48	0.80	150
IC0805A392R-K0	3,900.00	45	44	0.90	150
IC0805A472R-K0	4,700.00	45	41	1.00	150
IC0805A562R-K0	5,600.00	50	37	0.90	150
IC0805A682R-K0	6,800.00	50	34	1.00	150
IC0805A822R-K0	8,200.00	50	30	1.10	100
IC0805A103R-K0	10,000.00	50	28	1.15	100
IC0805A123R-K0	12,000.00	50	26	1.25	100
IC0805A153R-K0	15,000.00	30	22	0.80	150
IC0805A183R-K0	18,000.00	30	21	0.90	150
IC0805A223R-K0	22,000.00	30	19	1.10	100
IC0805A273R-K0	27,000.00	30	17	1.15	100
IC0805A333R-K0	33,000.00	30	15	1.25	100
IC1206D470R-K0	47.00	20	320	0.15	400
IC1206C101R-K0	100.00	20	271	0.25	300
IC1206B121R-K0	100.00	20	253	0.30	250
IC1206B331R-K0	330.00	20	167	0.60	250
IC1206B391R-K0	390.00	25	156	0.50	250
IC1206B471R-K0	470.00	25	144	0.60	250
IC1206B561R-K0	560.00	25	133	0.75	200
IC1206B821R-K0	820.00	25	115	0.90	150
IC1206B102R-K0	1,000.00	45	87	0.40	250
IC1206B152R-K0	1,500.00	45	69	0.50	250
IC1206B222R-K0	2,200.00	45	58	0.60	250
IC1206B332R-K0	3,300.00	45	48	0.70	200
IC1206B562R-K0	5,600.00	50	37	0.70	200

Ferrite Chip Inductors							
PART NUMBER	Inductance (L) (nH)	Q (min)	Self-Resonant Frequency (MHz)	DCR MAX OHMS	RATED I MAX (continuous) mA		
IC1206A682R-K0	6,800.00	50	34	0.80	150		
IC1206A822R-K0	8,200.00	50	30	0.90	150		
IC1206A103R-K0	10,000.00	50	28	1.00	150		
IC1206A123R-K0	12,000.00	50	26	1.05	100		
IC1206B153R-K0	15,000.00	35	22	0.70	200		
IC1206B183R-K0	18,000.00	35	21	0.70	200		
IC1206A223R-K0	22,000.00	35	19	0.90	150		
IC1206A333R-K0	33,000.00	35	15	1.05	100		
High Frequency Chip Inductors (air cores)							
PART NUMBER	Inductance (L) (nH)	Q (Minimum) 100MHz 800MHz		Self-Resonant Frequency (MHz) Min Typ		DCR MAX OHMS	RATED I MAX (continuous) mA
IH0603E1D8R-S0	1.80	12	37	> 6,000	> 6,000	0.10	500
IH0603E2D2R-S0	2.20	12	38	> 6,000	> 6,000	0.10	500
IH0603E2D7R-S0	2.70	13	41	> 6,000	> 6,000	0.10	500
IH0603E3D3R-S0	3.30	14	45	5,700	6,000	0.12	500
IH0603E3D9R-S0	3.90	13	43	5,600	5,800	0.14	500
IH0603E5D6R-S0	5.60	14	42	4,350	4,650	0.18	500
IH0603E6D8R-J0	6.80	14	43	3,750	4,050	0.22	500
IH0603C100R-J0	10.00	14	44	2,850	3,150	0.26	300
IH0603C120R-J0	12.00	15	44	2,700	3,000	0.28	300
IH0603C150R-J0	15.00	15	46	2,400	2,700	0.32	300
IH0603C180R-J0	18.00	15	44	2,050	2,350	0.35	300
IH0603C220R-J0	22.00	16	44	1,850	2,150	0.40	300
IH0603C270R-J0	27.00	16	45	1,750	2,050	0.45	300
IH0603C330R-J0	33.00	16	46	1,500	1,800	0.55	300
IH0805E100R-J0	10.00	15	60	2,500	2,800	0.30	500
IH0805C120R-J0	12.00	16	60	2,450	2,750	0.35	300
IH0805C180R-J0	18.00	17	63	1,750	2,050	0.45	300
IH0805C220R-J0	22.00	18	60	1,700	2,000	0.50	300

High Frequency Chip Inductors (air cores)							
PART NUMBER	Inductance (L) (nH)	Q (Minimum)		Self-Resonant Frequency (MHz)		DCR MAX OHMS	RATED I MAX (continuous) mA
		100MHz	800MHz	Min	Typ		
IH0805C270R-J0	27.00	17	58	1,550	1,850	0.55	300
IH0805C330R-J0	33.00	18	55	1,350	1,650	0.60	300
IH0805C390R-J0	39.00	18	47	1,300	1,600	0.65	300
IH0805C470R-J0	47.00	18	43	1,200	1,500	0.70	300
IH0805C560R-J0	56.00	19	39	1,150	1,450	0.75	300
IH0805C680R-J0	68.00	19	30	1,000	1,300	0.80	300
IH0805C820-J0	82.00	19	10	850	1,150	0.90	300
IH0805C101R-J0	100.00	15		700	1,000	0.90	300
IH0805C121R-J0	120.00	16		650	950	0.95	300
IH0805C181R-J0	180.00	16		500	800	1.10	300
IH0805C221R-J0	220.00	16	16	430	730	1.20	300
IH0805C331R-J0	330.00	16		550	850	1.00	300

Steward Surface Mount
Inductors for Signal Applications
Brochure 48 Rev 2 01/2004

Steward produces an extensive line of ferrite products for Inductive and EMI Filtering Applications. Products include ferrite EMI cable cores, connector plates, unique common mode chokes, can-bus chokes, high current thru hole and surface mount components, impedance chip beads, surface mount inductors, toroid inductor cores and ferrite powders. Please consult our web site, Steward's EMI and Inductive Components full catalog, or contact your nearest Steward office or representative for additional information.

Steward North America

1200 East 36th Street
P.O. Box 510
Chattanooga, Tennessee 37401-0510
U.S.A.
Phone: +1-423-308-1690
Fax: +1-423-308-1622
e-mail: americas@steward.com

Steward Mexico

Ave. Obrero Mundial # 9
Parque Industrial Dynatech
Hermosillo, Sonora 83170
Mexico
Phone: +52 662 260-4832
Fax: +52 662 260-5074
e-mail: mexico@steward.com

Steward Europe

5 Cochrane Square
Brucefield Industry Park
Livingston EH54 9DR
Scotland, UK
Phone: +44-(0)-1506-414200
Fax: +44-(0)-1506-410694
e-mail: europe@steward.com

Steward Asia / Pacific

3791 Jalan Bukit Merah
#10-14, E-Centre @ Redhill
159471
Singapore
Phone: +65 6272 2646
Fax: +65 6272 6165
email: asia@steward.com

Steward China

Fuan Industrial Zone, Leliu Town
Shunde District, Foshan City,
Guangdong Province
P.R. China 528322
Phone: +86-757-2563 8860
Fax: +86-757-2563 8862
email: china@steward.com