Chip Inductors–1812CS Series (4532)

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

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

Part number[1]	Inductance[2] (µH)	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-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. 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

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. 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 Only pure water or alcohol recommended

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SPICE models
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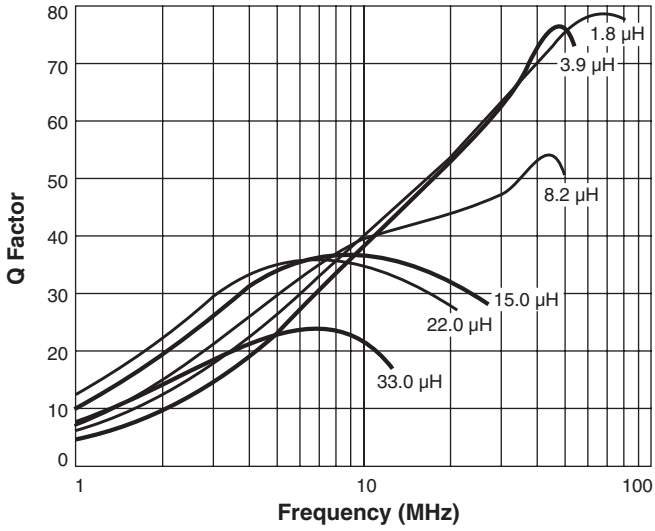
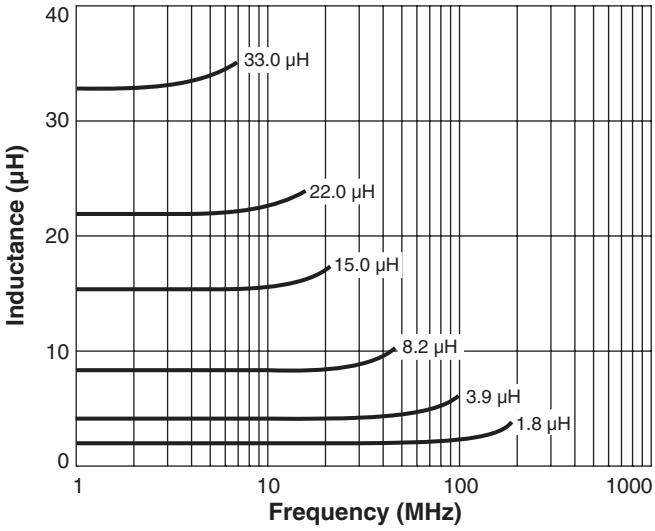
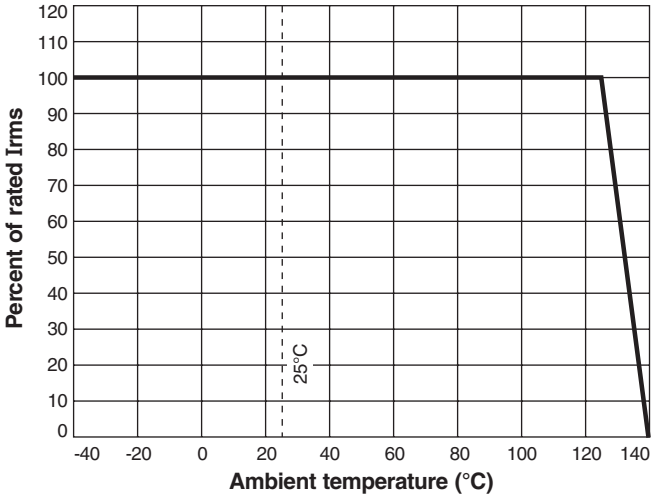
Typical Q vs Frequency

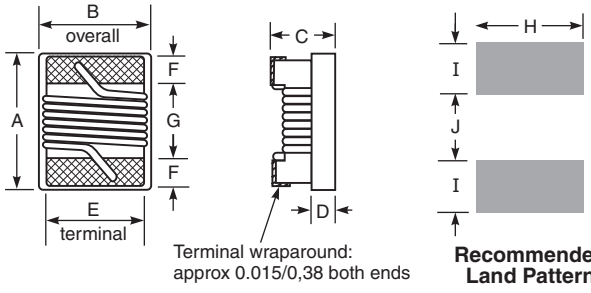


Typical L vs Frequency



Irms Derating





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	inches
4,95	3,81	3,43	1,78	2,54	0,64	3,25	3,05	1,14	3,00	mm

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