



Chip Inductors – 1812CS (4532)

- Higher SRF values than 1812 size parts with ferrite cores
- 5% tolerances for all values
- 19 inductance values from 1.0 to 33 μ H

Request free evaluation samples by contacting Coilcraft or visiting www.coilcraft.com.

Part number ¹	Inductance ² (μ H)	Percent tolerance ³	Q min ⁴	SRF min ⁵ (MHz)	DCR max ⁶ (Ohms)	Irms ⁷ (mA)
1812CS-102XJL_	1.0 @ 7.9 MHz	5	60 @ 50 MHz	310	1.2	480
1812CS-122XJL_	1.2 @ 7.9 MHz	5	62 @ 50 MHz	230	1.2	480
1812CS-152X_L_	1.5 @ 7.9 MHz	5,2	65 @ 50 MHz	210	1.6	430
1812CS-182XJL_	1.8 @ 7.9 MHz	5	68 @ 50 MHz	190	2.0	380
1812CS-222X_L_	2.2 @ 7.9 MHz	5,2	63 @ 50 MHz	170	2.2	340
1812CS-272X_L_	2.7 @ 7.9 MHz	5,2	63 @ 50 MHz	160	3.2	300
1812CS-332X_L_	3.3 @ 7.9 MHz	5,2	65 @ 50 MHz	145	3.8	270
1812CS-392X_L_	3.9 @ 7.9 MHz	5,2	69 @ 50 MHz	130	5.0	240
1812CS-472XJL_	4.7 @ 7.9 MHz	5	63 @ 50 MHz	115	5.4	230
1812CS-562XJL_	5.6 @ 7.9 MHz	5	59 @ 50 MHz	100	5.7	220
1812CS-682XJL_	6.8 @ 7.9 MHz	5	60 @ 50 MHz	90	6.6	210
1812CS-822X_L_	8.2 @ 7.9 MHz	5,2	47 @ 50 MHz	80	7.0	200
1812CS-103XJL_	10 @ 7.9 MHz	5	36 @ 50 MHz	70	7.7	190
1812CS-123XJL_	12 @ 2.5 MHz	5	35 @ 10 MHz	60	8.7	180
1812CS-153X_L_	15 @ 2.5 MHz	5,2	34 @ 10 MHz	50	9.6	170
1812CS-183XJL_	18 @ 2.5 MHz	5	30 @ 10 MHz	45	10.5	160
1812CS-223X_L_	22 @ 2.5 MHz	5,2	32 @ 10 MHz	40	11.5	155
1812CS-273XJL_	27 @ 2.5 MHz	5	29 @ 10 MHz	30	12.5	150
1812CS-333X_L_	33 @ 2.5 MHz	5,2	20 @ 10 MHz	20	13.5	145

1. When ordering, specify **tolerance**, **termination** and **packaging** codes:

1812CS-333XGLC

Tolerance: G = 2% J = 5% (Table shows stock tolerances in bold.)

Termination: L = RoHS compliant silver-palladium-platinum-glass frit.
E = Halogen free component. RoHS compliant silver-palladium-platinum-glass frit terminations.
Special order: T = RoHS tin-silver-copper (95.5/4/0.5) or S = non-RoHS tin-lead (63/37).

Packaging: C = 7" machine-ready reel. EIA-481 embossed plastic tape (600 parts per full reel).
B = Less than full reel. In tape, but not machine ready. To have a leader and trailer added (\$25 charge), use code letter C instead.
D = 13" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (2200 parts per full reel).

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

3. Tolerances in bold are stocked for immediate shipment.

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

5. SRF measured using an Agilent/HP 8753D network analyzer and a Coilcraft SMD-D test fixture.

6. DCR measured on a Cambridge Technology micro-ohmmeter and a Coilcraft CCF859 test fixture.

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

8. Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

Designer's Kit C337 contains 10 of each 5% 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 109 – 128 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 600 per 7" reel; 2200 per 13" reel. Plastic tape: 12 mm wide, 0.3 mm thick, 8 mm pocket spacing, 3.7 mm pocket depth

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

COILCRAFT ACCURATE
PRECISION REPEATABLE
MEASUREMENTS
SEE WEB SITE **TEST FIXTURES**



www.coilcraft.com

US +1-847-639-6400 sales@coilcraft.com
UK +44-1236-730595 sales@coilcraft-europe.com
Taiwan +886-2-2264 3646 sales@coilcraft.com.tw
China +86-21-6218 8074 sales@coilcraft.com.cn
Singapore + 65-6484 8412 sales@coilcraft.com.sg

Document 105-1 Revised 01/11/12

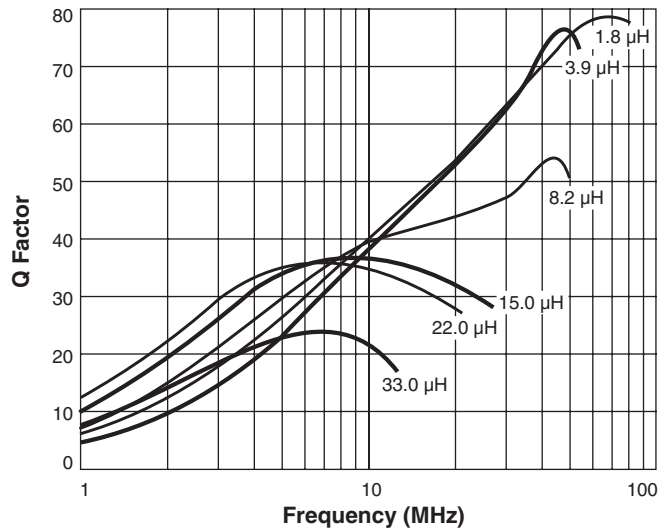
© Coilcraft Inc. 2013

This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.

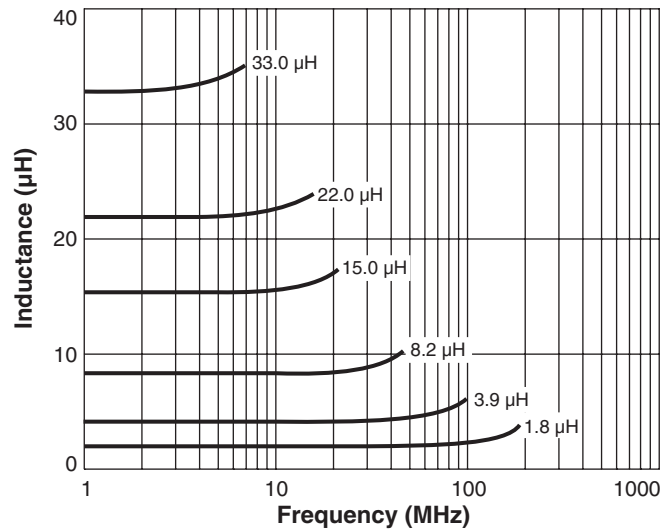


Chip Inductors - 1812CS Series (4532)

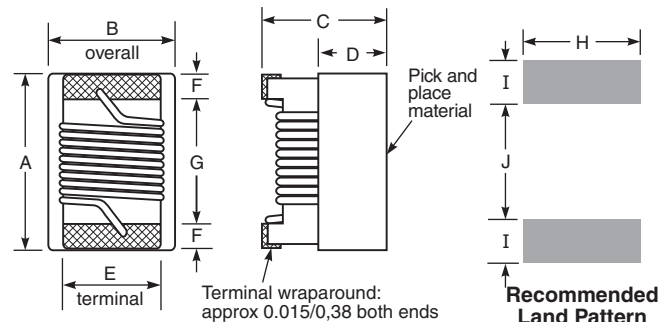
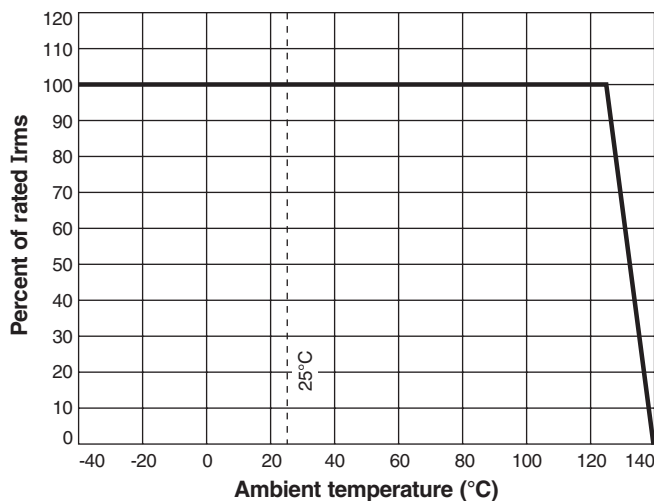
Typical Q vs Frequency



Typical L vs Frequency



Irms Derating



A	B	C	D	E	F	G	H	I	J
max	max	max	ref						
0.195	0.150	0.135	0.070	0.100	0.025	0.128	0.120	0.045	0.118
4,95	3,81	3,43	1,78	2,54	0,64	3,25	3,05	1,14	3,00

Note: Height dimension (C) is before optional solder application. For maximum height dimension including solder, add 0.006 in / 0,152 mm.