Chip Inductors–1812CS Series (4532)

Coilcraft 1812CS ceramic chip inductors are ideal for applications requiring mid-range inductance and close tolerances (±5%). Also, the SRFs of the parts in this series are up to 3 times higher than those of commonly available 1812 chip inductors made on ferrite cores.

Part number[1]	Inductance[2] (µH)	Percent tolerance[3]	Q min[4]	SRF min[5] (MHz)	DCR max[6] (Ohms)	Irms[7] (mA)
1812CS-102X_L_	1.0 @ 7.9 MHz	**5**	60 @ 50 MHz	310	1.2	480
1812CS-122X_L_	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-182X_L_	1.8 @ 7.9 MHz	**5**	68 @ 50 MHz	190	2.0	380
1812CS-222X_L_	2.2 @ 7.9 MHz	**5**	63 @ 50 MHz	170	2.2	340
1812CS-272X_L_	2.7 @ 7.9 MHz	**5**	63 @ 50 MHz	160	3.2	300
1812CS-332X_L_	3.3 @ 7.9 MHz	**5**	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-472X_L_	4.7 @ 7.9 MHz	**5**	63 @ 50 MHz	115	5.4	230
1812CS-562X_L_	5.6 @ 7.9 MHz	**5**	59 @ 50 MHz	100	5.7	220
1812CS-682X_L_	6.8 @ 7.9 MHz	**5**	60 @ 50 MHz	90	6.6	210
1812CS-822X_L_	8.2 @ 7.9 MHz	**5**	47 @ 50 MHz	80	7.0	200
1812CS-103X_L_	10.0 @ 7.9 MHz	**5**	36 @ 50 MHz	70	7.7	190
1812CS-123X_L_	12.0 @ 2.5 MHz	**5**	35 @ 10 MHz	60	8.7	180
1812CS-153X_L_	15.0 @ 2.5 MHz	**5**	34 @ 10 MHz	50	9.6	170
1812CS-183X_L_	18.0 @ 2.5 MHz	**5**	30 @ 10 MHz	45	10.5	160
1812CS-223X_L_	22.0 @ 2.5 MHz	**5,2**	32 @ 10 MHz	40	11.5	155
1812CS-273X_L_	27.0 @ 2.5 MHz	**5**	29 @ 10 MHz	30	12.5	150
1812CS-333X_L_	33.0 @ 2.5 MHz	**5,2**	20 @ 10 MHz	20	13.5	145

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

1812CS-333X G L C

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

Termination: **L** = RoHS compliant silver-palladium-platinum-glass frit. 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. Average current for a 15°C rise above 25°C ambient.
8. Operating temperature range –40°C to +125°C.
9. Electrical specifications at 25°C.

See Qualification Standards section for environmental and test data.
For part marking data see Color Coding section.

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S-Parameter files
ON OUR WEB SITE OR CD
SPICE models
ON OUR WEB SITE OR CD

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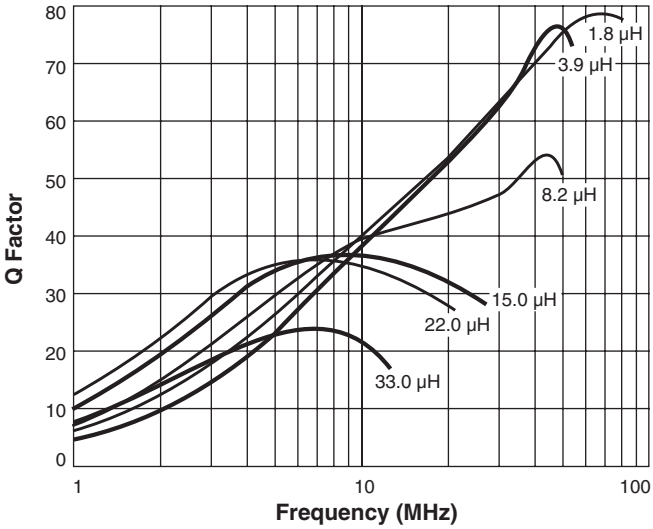
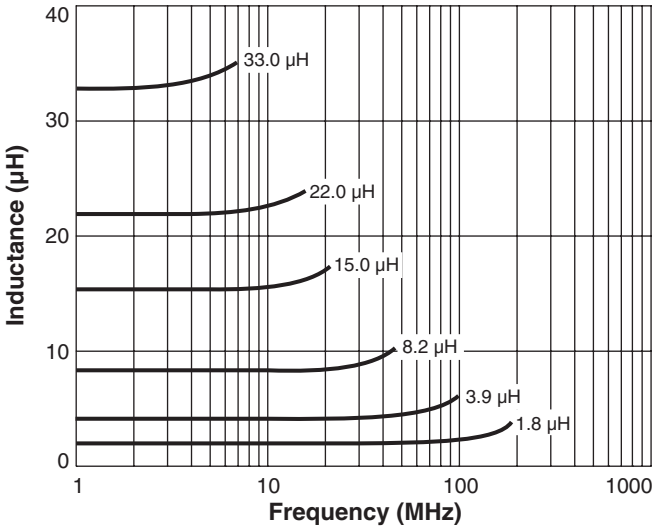
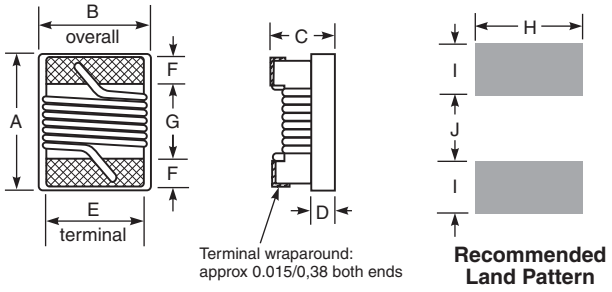
Typical Q vs Frequency



Typical L vs Frequency





A max	B max	C max	D ref	E	F	G	H	I	J
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

Weight: 109 – 128 mg
Terminations: Silver-palladium-platinum-glass frit
Tape and reel: 600/7″ reel; 2200/13″ reel 12 mm tape width
For packaging data see Tape and Reel Specifications section.

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