



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

1. 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

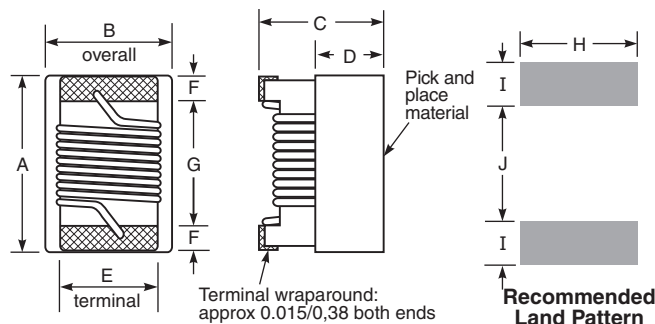
Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

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](#).



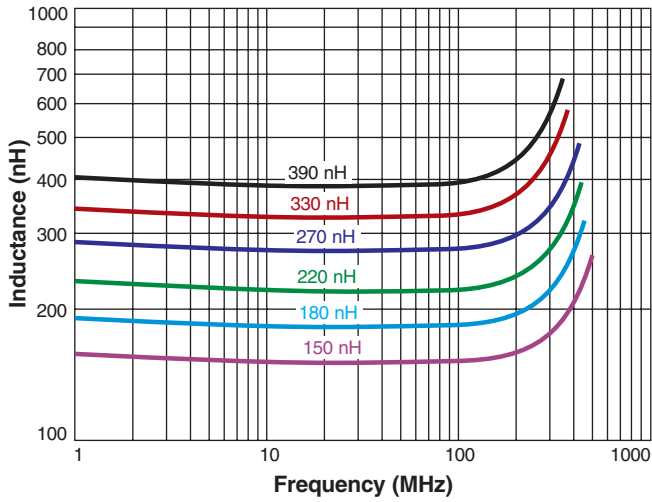
A	B	C	D	E	F	G	H	I	J
max	max	max	ref						
0.195	0.150	0.135	0.070	0.100	0.025	0.128	0.120	0.045	0.118
4,95	3,81	3,43	1,78	2,54	0,64	3,25	3,05	1,14	3,00

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

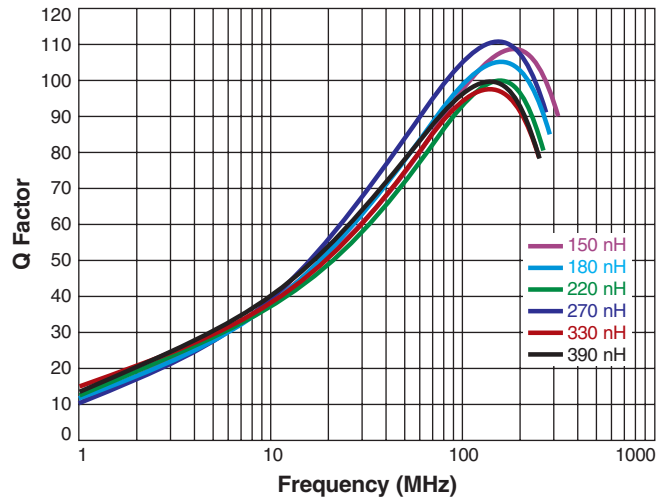


Ultra High Q Chip Inductors – 1812

L vs Frequency



Q vs Frequency



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 730-2 Revised 03/27/12
 © Coilcraft Inc. 2016
 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.