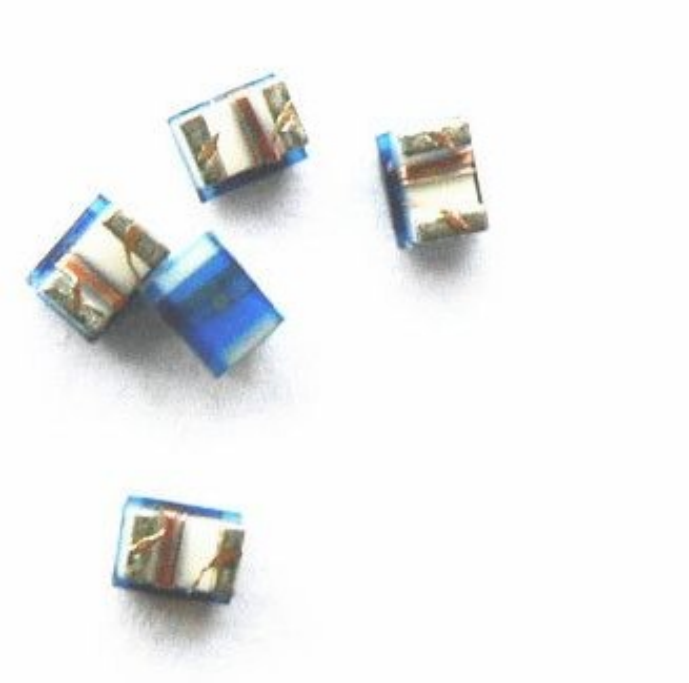
WIRE WOUND CHIP CERAMIC INDUCTORS

J0402/0603/0805/1008CS SERIES



FEATURES/APPLICATOINS

.Carrier tape packing use for SMT
.Can be used in a wide range of frequency to suppress EMI
.Excellent solder ability
.Suitable for reflow STM craft soldering
.Lead free products, ROHS compliant
.Widely use in Noise suppression in Digital equipment such as Computer peripheral devices /VCR /VCD /DVD /Camera /OA equipments etc.

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PRODUCT INDICATION

J 0603 CS - R10 J

① ② ③ ④ ⑤

①Product type: J type

②External dimension：06 for Diameter 0.6inch，03 for Width 0.3inch

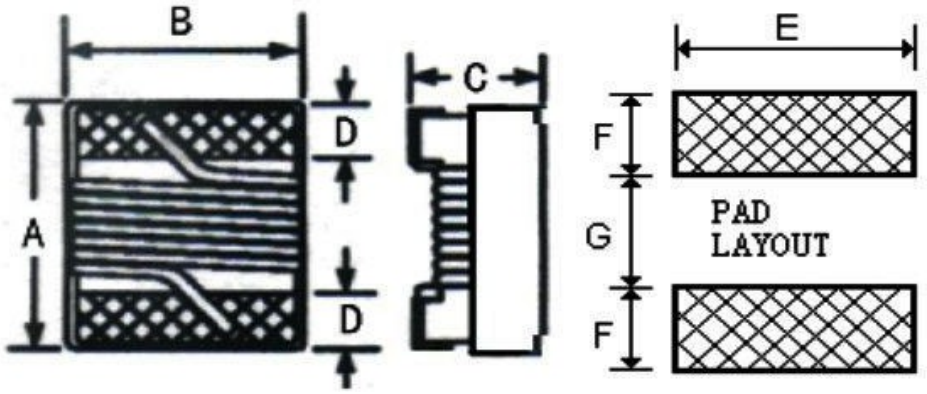
③Material code：CERAMIC

④Nominal impedance：R10 for 100NH

⑤Tolerance: S for ±0.3nH J for ±5% K for ±10%

M for ±20%

SHAPE AND DIMENSIONS



UNIT: mm(inch)

Par NO.	A (Max.)	B (Max.)	C (Max.)	D	E	F	G
J0302CS	0.86(0.034)	0.53(0.021)	0.45(0.018)	0.2(0.006)	0.53(0.021)	0.25(0.01)	0.36(0.014)
J0402CS	1.19(0.047)	0.66(0.026)	0.6(0.024)	0.23 (0.009)	0.66 (0.026)	0.36 (0.014)	0.46 (0.018)
J0603CS	1.78(0.07)	1.1(0.043)	0.95(0.037)	0.3 (0.012)	1.02 (0.04)	0.64 (0.025)	0.64 (0.025)
J0805CS	2.3(0.091)	1.7(0.067)	1.52(0.06)	0.5 (0.02)	1.78 (0.07)	1.02 (0.04)	0.76 (0.03)
J1008CS	2.92(0.115)	2.79(0.11)	2.1(0.083)	0.5 (0.02)	2.54 (0.1)	1.02 (0.04)	1.27 (0.05)
J1206CS	3.56(0.14)	2.16(0.085)	1.52(0.06)	0.51(0.02)	1.93(0.076)	1.02(0.04)	1.78(0.07)

Electrical Characteristics J0302 Series

- 0302 size – 20% smaller than our 0402CS inductors
- 35 inductance values from 0.67 to 34 nH
- High Q values – up to 131 at 2.4 GHz!

Part Number	Inductance	Tolerance (%)	SRF(MHz) (min)	DCR(Ω) (max)	IDC(mA) (max)	Test Freq
J0302CS-N67K	0.67 nH	10	26000	0.021	1600	250 MHz
J0302CS-1N7J	1.70 nH	5	16140	0.038	1140	250 MHz
J0302CS-1N9J	1.90 nH	5	16060	0.065	910	250 MHz
J0302CS-2N1J	2.10 nH	5	15940	0.082	830	250 MHz
J0302CS-3N0J	3.00 nH	5	15100	0.06	950	250 MHz
J0302CS-3N3J	3.30 nH	5	11500	0.06	950	250 MHz
J0302CS-3N5J	3.50 nH	5	11530	0.07	870	250 MHz
J0302CS-3N8J	3.80 nH	5	10670	0.09	830	250 MHz
J0302CS-4N0J	4.00 nH	5	11210	0.1	760	250 MHz
J0302CS-4N7J	4.70 nH	5	12070	0.074	830	250 MHz
J0302CS-5N1J	5.10 nH	5	9650	0.074	830	250 MHz
J0302CS-6N0J	6.00 nH	5	8600	0.14	700	250 MHz
J0302CS-6N3J	6.30 nH	5	9340	0.155	620	250 MHz
J0302CS-6N5J	6.50 nH	5	8190	0.2	620	250 MHz
J0302CS-7N0J	7.00 nH	5	8500	0.103	760	250 MHz
J0302CS-7N2J	7.20 nH	5	9120	0.112	690	250 MHz
J0302CS-7N4J	7.40 nH	5	7980	0.112	690	250 MHz
J0302CS-8N3J	8.30 nH	5	8190	0.15	590	250 MHz
J0302CS-9N2J	9.20 nH	5	7920	0.115	690	250 MHz
J0302CS-10NJ	10 nH	5	7450	0.14	620	250 MHz
J0302CS-12NJ	12 nH	5	6860	0.17	560	250 MHz
J0302CS-13NJ	13 nH	5	6940	0.23	480	250 MHz
J0302CS-15NJ	15 nH	5	6200	0.174	560	250 MHz
J0302CS-16NJ	16 nH	5	6130	0.21	480	250 MHz
J0302CS-17NJ	17 nH	5	6260	0.28	440	250 MHz
J0302CS-18NJ	18 nH	5	6030	0.35	390	250 MHz
J0302CS-19NJ	19 nH	5	5790	0.26	480	250 MHz
J0302CS-20NJ	20 nH	5	5680	0.3	430	250 MHz
J0302CS-21NJ	21 nH	5	5160	0.37	370	250 MHz
J0302CS-22NJ	22 nH	5	4950	0.42	340	250 MHz
J0302CS-23NJ	23 nH	5	5180	0.4	430	250 MHz
J0302CS-29NJ	29 nH	5	4830	0.47	330	250 MHz
J0302CS-34NJ	34 nH	5	4450	0.53	310	250 MHz

1. Inductance measured at 250 MHz using a SMD-F fixture in an Agilent/HP 4286 impedance analyzer with provided correlation pieces.

2. Q measured using an Agilent/HP 4287A with an Agilent/HP 16193 test fixture.

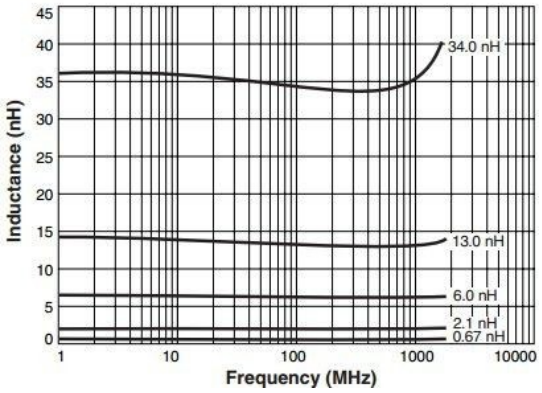
3. SRF measured using an Agilent/HP 8722ES network analyzer and a test fixture with a 0.017″ air gap.

4. DCR measured on a micro-ohmmeter and a CCF858 test fixture.

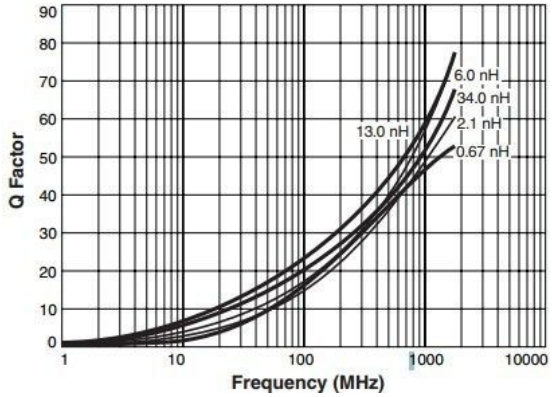
5. Current that causes a 30° C temperature rise from 25° C ambient.

6. Electrical specifications at 25° C.Refer to Doc 362 "Soldering Surface Mount Components" before soldering

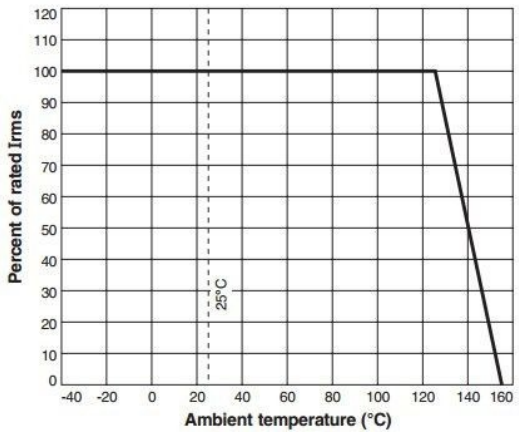
Typical L vs Frequency



Typical Q vs Frequency



Irms Derating



Designer's Kit C370 contains 20 each of all values

Core material Ceramic

Environmental RoHS compliant, halogen free optional

Terminations RoHS compliant silver-platinum-glass frit.

Weight 0.4 – 0.5 mg

Ambient temperature – 40 ° C to +125 ° C with Irms current, +125 ° C to +155 ° C with derated current

Storage temperature Component: – 40° C to +155° C. Tape and reel packaging: – 40° C to +80° C

Resistance to soldering heat Max three 40 second reflows at +260° C, parts cooled to room temperature between cycles

Temperature Coefficient of Inductance (TCL) +25 to +125 ppm/° C

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30° C / 85% relative humidity)

Failures in Time (FIT) / Mean Time Between Failures (MTBF)

One per billion hours / one billion hours, calculated per Telcordia SR-332

Packaging 2000 per 7″ reel. Paper tape: 8 mm wide, 0.5 mm thick, 2 mm pocket spacing

PCB washing Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf.

Electrical Characteristics J0402(1005) Series

Designer’s Kits C328A and B contain 20 each of all 5% values

Designer’s Kits C328A-2 and B-2 contain 20 each of all 2% values

Part Number	Inductance	Tolerance (%)	SRF(MHz) (min)	DCR(Ω) (max)	IDC(mA) (max)	Test Freq
J0402CS-1N0J	1.00 nH	5	12700	0.045	1360	250 MHz
J0402CS-1N2J	1.20 nH	5	12900	0.09	740	250 MHz
J0402CS-1N8J	1.80 nH	5	12000	0.07	1040	250 MHz
J0402CS-1N9J	1.90 nH	5	11300	0.07	1040	250 MHz
J0402CS-2N0_	2.00 nH	2,5	11100	0.07	1040	250 MHz
J0402CS-2N2_	2.20 nH	2,5	10800	0.07	960	250 MHz
J0402CS-2N4_	2.40 nH	2,5	10500	0.068	790	250 MHz
J0402CS-2N7_	2.70 nH	2,5	10400	0.12	640	250 MHz
J0402CS-3N3_	3.30 nH	2,5	7000	0.066	840	250 MHz
J0402CS-3N6_	3.60 nH	2,5	6800	0.066	840	250 MHz
J0402CS-3N9_	3.90 nH	2,5	6000	0.066	840	250 MHz
J0402CS-4N0_	4.00 nH	2,5	6000	0.091	700	250 MHz
J0402CS-4N7_	4.70 nH	2,5	4770	0.13	640	250 MHz
J0402CS-5N1_	5.10 nH	2,5	4800	0.083	800	250 MHz
J0402CS-5N6_	5.60 nH	2,5	4800	0.083	760	250 MHz
J0402CS-6N2_	6.20 nH	2,5	4800	0.083	760	250 MHz
J0402CS-6N8_	6.80 nH	2,5	4800	0.083	680	250 MHz
J0402CS-7N5_	7.50 nH	2,5	4800	0.1	680	250 MHz
J0402CS-8N2_	8.20 nH	2,5	4400	0.1	680	250 MHz
J0402CS-8N7_	8.70 nH	2,5	4100	0.2	480	250 MHz
J0402CS-9N0_	9.00 nH	2,5	4160	0.1	680	250 MHz
J0402CS-9N5_	9.50 nH	2,5	4000	0.2	480	250 MHz
J0402CS-10N_	10 nH	2,5	3900	0.2	480	250 MHz
J0402CS-11N_	11 nH	2,5	3680	0.12	640	250 MHz
J0402CS-12N_	12 nH	2,5	3600	0.12	640	250 MHz
J0402CS-13N_	13 nH	2,5	3450	0.21	440	250 MHz
J0402CS-15N_	15 nH	2,5	3280	0.17	560	250 MHz
J0402CS-16N_	16 nH	2,5	3100	0.22	560	250 MHz
J0402CS-18N_	18 nH	2,5	3100	0.23	420	250 MHz
J0402CS-19N_	19 nH	2,5	3040	0.2	480	250 MHz
J0402CS-20N_	20 nH	2,5	3000	0.25	420	250 MHz
J0402CS-22N_	22 nH	2,5	2800	0.3	400	250 MHz
J0402CS-23N_	23 nH	2,5	2720	0.3	400	250 MHz
J0402CS-24N_	24 nH	2,5	2700	0.3	400	250 MHz

Part Number	Inductance	Tolerance (%)	SRF(MHz) (min)	DCR(Ω) (max)	IDC(mA) (max)	Test Freq
J0402CS-27N_	27 nH	2,5	2480	0.3	400	250 MHz
J0402CS-30N_	30 nH	2,5	2350	0.3	400	250 MHz
J0402CS-33N_	33 nH	2,5	2350	0.3	400	250 MHz
J0402CS-36N_	36 nH	2,5	2320	0.44	320	250 MHz
J0402CS-39N_	39 nH	2,5	2100	0.55	200	250 MHz
J0402CS-40N_	40 nH	2,5	2240	0.44	320	250 MHz
J0402CS-43N_	43 nH	2,5	2030	0.81	100	250 MHz
J0402CS-47N_	47 nH	2,5	2100	0.83	150	250 MHz
J0402CS-51N_	51 nH	2,5	1750	0.82	100	250 MHz
J0402CS-56N_	56 nH	2,5	1760	0.97	100	250 MHz
J0402CS-68N_	68 nH	2,5	1620	1.12	100	250 MHz
J0402CS-82N_	82 nH	2,5	1260	1.55	50	250 MHz
J0402CS-R10_	100 nH	2,5	1160	2	30	250 MHz
J0402CS-R12_	120 nH	5	1900	1.78	50	250 MHz

1. Inductance measured at 250 MHz using a SMD-F test fixture and provided correlation pieces with an Agilent/HP 4286 impedance analyzer.

2. Tolerances in bold are stocked for immediate shipment.

3. Q measured using an Agilent/HP 4291A with an Agilent/HP 16193 test fixture.

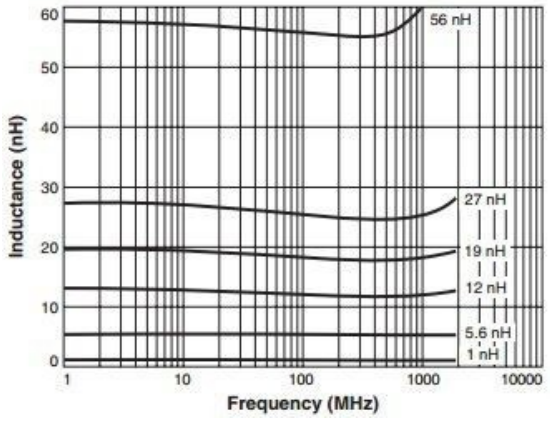
4. For SRF >6 GHz, measured using an Agilent/HP 8722ES network analyzer and a SMD-D test fixture. For SRF ≤6 GHz, measured using an Agilent/HP 8753D network analyzer and a SMD-D test fixture.

5. DCR measured on a micro-ohmmeter.

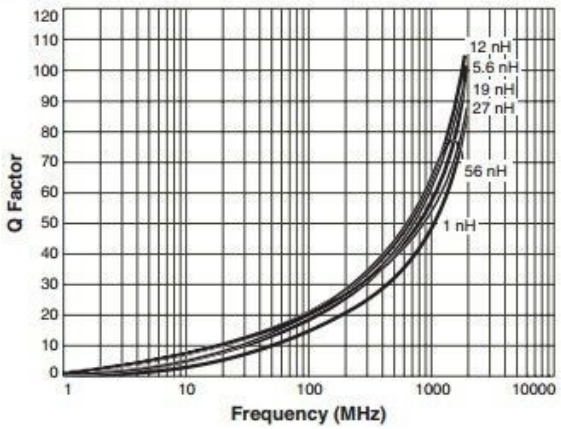
6. Current that causes a 15° C temperature rise from 25° C ambient.

7. Electrical specifications at 25° C. Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

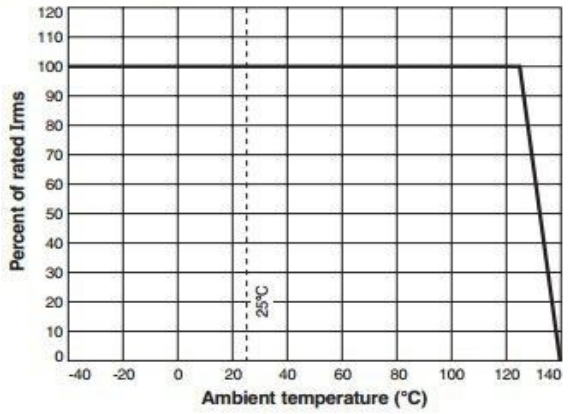
Typical L vs Frequency



Typical Q vs Frequency



Irms Derating



Core material Ceramic

Environmental RoHS compliant, halogen free optional

Terminations RoHS compliant silver-palladium-platinum-glass frit. Other terminations available at additional cost.

Weight 0.8 – 1.0 mg

Ambient temperature –40° C to +125° C with Irms current, +125° C to +140° C with derated current

Storage temperature Component: –40° C to +140° C.

Tape and reel packaging: –40° C to +80° C

Resistance to soldering heat Max three 40 second reflows at +260° C, parts cooled to room temperature between cycles

Temperature Coefficient of Inductance (TCL) +25 to +125 ppm/° C

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30° C / 85% relative humidity)

Failures in Time (FIT) / Mean Time Between Failures (MTBF)

One per billion hours / one billion hours, calculated per Telcordia SR-332

Packaging 2000 or 5000 per 7″ reel Paper tape: 8 mm wide, 1.68 mm thick, 2 mm pocket spacing

PCB washing Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf

Electrical Characteristics J0603(1608) Series

Designer’s Kits C324A and B contain 10 each of all 5% values

Designer’s Kits C324A-2 and B-2 contain 10 each of all 2% values

Part Number	Inductance	Tolerance (%)	Q (min)	SRF(MHz) (min)	DCR(Ω) (max)	IDC(mA) (max)	Test Freq
J0603CS-1N6J	1.60 nH	5	24	12500	0.03	700	250 MHz
J0603CS-1N8J	1.80 nH	5	16	12500	0.045	700	250 MHz
J0603CS-2N2J	2.20 nH	5	13	12.5	0.25	700	250 MHz
J0603CS-3N3_	3.30 nH	2,5	35	5900	0.045	700	250 MHz
J0603CS-3N6_	3.60 nH	2,5	22	5900	0.063	700	250 MHz
J0603CS-3N9_	3.90 nH	2,5	22	6900	0.08	700	250 MHz
J0603CS-4N3_	4.30 nH	2,5	22	5900	0.063	700	250 MHz
J0603CS-4N7_	4.70 nH	2,5	20	5800	0.116	700	250 MHz
J0603CS-5N1_	5.10 nH	2,5	20	5700	0.14	700	250 MHz
J0603CS-5N6_	5.60 nH	2,5	26	4760	0.075	700	250 MHz
J0603CS-6N8_	6.80 nH	2,5	27	5800	0.011	700	250 MHz
J0603CS-7N5_	7.50 nH	2,5	28	4800	0.106	700	250 MHz
J0603CS-8N2_	8.20 nH	2,5	30	4200	0.115	700	250 MHz
J0603CS-8N7_	8.70 nH	2,5	28	4600	0.109	700	250 MHz
J0603CS-9N5_	9.50 nH	2,5	28	5400	0.135	700	250 MHz
J0603CS-10N_	10 nH	2,5	31	4800	0.13	700	250 MHz
J0603CS-11N_	11 nH	2,5	30	4000	0.086	700	250 MHz
J0603CS-12N_	12 nH	2,5	35	4000	0.13	700	250 MHz
J0603CS-15N_	15 nH	2,5	35	4000	0.17	700	250 MHz
J0603CS-16N_	16 nH	2,5	34	3300	0.104	700	250 MHz
J0603CS-18N_	18 nH	2,5	35	3100	0.17	700	250 MHz
J0603CS-22N_	22 nH	2,5	38	3000	0.19	700	250 MHz
J0603CS-23N_	23 nH	2,5	38	2850	0.19	700	250 MHz
J0603CS-24N_	24 nH	2,5	36	2650	0.135	700	250 MHz
J0603CS-27N_	27 nH	2,5	40	2800	0.22	600	250 MHz
J0603CS-30N_	30 nH	2,5	37	2250	0.144	600	250 MHz
J0603CS-33N_	33 nH	2,5	40	2300	0.22	600	250 MHz
J0603CS-36N_	36 nH	2,5	37	2080	0.25	600	250 MHz
J0603CS-39N_	39 nH	2,5	40	2200	0.25	600	250 MHz
J0603CS-43N_	43 nH	2,5	38	2000	0.28	600	250 MHz
J0603CS-47N_	47 nH	2,5	38	2000	0.28	600	200 MHz
J0603CS-51N_	51 nH	2,5	35	1900	0.27	600	200 MHz
J0603CS-56N_	56 nH	2,5	38	1900	0.31	600	200 MHz

Part Number	Inductance	Tolerance (%)	Q (min)	SRF(MHz) (min)	DCR(Ω) (max)	IDC(mA) (max)	Test Freq
J0603CS-68N_	68 nH	2,5	37	1700	0.34	600	200 MHz
J0603CS-72N_	72 nH	2,5	34	1700	0.49	400	150 MHz
J0603CS-82N_	82 nH	2,5	34	1700	0.54	400	150 MHz
J0603CS-R10_	100 nH	2,5	34	1400	0.58	400	150 MHz
J0603CS-R11_	110 nH	2,5	32	1350	0.61	300	150 MHz
J0603CS-R12_	120 nH	2,5	32	1300	0.65	300	150 MHz
J0603CS-R15_	150 nH	2,5	28	990	0.92	280	150 MHz
J0603CS-R18_	180 nH	2,5	25	990	1.25	240	100 MHz
J0603CS-R20_	200 nH	2,5	25	900	1.98	200	100 MHz
J0603CS-R21_	210 nH	2,5	27	895	2.06	200	100 MHz
J0603CS-R22_	220 nH	2,5	25	900	2.1	200	100 MHz
J0603CS-R25_	250 nH	2,5	25	822	3.55	120	100 MHz
J0603CS-R27_	270 nH	2,5	24	900	2.3	170	100 MHz
J0603CS-R33_	330 nH	2,5	25	900	3.89	100	100 MHz
J0603CS-R39_	390 nH	2,5	25	900	4.35	100	100 MHz

1. Inductance measured using a SMD-A fixture in an Agilent/HP 4286 impedance analyzer with provided correlation pieces.

2. Tolerances in bold are stocked for immediate shipment.

3. Q measured at the same frequency as inductance using an Agilent/HP 4291A with an Agilent/HP 16193 test fixture.

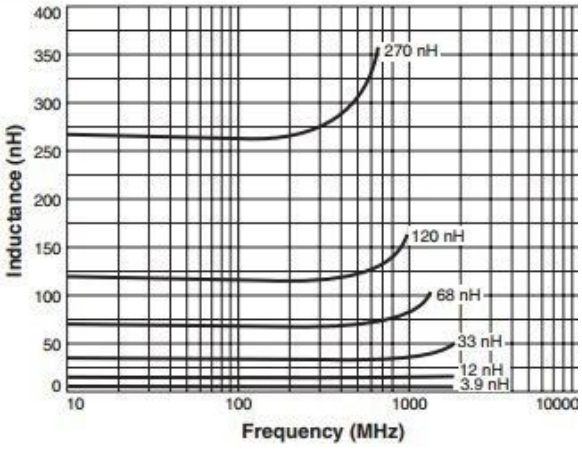
4. SRF measured using an Agilent/HP 8720D network analyzer and a SMD-D test fixture.

5. DCR measured on a Cambridge Technology micro-ohmmeter and a CCF858 test fixture.

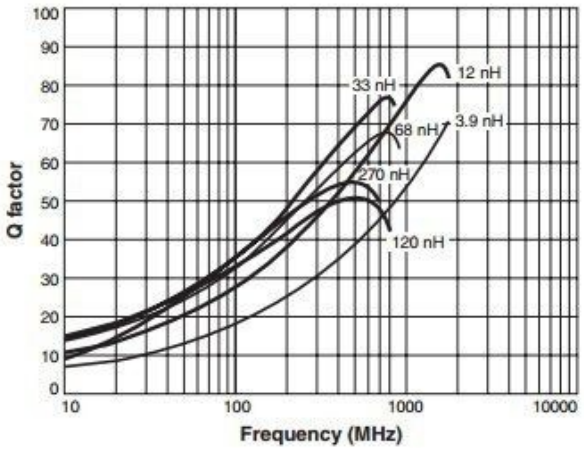
6. Current that causes a 15° C temperature rise from 25° C ambient.

7. Electrical specifications at 25° C.Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

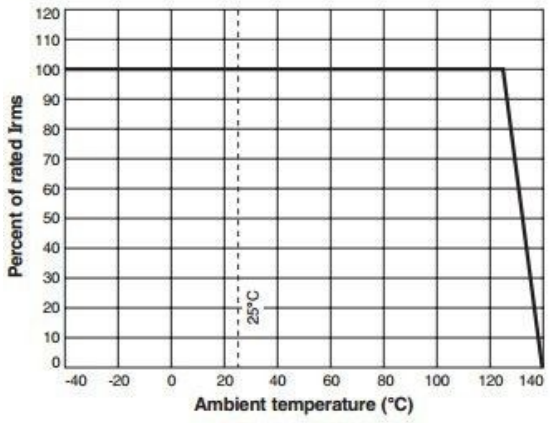
Typical L vs Frequency



Typical Q vs Frequency



Irms Derating



Core material Ceramic

Environmental RoHS compliant, halogen free optional

Terminations RoHS compliant silver-palladium-platinum-glass frit.

Other terminations available at additional cost.

Weight 3.2 – 3.7 mg

Ambient temperature –40° C to +125° C with Irms current, +125° C to +140° C with derated current

Storage temperature Component: –40° C to +140° C.

Tape and reel packaging: –40° C to +80° C

Resistance to soldering heat Max three 40 second reflows at +260° C, parts cooled to room t emperature between cycles

Temperature Coefficient of Inductance (TCL) +25 to +125 ppm/° C

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30° C / 85% relative humidity)

Failures in Time (FIT) / Mean Time Between Failures (MTBF)

One per billion hours / one billion hours, calculated per Telcordia SR-332

Packaging 2000 per 7″ reel Paper tape: 8 mm wide, 1.0 mm thick, 4 mm pocket spacing

PCB washing Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pd

Electrical Characteristics J0805(2012) Series

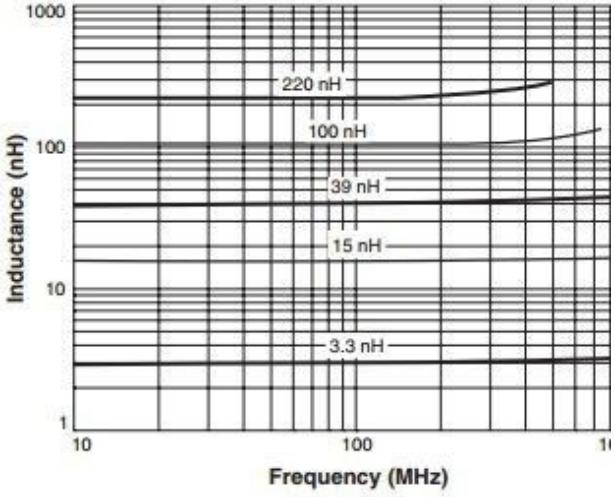
- Exceptional Q values, even at high frequencies
- Tight tolerances – 2% for most; 1% for some values
- Wirewound construction provides the highest SRFs in 0805 size

Part Number	Inductance	Tolerance (%)	Q (min)	SRF(MHz) (min)	DCR(Ω) (max)	IDC(mA) (max)	Test Freq
J0805CS-2N8_	2.80 nH	5	80	7900	0.06	800	250 MHz
J0805CS-3N0_	3.00 nH	5	65	7900	0.06	800	250 MHz
J0805CS-3N3_	3.30 nH	5	50	7900	0.08	600	250 MHz
J0805CS-5N6_	5.60 nH	5	65	5500	0.08	600	250 MHz
J0805CS-6N8_	6.80 nH	5	50	5500	0.11	600	250 MHz
J0805CS-7N5_	7.50 nH	5	50	4500	0.14	600	250 MHz
J0805CS-8N2_	8.20 nH	2,5	50	4700	0.12	600	250 MHz
J0805CS-10N_	10 nH	2,5	60	4200	0.1	600	250 MHz
J0805CS-12N_	12 nH	2,5	50	4000	0.15	600	250 MHz
J0805CS-15N_	15 nH	2,5	50	3400	0.17	600	250 MHz
J0805CS-18N_	18 nH	2,5	50	3300	0.2	600	250 MHz
J0805CS-22N_	22 nH	2,5	55	2600	0.22	500	250 MHz
J0805CS-24N_	24 nH	2,5	50	2000	0.22	500	250 MHz
J0805CS-27N_	27 nH	2,5	55	2500	0.25	500	250 MHz
J0805CS-33N_	33 nH	1,2,5	60	2050	0.27	500	250 MHz
J0805CS-36N_	36 nH	1,2,5	55	1700	0.27	500	250 MHz
J0805CS-39N_	39 nH	1,2,5	60	2000	0.29	500	250 MHz
J0805CS-43N_	43 nH	1,2,5	60	1650	0.34	500	200 MHz
J0805CS-47N_	47 nH	1,2,5	60	1650	0.31	500	200 MHz
J0805CS-56N_	56 nH	1,2,5	60	1550	0.34	500	200 MHz
J0805CS-68N_	68 nH	1,2,5	60	1450	0.38	500	200 MHz
J0805CS-82N_	82 nH	1,2,5	65	1300	0.32	400	150 MHz
J0805CS-91N_	91 nH	1,2,5	65	1200	0.48	400	150 MHz
J0805CS-R10_	100 nH	1,2,5	65	1200	0.46	400	150 MHz
J0805CS-R11_	110 nH	2,5	50	1000	0.48	400	150 MHz
J0805CS-R12_	120 nH	1,2,5	50	1100	0.51	400	150 MHz
J0805CS-R15_	150 nH	1,2,5	50	920	0.56	400	100 MHz
J0805CS-R18_	180 nH	1,2,5	50	870	0.64	400	100 MHz
J0805CS-R22_	220 nH	2,5	50	850	0.7	400	100 MHz
J0805CS-R24_	240 nH	2,5	44	690	1	350	100 MHz
J0805CS-R27_	270 nH	2,5	48	650	1	350	100 MHz
J0805CS-R33_	330 nH	2,5	48	600	1.4	310	100 MHz
J0805CS-R39_	390 nH	2,5	48	560	1.5	290	100 MHz
J0805CS-R47_	470 nH	2,5	33	375	1.76	250	50 MHz

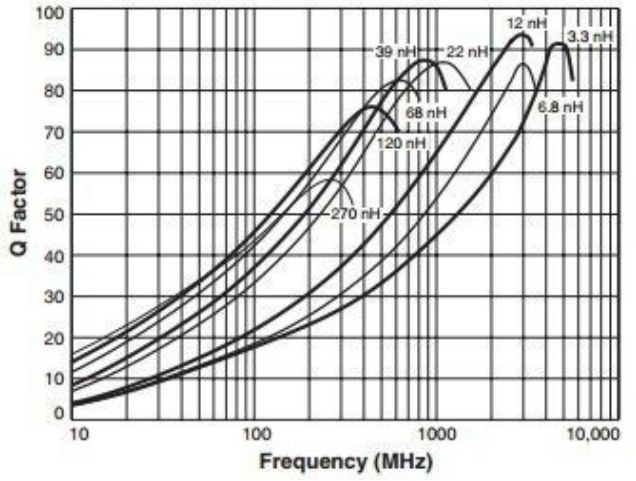
Part Number	Inductance	Tolerance (%)	Q (min)	SRF(MHz) (min)	DCR(Ω) (max)	IDC(mA) (max)	Test Freq
J0805CS-R56_	560 nH	2,5	23	340	1.9	230	25 MHz
J0805CS-R68_	680 nH	2,5	23	188	2.2	190	25 MHz
J0805CS-R82_	820 nH	2,5	23	215	2.35	180	25 MHz

1. Inductance measured using a SMD-A fixture in an Agilent/HP 4286A impedance analyzer with provided correlationpieces.
2. Tolerances in bold are stocked for immediate shipment.
3. Q measured using an Agilent/HP 4291A with an Agilent/HP 16193 test fixture.
4. SRF measured using an Agilent/HP 8720D network analyzer and a SMD-D test fixture.
5. DCR measured on a Cambridge Technology micro-ohmmeter and a CCF858 test fixture.
6. Current that causes a 15° C temperature rise from 25° C ambient.
7. Electrical specifications at 25° C. Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

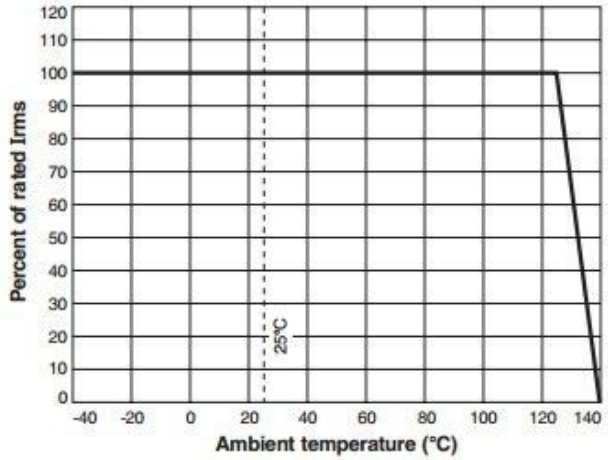
Typical L vs Frequency



Typical Q vs Frequency



Irms Derating



Designer's Kit C303 contains 10 of each 5% part

Designer's Kit C303-2 contains 10 of each 2% part

Core material Ceramic

Environmental RoHS compliant, halogen free optional

Terminations RoHS compliant silver-palladium-platinum-glass frit.

Other terminations available at additional cost.

Weight 10.2 – 11.6 mg

Ambient temperature –40°C to +125°C with Irms current, +125°C to +140°C with derated current

Storage temperature Component: –40°C to +140°C.

Tape and reelpackaging: –40°C to +80°C

Resistance to soldering heat Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

Temperature Coefficient of Inductance (TCL) +100 to +250 ppm/°C

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

Failures in Time (FIT) / Mean Time Between Failures (MTBF)

One per billion hours / one billion hours, calculated per Telcordia SR-332

Packaging 2000/7″ reel; 7500/13″ reel. Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.65 mm pocket depth

PCB washing Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf

Electrical Characteristics J1008(2520) Series

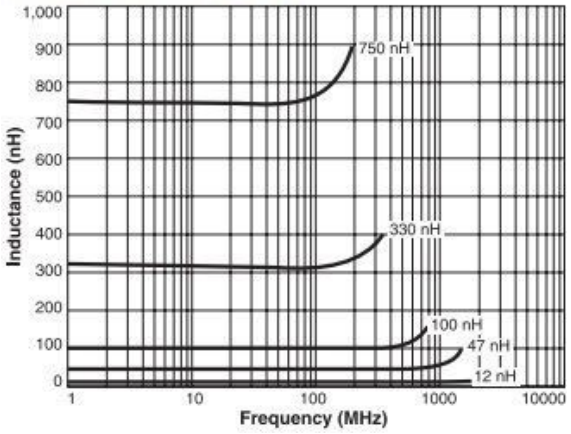
- High SRF and excellent Q values
- Tight tolerances, many values at 1%
- 39 inductance values from 10 nH to 8.2 µH

Part Number	Inductance	Tolerance (%)	Q (min)	SRF(MHz) (min)	DCR(Ω) (max)	IDC(mA) (max)	Test Freq
J1008CS-10N_	10 nH	2,5	50	4100	0.08	1000	50 MHz
J1008CS-12N_	12 nH	2,5	50	3300	0.09	1000	50 MHz
J1008CS-15N_	15 nH	2,5	50	2500	0.1	1000	50 MHz
J1008CS-18N_	18 nH	2,5	50	2500	0.11	1000	50 MHz
J1008CS-22N_	22 nH	1,2,5	55	2400	0.12	1000	50 MHz
J1008CS-27N_	27 nH	2,5	55	1600	0.13	1000	50 MHz
J1008CS-33N_	33 nH	2,5	60	1600	0.14	1000	50 MHz
J1008CS-39N_	39 nH	2,5	60	1500	0.15	1000	50 MHz
J1008CS-47N_	47 nH	1,2,5	65	1500	0.16	1000	50 MHz
J1008CS-56N_	56 nH	1,2,5	65	1300	0.18	1000	50 MHz
J1008CS-68N_	68 nH	1,2,5	65	1300	0.2	1000	50 MHz
J1008CS-82N_	82 nH	1,2,5	60	1000	0.22	1000	50 MHz
J1008CS-R10_	100 nH	1,2,5	60	1000	0.56	650	25 MHz
J1008CS-R12_	120 nH	1,2,5	60	950	0.63	650	25 MHz
J1008CS-R15_	150 nH	1,2,5	45	850	0.7	580	25 MHz
J1008CS-R18_	180 nH	1,2,5	45	750	0.77	620	25 MHz
J1008CS-R22_	220 nH	1,2,5	45	700	0.84	500	25 MHz
J1008CS-R27_	270 nH	1,2,5	45	600	0.91	500	25 MHz
J1008CS-R33_	330 nH	1,2,5	45	570	1.05	450	25 MHz
J1008CS-R39_	390 nH	1,2,5	45	500	1.12	470	25 MHz
J1008CS-R47_	470 nH	1,2,5	45	450	1.19	470	25 MHz
J1008CS-R56_	561 nH	1,2,5	45	415	1.33	400	25 MHz
J1008CS-R62_	620 nH	1,2,5	45	375	1.4	300	25 MHz
J1008CS-R68_	680 nH	1,2,5	45	375	1.47	400	25 MHz
J1008CS-R75_	750 nH	1,2,5	45	360	1.54	360	25 MHz
J1008CS-R82_	820 nH	1,2,5	45	350	1.61	400	25 MHz
J1008CS-R91_	910 nH	2,5	35	320	1.68	380	25 MHz
J1008CS-1R0_	1000 nH	2,5	35	290	1.75	370	25 MHz
J1008CS-1R2_	1200 nH	2,5	35	250	2	310	7.9 MHz
J1008CS-1R5_	1500 nH	2,5	28	200	2.3	330	7.9 MHz
J1008CS-1R8_	1800 nH	2,5	28	160	2.6	300	7.9 MHz
J1008CS-2R2_	2200 nH	2,5	28	160	2.8	280	7.9 MHz
J1008CS-2R7_	2700 nH	2,5	22	140	3.2	290	7.9 MHz
J1008CS-3R3_	3300 nH	2,5	22	110	3.4	290	7.9 MHz
J1008CS-4R7_	4700 nH	2,5	20	90	4	260	7.9 MHz

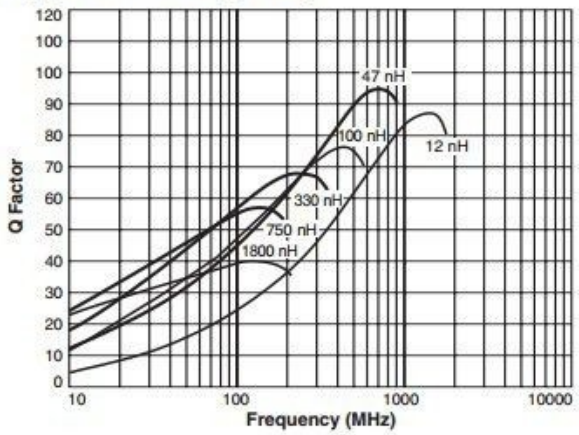
Part Number	Inductance	Tolerance (%)	Q (min)	SRF(MHz) (min)	DCR(Ω) (max)	IDC(mA) (max)	Test Freq
J1008CS-5R6_	5600 nH	5	16	20	4	240	7.9 MHz
J1008CS-6R8_	6800 nH	5	18	40	4.9	200	7.9 MHz
J1008CS-8R2_	8200 nH	5	18	25	6	170	7.9 MHz

1. Inductance measured using a SMD-A fixture in an Agilent/HP4286A impedance analyzer with provided correlation pieces.
2. Tolerances in bold are stocked for immediate shipment.
3. Q measured using an Agilent/HP 4291A with an Agilent/HP 16193 test fixture.
4. SRF measured using an Aglilent/HP 8753D network analyzer and a SMD-D test fixture.
5. DCR measured on a Cambridge Technology micro-ohmmeter and a CCF840 test fixture.
6. Current that causes a 15° C temperature rise from 25° C ambient.
7. Current production parts are marked with one dot. Prior production parts were marked with three dots. Part marking does not indicate polarity.
8. Electrical specifications at 25° C. Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

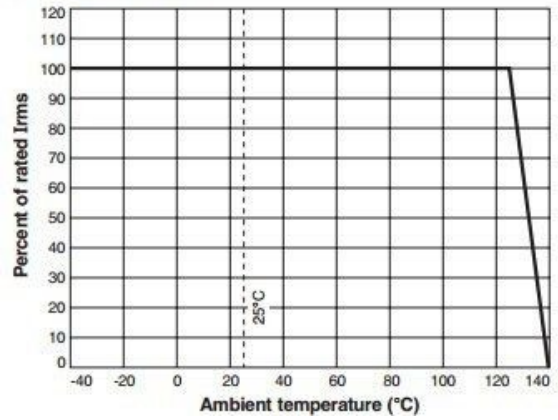
Typical L vs Frequency



Typical Q vs Frequency



Irms Derating



Designer's Kit C300 contains 10 each of all 5% tolerance values

Core material Ceramic

Environmental RoHS compliant, halogen free

Terminations RoHS compliant silver-palladium-platinum-glass frit.

Other terminations available at additional cost.

Weight 29.6 – 37.4 mg

Ambient temperature –40°C to +125°C with Irms current, +125°C to +140°C with derated current

Storage temperature Component: –40°C to +140°C.

Tape and reel packaging: –40°C to +80°C

Resistance to soldering heat Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

Temperature Coefficient of Inductance (TCL) +25 to +125 ppm/°C

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

Failures in Time (FIT) / Mean Time Between Failures (MTBF)

One per billion hours / one billion hours, calculated per Telcordia SR-332

Packaging 2000 per 7″ reel; 7500 per 13″ reel. Plastic tape: 8 mm wide, 0.3 mm thick, 4 mm pocket spacing, 2.0 mm pocket depth

PCB washing Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf

Electrical Characteristics J1206(3216) Series

- High SRF and excellent Q values
- Tight tolerances, many values at 1%
- 31 inductance values from 3.3 to 1200 nH

Part Number	Inductance	Tolerance (%)	Q (min)	SRF(MHz) (min)	DCR(Ω) (max)	IDC(mA) (max)	Test Freq
1206CS-3N3J	3.30 nH	5	30	6200	0.05	1000	100 MHz
1206CS-6N8J	6.80 nH	5	30	5500	0.07	1000	100 MHz
1206CS-10NJ	10 nH	5	40	4000	0.08	1000	100 MHz
1206CS-12N_	12 nH	2,5	40	3200	0.08	1000	100 MHz
1206CS-15N_	15 nH	2,5	40	3200	0.1	1000	100 MHz
1206CS-18N_	18 nH	2,5	50	2800	0.1	1000	100 MHz
1206CS-22N_	22 nH	2,5	50	2200	0.1	1000	100 MHz
1206CS-27N_	27 nH	2,5	50	1800	0.11	1000	100 MHz
1206CS-33N_	33 nH	2,5	55	1800	0.11	1000	100 MHz
1206CS-39N_	39 nH	2,5	55	1800	0.12	1000	100 MHz
1206CS-47N_	47 nH	2,5	55	1500	0.13	1000	100 MHz
1206CS-56N_	56 nH	1,2,5	55	1450	0.14	1000	100 MHz
1206CS-68N_	68 nH	1,2,5	55	1200	0.26	900	100 MHz
1206CS-82N_	82 nH	1,2,5	55	1200	0.21	900	100 MHz
1206CS-R10_	100 nH	1,2,5	55	1100	0.26	850	100 MHz
1206CS-R12_	120 nH	1,2,5	60	1100	0.26	800	100 MHz
1206CS-R15_	150 nH	1,2,5	60	950	0.31	750	100 MHz
1206CS-R18_	180 nH	1,2,5	60	900	0.43	700	50 MHz
1206CS-R22_	220 nH	1,2,5	60	760	0.5	670	50 MHz
1206CS-R27_	270 nH	1,2,5	55	730	0.56	630	50 MHz
1206CS-R33_	330 nH	1,2,5	45	650	0.62	590	50 MHz
1206CS-R39_	390 nH	1,2,5	45	600	0.75	530	50 MHz
1206CS-R47_	470 nH	1,2,5	45	550	1.3	490	50 MHz
1206CS-R56_	560 nH	1,2,5	45	470	1.34	460	35 MHz
1206CS-R62_	620 nH	1,2,5	45	470	1.58	460	35 MHz
1206CS-R68_	680 nH	1,2,5	45	450	1.58	430	35 MHz
1206CS-R75_	750 nH	1,2,5	45	440	2.25	320	35 MHz
1206CS-R82_	820 nH	1,2,5	45	420	1.82	400	35 MHz
1206CS-R91_	910 nH	1,2,5	45	410	2.95	310	35 MHz
1206CS-1R0_	1000 nH	1,2,5	45	400	2.8	320	35 MHz
1206CS-1R2_	1200 nH	1,2,5	45	380	3.2	300	35 MHz

1. Inductance measured using a SMD-A fixture in an Agilent/HP 4286A impedance analyzer with provided correlation pieces.

2. Tolerances in bold are stocked for immediate shipment.

3. Q measured using an Agilent/HP 4291A with an Agilent/HP 16193 test fixture.

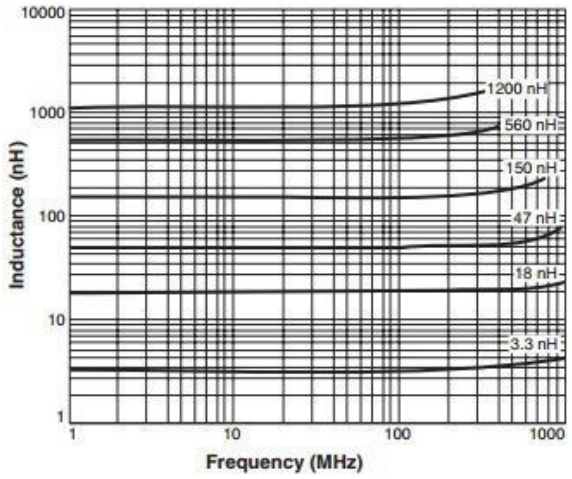
4. SRF measured using an Agilent/HP 8720D network analyzer and a SMD-D test fixture.

5. DCR measured on a Cambridge Technology Micro-ohmmeter and a CCF840 fixture.

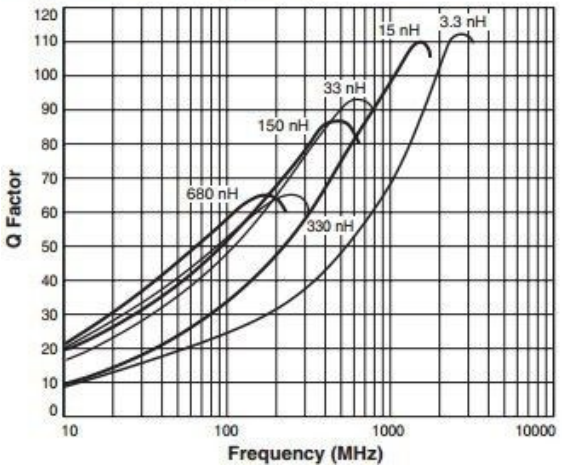
6. Current that causes a 15° C temperature rise from 25° C ambient.

7. Electrical specifications at 25° C. Refer to Doc 362 "Soldering Surface Mount Components" before soldering. Refer to Doc 174 "Color Coding" for the explanation of color Dots.

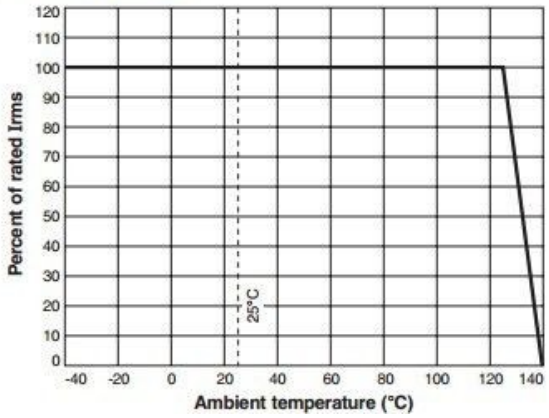
Typical L vs Frequency



Typical Q vs Frequency



Irms Derating



Designer's Kit C320 contains 10 each of all 5% values

Core material Ceramic

Environmental RoHS compliant, halogen free optional

Terminations RoHS compliant silver-palladium-platinum-glass frit.

Other terminations available at additional cost.

Weight 19.5 – 23.0 mg

Ambient temperature –40° C to +125° C with Irms current, +125° C to +140° C with derated current

Storage temperature Component: –40° C to +140° C.

Tape and reel packaging: –40° C to +80° C

Resistance to soldering heat Max three 40 second reflows at +260° C, parts cooled to room temperature between cycles

Temperature Coefficient of Inductance (TCL) +25 to +125 ppm/° C

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30° C / 85% relative humidity)

Failures in Time (FIT) / Mean Time Between Failures (MTBF)

One per billion hours / one billion hours, calculated per Telcordia SR-332

Packaging 2000/7″ reel; 7500/13″ reel. Plastic tape: 8 mm wide, 0.3 mm thick, 4 mm pocket spacing, 1.6 mm pocket depth

PCB washing Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf