

# Chip Inductors – 1008LS (2520)



- Lower DCR than other 1008 inductors
- Ferrite construction for high current handling
- Inductance values: 1.0 – 100  $\mu$ H

Request free evaluation samples by contacting Coilcraft or visiting [www.coilcraft.com](http://www.coilcraft.com).

Part number <sup>1</sup>	Inductance <sup>2</sup> ( $\mu$ H)	Percent tolerance	Q min <sup>3</sup>	SRF min <sup>4</sup> (MHz)	DCR max <sup>5</sup> (Ohms)	Irms <sup>6</sup> (mA)	Color code <sup>7</sup>
1008LS-102XJL_	1.0 @ 7.9 MHz	5	48 @ 50 MHz	230	0.62	700	Black
1008LS-122XJL_	1.2 @ 7.9 MHz	5	37 @ 50 MHz	210	0.68	650	Red
1008LS-152XJL_	1.5 @ 7.9 MHz	5	37 @ 50 MHz	190	0.76	630	Green
1008LS-182XJL_	1.8 @ 7.9 MHz	5	37 @ 50 MHz	170	0.84	600	Gray
1008LS-222XJL_	2.2 @ 7.9 MHz	5	37 @ 50 MHz	150	1.10	520	Red
1008LS-272XJL_	2.7 @ 7.9 MHz	5	37 @ 50 MHz	135	1.28	490	Violet
1008LS-332XJL_	3.3 @ 7.9 MHz	5	37 @ 50 MHz	120	1.46	450	Orange
1008LS-392XJL_	3.9 @ 7.9 MHz	5	37 @ 7.9 MHz	105	1.56	420	White
1008LS-432XJL_	4.3 @ 7.9 MHz	5	30 @ 7.9 MHz	85	1.70	400	Orange
1008LS-472XJL_	4.7 @ 7.9 MHz	5	32 @ 7.9 MHz	90	1.68	400	Violet
1008LS-502XJL_	5.0 @ 7.9 MHz	5	25 @ 7.9 MHz	30	2.20	360	Black
1008LS-562XJL_	5.6 @ 7.9 MHz	5	37 @ 7.9 MHz	80	1.82	380	Blue
1008LS-622XJL_	6.2 @ 7.9 MHz	5	32 @ 7.9 MHz	75	2.50	330	Red
1008LS-682XJL_	6.8 @ 7.9 MHz	5	37 @ 7.9 MHz	70	2.00	360	Gray
1008LS-822XJL_	8.2 @ 7.9 MHz	5	37 @ 7.9 MHz	65	2.65	330	Red
1008LS-912XJL_	9.1 @ 7.9 MHz	5	37 @ 7.9 MHz	57	2.90	310	Brown
1008LS-103XJL_	10 @ 7.9 MHz	5	37 @ 7.9 MHz	60	2.95	300	Black
1008LS-123XJL_	12 @ 2.5 MHz	5	28 @ 2.5 MHz	38	3.30	290	Red
1008LS-153XJL_	15 @ 2.5 MHz	5	34 @ 2.5 MHz	30	3.70	280	Green
1008LS-183XJL_	18 @ 2.5 MHz	5	28 @ 2.5 MHz	26	4.00	160	Gray
1008LS-223XJL_	22 @ 2.5 MHz	5	20 @ 2.5 MHz	22	6.14	270	Red
1008LS-273XJL_	27 @ 2.5 MHz	5	24 @ 2.5 MHz	12	6.45	210	Violet
1008LS-333XJL_	33 @ 2.5 MHz	5	22 @ 2.5 MHz	19	7.00	200	Orange
1008LS-393XJL_	39 @ 2.5 MHz	5	33 @ 2.5 MHz	26	10.0	170	White
1008LS-473XJL_	47 @ 2.5 MHz	5	20 @ 2.5 MHz	12	10.7	160	Violet
1008LS-563XJL_	56 @ 2.5 MHz	5	20 @ 2.5 MHz	8.0	10.0	170	Blue
1008LS-683XJL_	68 @ 0.79 MHz	5	14 @ 0.79 MHz	5.7	13.5	145	Gray
1008LS-104XJL_	100 @ 0.79 MHz	5	13 @ 0.79 MHz	4.5	20.5	120	Black

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

1008LS-103XJLC

**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 (2000 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 (7500 parts per full reel).

- Inductance measured using a Coilcraft SMD-A fixture in an Agilent/HP 4286A impedance analyzer with Coilcraft-provided correlation pieces.
- Q measured using an Agilent/HP 4291A with an Agilent/HP 16193 test fixture.
- SRF measured using an Agilent/HP 8753D network analyzer with a Coilcraft SMD-D fixture.
- DCR measured on a Cambridge Technology Micro-ohmmeter.
- Current that causes a 15°C temperature rise from 25°C. Because of their open construction, these parts will not saturate.
- Current production parts are marked with one dot. Prior production parts were marked with three dots. Part marking does not indicate polarity.
- Electrical specifications at 25°C.

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

**Designer's Kit C336** contains 10 of each stocked value

**Core material** Ceramic/Ferrite

**Environmental** RoHS compliant, halogen free optional

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

**Weight** 38.3 – 41.0 mg

**Ambient temperature** –40°C to +85°C with Irms current, +85°C to +100°C with derated current

**Storage temperature** Component: –40°C to +100°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)** +100 to +350 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 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



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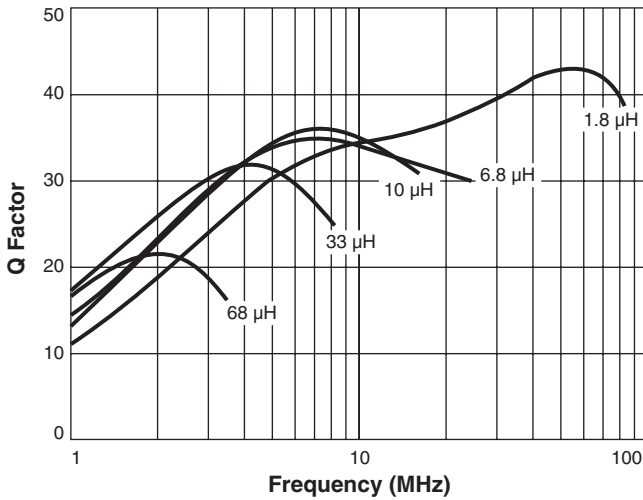
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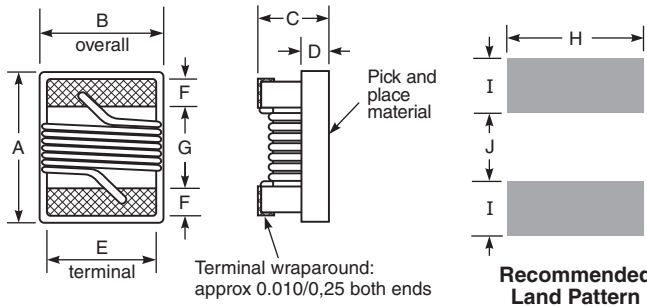
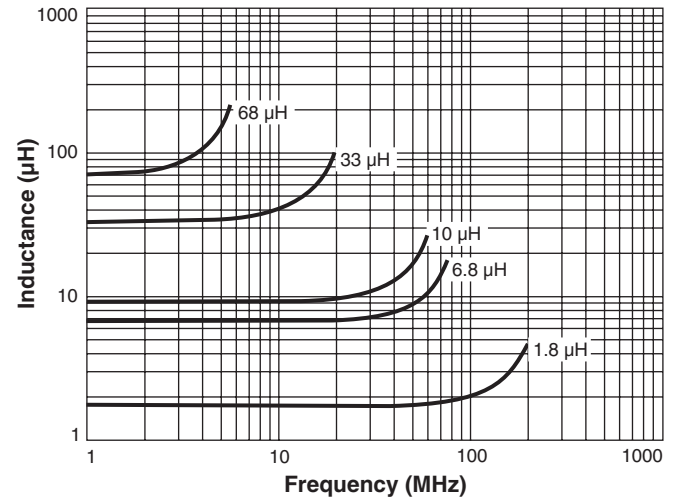


# 1008LS Series (2520)

## Typical Q vs Frequency



## Typical L vs Frequency



A	B	C	D	E	F	G	H	I	J
max	max	max	ref	E	F	G	H	I	J
0.115	0.110	0.080	0.020	0.080	0.020	0.060	0.100	0.040	0.050
2,92	2,79	2,03	0,51	2,03	0,51	1,52	2,54	1,02	1,27

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

**S-Parameter files**  
ON OUR WEB SITE  
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**PRECISION** REPEATABLE  
MEASUREMENTS  
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