



SMT Power Inductors – DO1813H Series



- High-current power inductance; up to 14 A saturating current
- Rugged self-leaded construction for reliable soldering

Designer's Kit C331 contains 3 of each part

Core material Ferrite

Core and winding loss See www.coilcraft.com/coreloss

Terminations RoHS compliant tin-silver over copper. Other terminations available at additional cost.

Weight 278–315 mg

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

Maximum part temperature +125°C (ambient + temp rise). [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 1000 per 13" reel Plastic tape: 16 mm wide, 0.3 mm thick, 12 mm pocket spacing, 5.4 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 | L ref (μH) | L typ ±20% ² (μH) | DCR max (Ohms) | SRF typ (MHz) | Isat ³ (A) | Irms ⁴ (A) |
|--------------------------|------------|------------------------------|----------------|---------------|-----------------------|-----------------------|
| DO1813H-181ML_ | 0.18 | 0.18 | 0.003 | 800 | 14.0 | 10.0 |
| DO1813H-331ML_ | 0.33 | 0.33 | 0.004 | 600 | 10.0 | 7.0 |
| DO1813H-561ML_ | 0.56 | 0.56 | 0.010 | 200 | 7.7 | 6.0 |
| DO1813H-122ML_ | 1.2 | 1.15 | 0.017 | 140 | 5.3 | 4.4 |
| DO1813H-222ML_ | 2.2 | 2.06 | 0.035 | 100 | 3.5 | 3.1 |
| DO1813H-332ML_ | 3.3 | 3.20 | 0.040 | 80 | 3.0 | 2.7 |
| DO1813H-472ML_ | 4.7 | 4.70 | 0.054 | 50 | 2.6 | 2.2 |
| DO1813H-682ML_ | 6.8 | 6.80 | 0.080 | 45 | 2.2 | 1.8 |
| DO1813H-822ML_ | 8.2 | 8.20 | 0.092 | 42 | 2.0 | 1.6 |
| DO1813H-103ML_ | 10.0 | 9.55 | 0.11 | 40 | 1.9 | 1.5 |
| DO1813H-153ML_ | 15.0 | 15.3 | 0.17 | 30 | 1.5 | 1.2 |
| DO1813H-223ML_ | 22.0 | 22.6 | 0.25 | 25 | 1.2 | 1.0 |
| DO1813H-333ML_ | 33.0 | 32.5 | 0.35 | 20 | 0.99 | 0.82 |
| DO1813H-473ML_ | 47.0 | 48.1 | 0.47 | 15 | 0.87 | 0.72 |

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

DO1813H-473MLD

Termination: L = RoHS compliant tin-silver over copper.
Special order: T = RoHS tin-silver-copper (95.5/4/0.5) or S = non-RoHS tin-lead (63/37).

Packaging: D = 13" machine-ready reel. EIA-481 embossed plastic tape, 1000 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 tested at 0.25 Vrms, 100 kHz, 0 Adc.
 3. DC current at which the inductance drops 30% (typ) from its value without current.
 4. Current that causes a 40°C temperature rise from 25°C ambient.
 5. Electrical specifications at 25°C.
- Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

SPICE models ON OUR WEB SITE



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Document 207-1 Revised 08/05/15

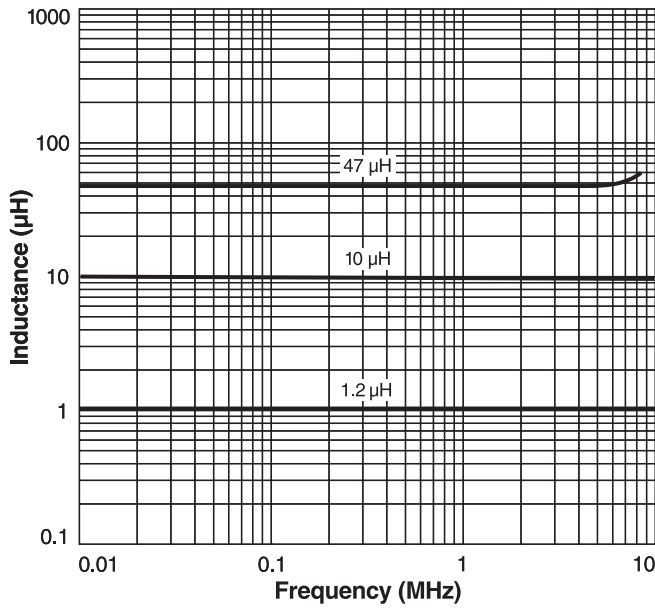
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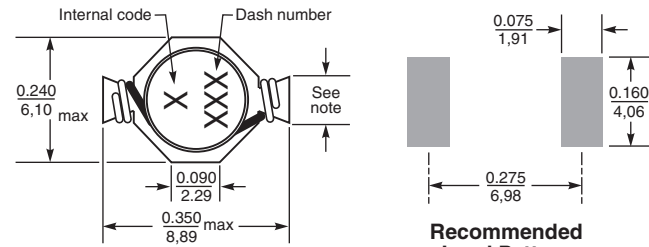
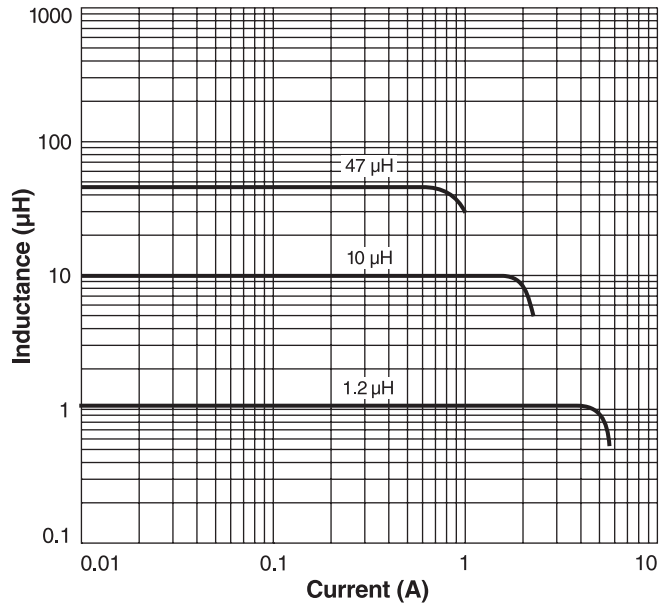


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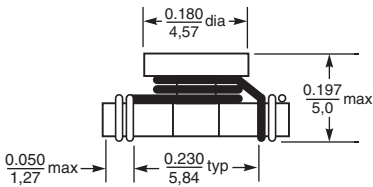
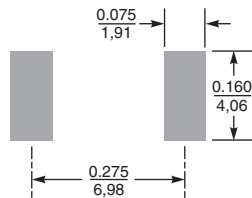
Typical L vs Frequency



Typical L vs Current



Recommended Land Pattern



Note:
 0.080 ±0.010 body
 2.03 ±0.25
 0.100 / 2.54 leads, based on -561

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



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