

Chip Inductors for DOCSIS 3.x



- Low inductance (150 – 390 nH) 1812 size chip inductors
- Exceptionally high Q
- High current ratings – up to 1150 mA
- 2% tolerance for all values

Part number ¹	Inductance ² ±2% (nH)	Q typ ³	SRF typ ⁴ (MHz)	DCR max ⁵ (mOhms)	I _{rms} ⁶ (mA)
HA4031-AL_	150	75	860	100	1150
HA4032-AL_	180	80	850	105	1150
HA4033-AL_	220	80	700	110	940
HA4034-AL_	270	85	730	120	940
HA4035-AL_	330	80	600	135	850
HA4036-AL_	390	80	600	150	850

- When ordering, please specify **packaging** code:

↓
HA4036-ALC

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).

- Inductance measured at 50 MHz, using a Coilcraft SMD-A fixture in an Agilent/HP 4286A impedance analyzer with Coilcraft-provided correlation pieces.
 - Q measured at 50 MHz, using an Agilent/HP 4291A with an Agilent/HP 16193 test fixture.
 - SRF measured using an Agilent/HP 8753D network analyzer and a Coilcraft SMD-D test fixture.
 - DCR measured on a Cambridge Technology micro-ohmmeter and a Coilcraft CCF859 test fixture.
 - Current that causes a 15°C temperature rise from 25°C ambient.
 - Electrical specifications at 25°C.
- Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

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 I_{rms} current

Maximum part temperature +140°C (ambient + temp rise)

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

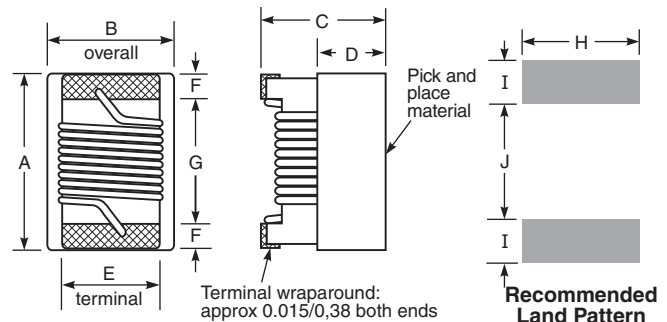
Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

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 to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](#).



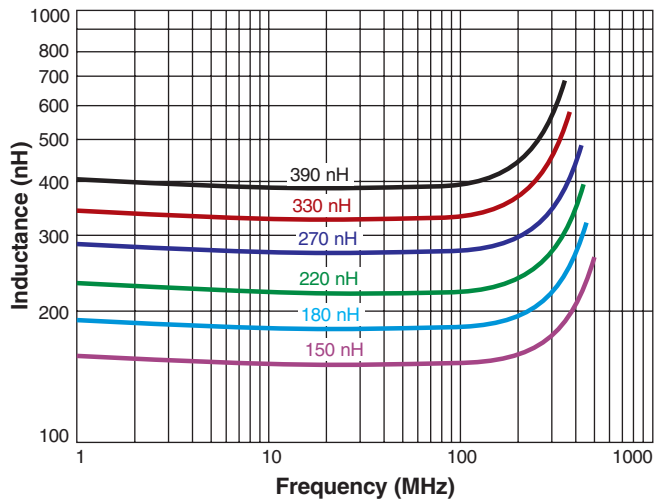
A	B	C	D	E	F	G	H	I	J
max	max	max	ref						
0.195	0.150	0.135	0.070	0.100	0.025	0.128	0.120	0.045	0.118
4,95	3,81	3,43	1,78	2,54	0,64	3,25	3,05	1,14	3,00

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

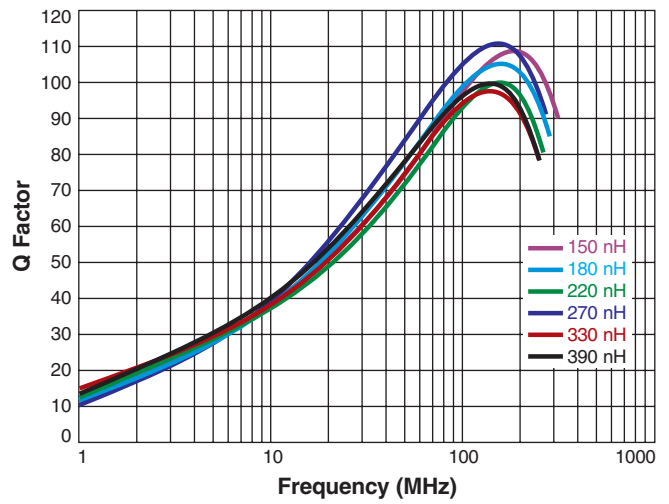


Ultra High Q Chip Inductors – 1812

L vs Frequency



Q vs Frequency



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Document 730-2 Revised 03/27/12
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