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

Storage temperature Component: –40°C to +125°C. 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, 8 mm pocket spacing, 1.19 mm pocket depth

PCB washing Only pure water or alcohol recommended

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:

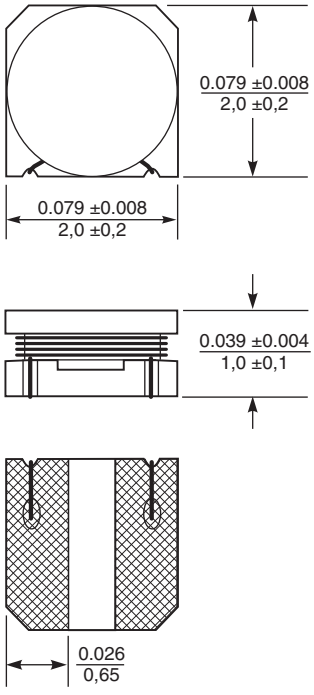
DO2010-123M L C

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).

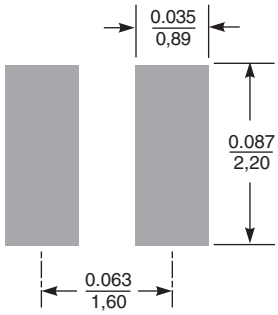
2. Inductance tested at 100 kHz, 0.1 Vrms.
3. DCR measured on a micro-ohmmeter.
4. SRF measured using Agilent/HP 4191A or equivalent.
5. DC current at which the inductance drops 10% (typ) from its value without current.
6. Current that causes a 40°C temperature rise from 25°C ambient.
7. Electrical specifications at 25°C.

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



Dimensions are in inches / mm

Recommended Land Pattern

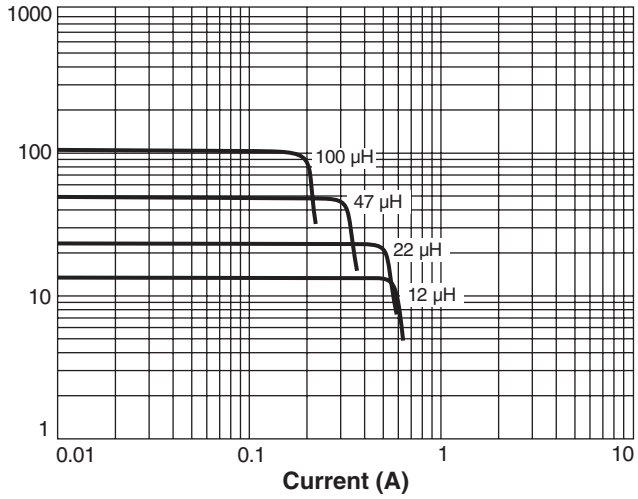


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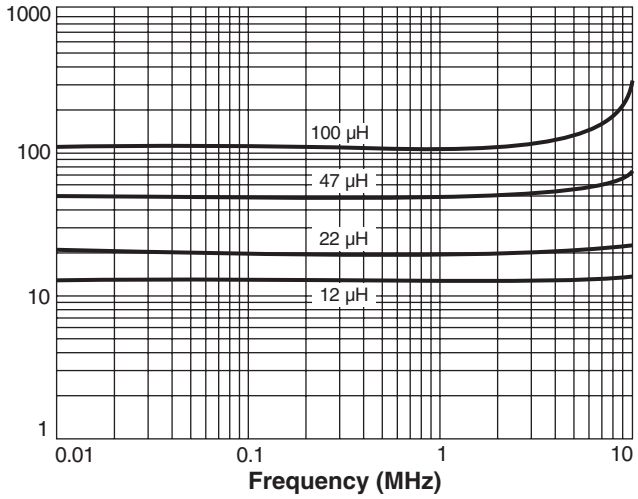
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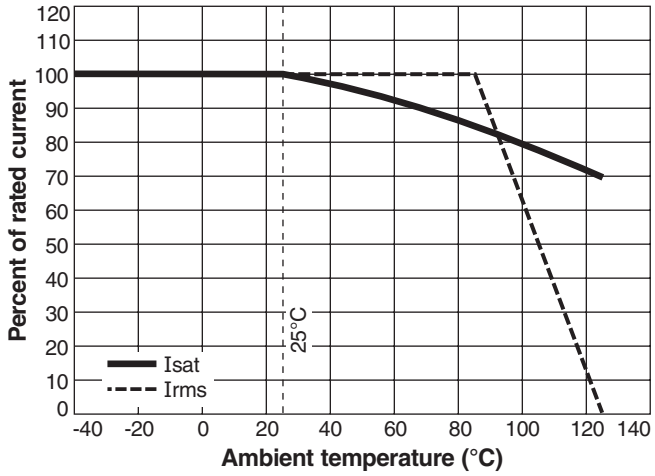
Typical L vs Current



Typical L vs Frequency



Typical Current Derating



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