



SMT Power Inductors – DO2010 Series



- Smallest power inductor, only 2 mm square and 1 mm high
- Can handle up to 0.51 A of saturating current

Designer's Kit C399 contains 5 of each part

Core material Ferrite

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

Terminations RoHS compliant matte tin over nickel over silver-platinum-glass frit. Other terminations available at additional cost.

Weight 11 mg

Ambient temperature -40°C to $+85^{\circ}\text{C}$ with I_{rms} current, $+85^{\circ}\text{C}$ to $+125^{\circ}\text{C}$ with derated current

Storage temperature Component: -40°C to $+125^{\circ}\text{C}$.

Packaging: -40°C to $+80^{\circ}\text{C}$

Resistance to soldering heat Max three 40 second reflows at $+260^{\circ}\text{C}$, parts cooled to room temperature between cycles

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at $<30^{\circ}\text{C}$ / 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 1000/7" reel; 3500/13" reel Plastic tape: 12 mm wide, 0.23 mm thick, 8 mm pocket spacing, 1.19 mm pocket depth

PCB washing Only pure water or alcohol recommended

Part number ¹	Inductance $\pm 20\%^2$ (μH)	DCR max ³ (Ohms)	SRF typ ⁴ (MHz)	Isat ⁵ (A)	Irms ⁶ (A)
DO2010-123ML_	12	1.84	35	0.51	0.39
DO2010-153ML_	15	2.14	30	0.47	0.36
DO2010-223ML_	22	2.80	25	0.42	0.32
DO2010-333ML_	33	4.10	20	0.34	0.25
DO2010-473ML_	47	6.00	16	0.28	0.21
DO2010-683ML_	68	8.80	13	0.23	0.16
DO2010-104ML_	100	15.7	11	0.18	0.13
DO2010-224ML_	220	38.0	8.0	0.10	0.08

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

DO2010-123ML C

Termination: L = RoHS compliant matte tin over nickel over silver-platinum-glass frit

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

Packaging: C = 7" 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 C instead.

D = 13" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (3500 parts per full reel).

2. Inductance tested at 100 kHz, 0.1 Vrms.

3. DCR measured on a micro-ohmmeter.

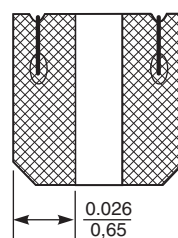
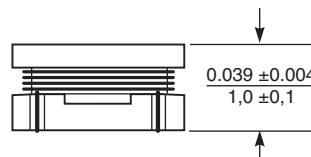
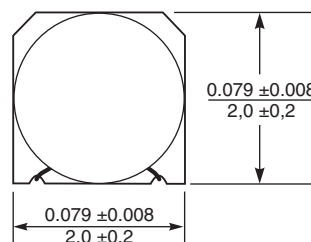
4. SRF measured using Agilent/HP 4191A or equivalent.

5. DC current at which the inductance drops 10% (typ) from its value without current.

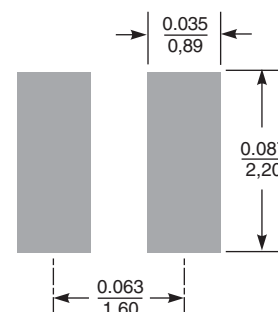
6. Current that causes a 40°C temperature rise from 25°C ambient.

7. Electrical specifications at 25°C .

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



Recommended Land Pattern



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

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Specifications subject to change without notice.
Please check our website for latest information.

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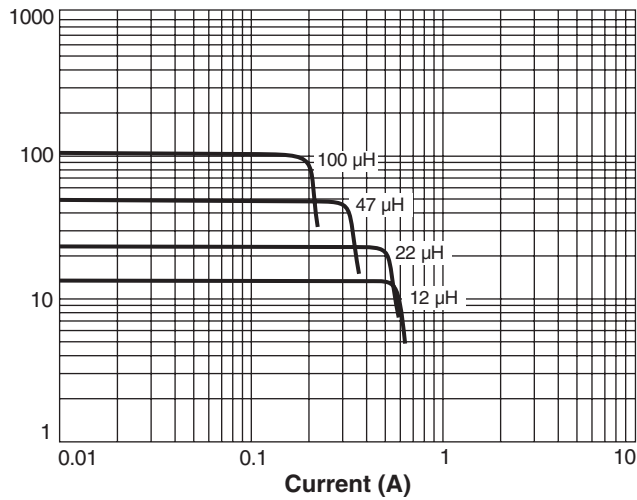
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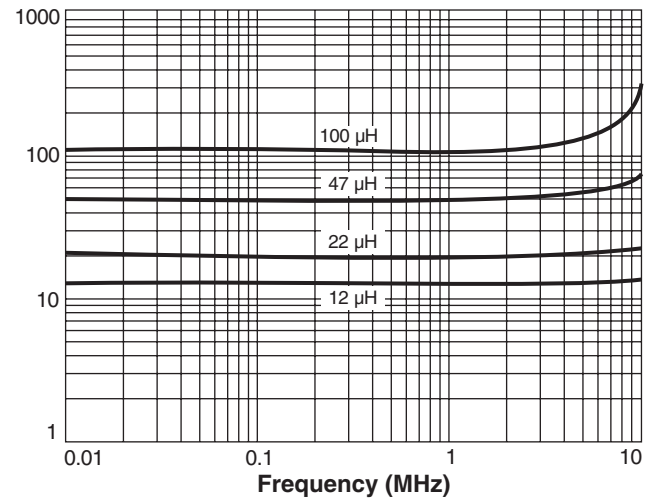


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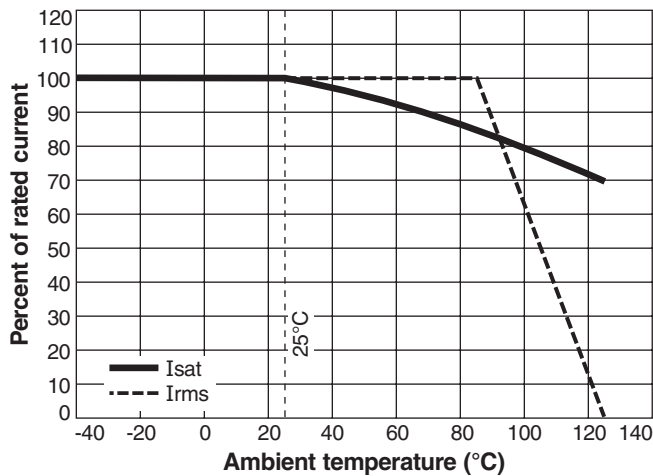
Typical L vs Current



Typical L vs Frequency



Typical Current Derating



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