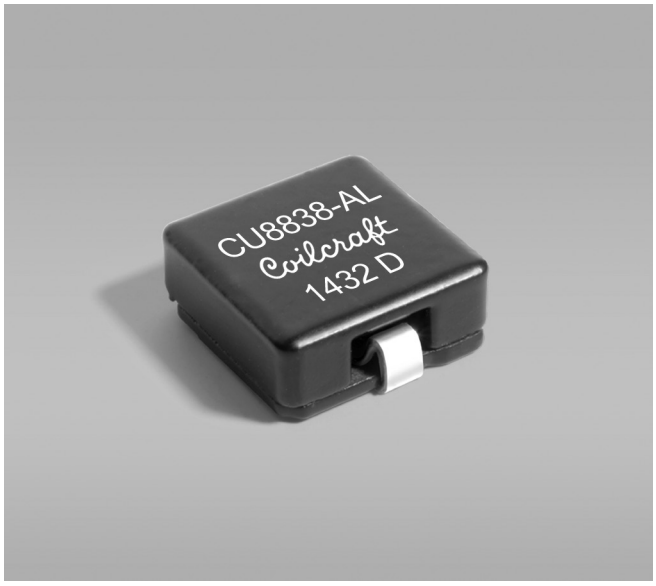
# Shielded Power Inductor CU8838-AL




- 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

**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.

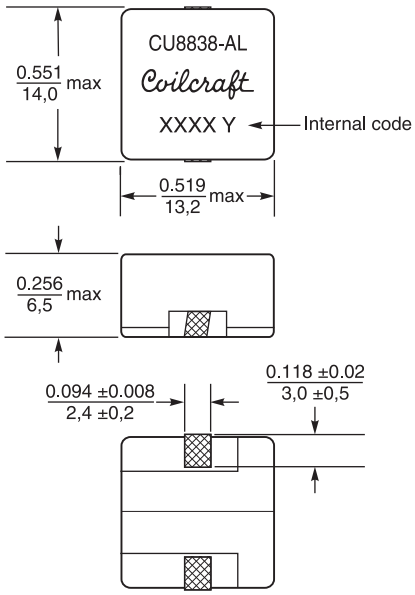
| Part number[1] | Inductance[2] ±20% (µH) | DCR (mOhm) typ | DCR (mOhm) max | SRF typ[3] (MHz) | Isat (A)[4] 10% drop | Isat (A)[4] 20% drop | Isat (A)[4] 30% drop | Irms (A)[5] 20°C rise | Irms (A)[5] 40°C rise |
|---|---|---|---|---|---|---|---|---|---|
| CU8838-AL_ | 1.0 | 1.75 | 2.0 | 100 | 27 |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

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

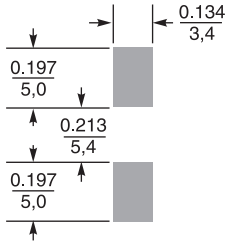
   **CU8838-ALD**

   **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.




**Recommended Land Pattern**




Dimensions are in inches / mm

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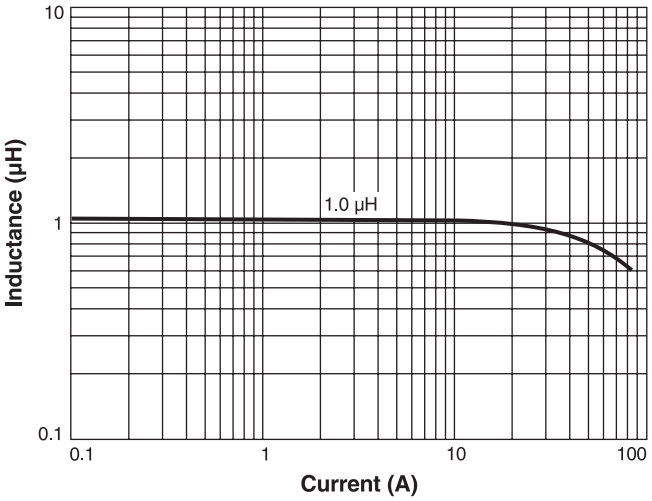
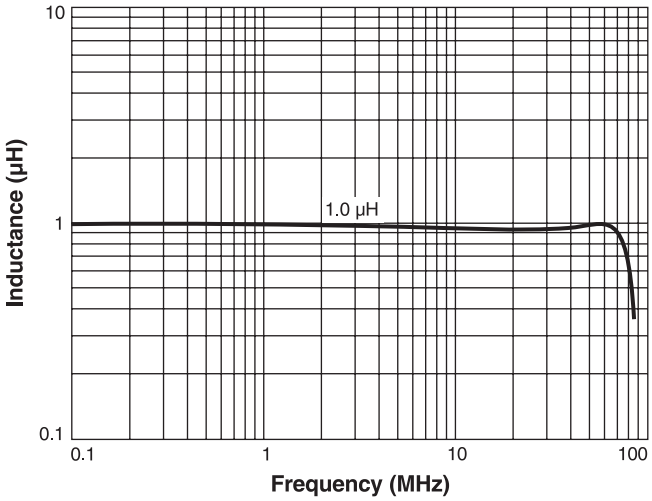
# Shielded Power Inductor – CU8838-AL

## L vs Current




## L vs Frequency




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

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