

# Shielded Power Inductor CU8838-AL



- Soft saturation makes it ideal for VRD/VRM applications
- Special materials eliminate all thermal aging issues.

**Core material** Iron

**Core and winding loss** See [www.coilcraft.com/coreloss](http://www.coilcraft.com/coreloss)

**Terminations** RoHS tin-silver over copper.

**Weight** 4.9 g

**Ambient temperature** -40°C to +85°C with (40°C rise) Irms current.

**Maximum part temperature:** The part may be operated without damage as long its temperature (ambient + self-heating) does not exceed +125°C. [Derating](#)

**Storage temperature** Component: -40°C to +125°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

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

**Failures in Time (FIT) / Mean Time Between Failures (MTBF)**

38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

**Packaging** 500/13" reel Plastic tape: 24 mm wide, 0.4 mm thick, 20 mm pocket spacing, 6.5 mm pocket depth

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).

Part number <sup>1</sup>	Inductance <sup>2</sup> ±20% (µH)	DCR (mOhm)		SRF typ <sup>3</sup> (MHz)	Isat (A) <sup>4</sup>			Irms (A) <sup>5</sup>	
		typ	max		10% drop	20% drop	30% drop	20°C rise	40°C rise
CU8838-AL_	1.0	1.75	2.0	100	27	45	63	18.5	26.0

1. When ordering, please specify **packaging** code:

**CU8838-ALD**

**Packaging:** D= 13" machine-ready reel. EIA-481 embossed plastic tape (500 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 D instead.

2. Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc using a Coilcraft SMD-A fixture in an Agilent/HP 4284A LCR meter.

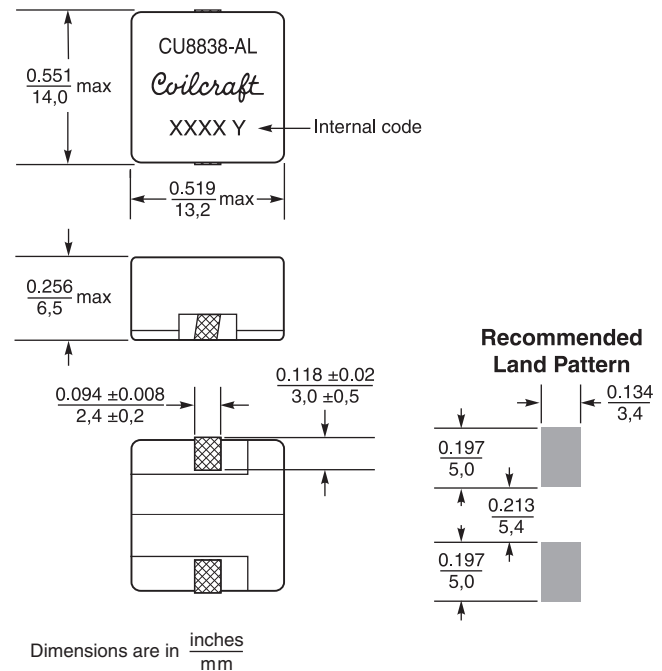
3. SRF measured using an Agilent/HP4291A impedance analyzer and a Coilcraft 16193 fixture.

4. DC current at 25°C that causes the specified inductance drop from its value without current. [Click for temperature derating information.](#)

5. Current that causes the specified temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings. [Click for temperature derating information.](#)

6. Electrical specifications at 25°C.

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

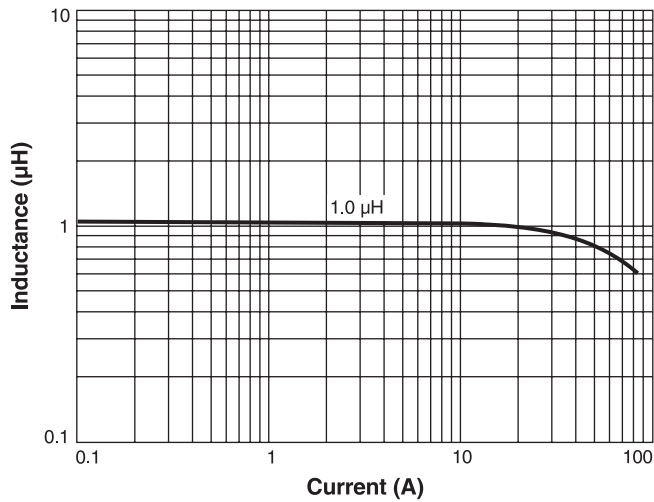


Dimensions are in  $\frac{\text{inches}}{\text{mm}}$

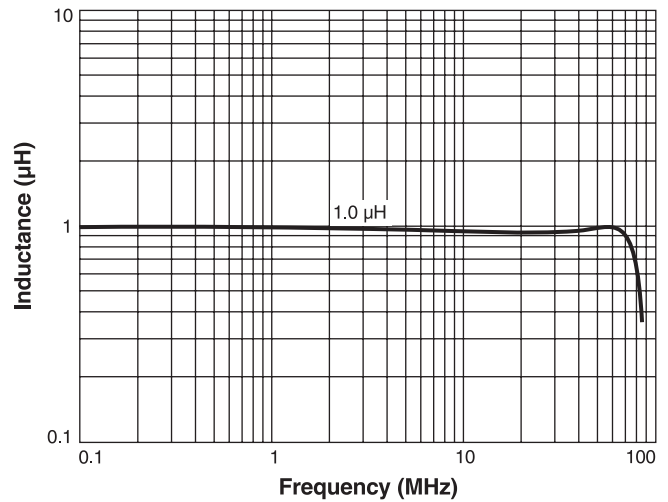


# Shielded Power Inductor – CU8838-AL

## L vs Current



## L vs Frequency



Inductance vs current is unaffected by part temperature up to 125°C.



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