



SMT Power Inductors – DO2010



- 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°C with Irms current, +85°C to +125°C with derated current

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 1000/7" reel; 3500/13" reel Plastic tape: 12 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.19 mm pocket depth

PCB washing Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf.

Part number ¹	Inductance ±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:

DO2010-123MLC

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

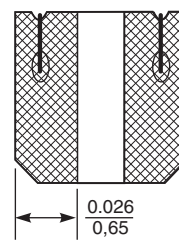
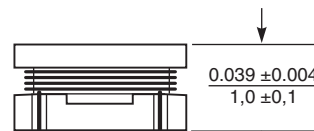
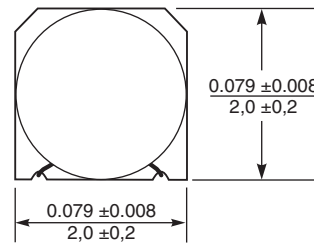
Special order: T = RoHS tin-silver-copper (95.5/4/0.5) or S = non-RoHS tin-lead (63/37).

Packaging: C = 7" machine-ready reel. EIA-481 embossed plastic tape (1000 parts per full reel).

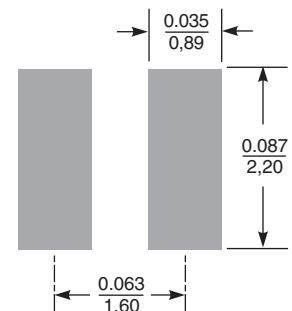
B = Less than full reel. In tape, but not machine ready. To have a leader and trailer added (\$25 charge), use code letter C instead.

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

- Inductance tested at 100 kHz, 0.1 Vrms.
 - DCR measured on a micro-ohmmeter.
 - SRF measured using Agilent/HP 4191A or equivalent.
 - DC current at which the inductance drops 10% (typ) from its value without current.
 - Current that causes a 40°C temperature rise from 25°C ambient.
 - 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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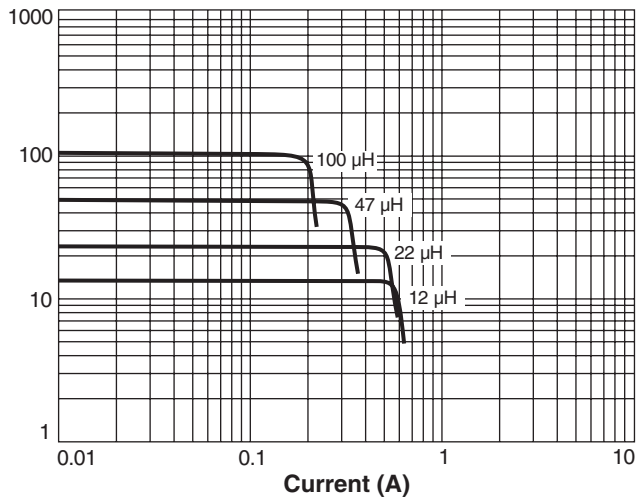
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This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.

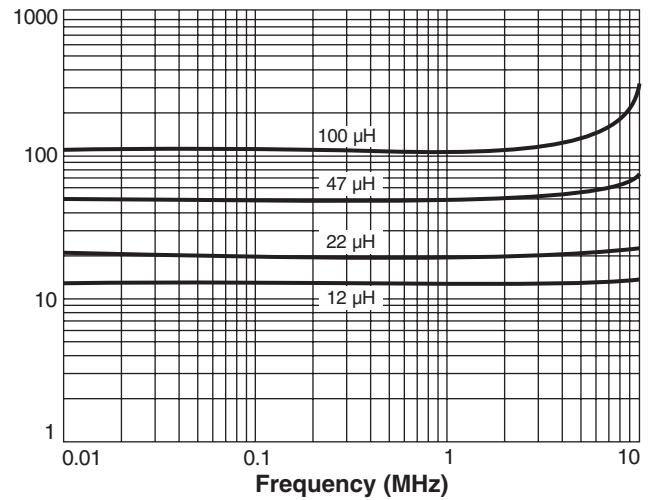


SMT Power Inductors – DO2010 Series

Typical L vs Current



Typical L vs Frequency



Typical Current Derating

