



Shielded Power Inductors – MLC1770



- Soft saturation makes them ideal for VRD/VRM applications
- Special materials eliminate all thermal aging issues.
- Saturation current up to 64 Amps

Part number ¹	Inductance ² ±20% (µH)	DCR (mOhm)		SRF typ ³ (MHz)	Isat (A) ⁴			Irms (A) ⁵	
		typ	max		10% drop	20% drop	30% drop	20°C rise	40°C rise
MLC1770-801ME_	0.80	1.15	1.30	72	28.40	49.92	64.88	20.36	28.92
MLC1770-142ME_	1.40	1.80	2.00	59	20.52	35.64	51.44	16.10	24.06
MLC1770-202ME_	2.00	2.70	3.00	49	14.20	24.80	37.00	12.98	19.12
MLC1770-282ME_	2.80	3.60	4.00	41	13.00	22.80	33.80	11.56	15.80

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

MLC1770-282MEC

Termination: E = RoHS compliant tin-silver over copper
Special order, added cost: 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 (400 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.

- Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc using a Coilcraft SMD-A fixture in an Agilent/HP 4263B LCR meter.
 - SRF measured using an Agilent/HP4291A impedance analyzer and an Agilent/HP 16193 fixture.
 - DC current at 25°C that causes the specified inductance drop from its value without current. [Click for temperature derating information.](#)
 - 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.](#)
 - Electrical specifications at 25°C.
- Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

Core material Iron

Core and winding loss [Go to core loss calculator](#)

Environmental RoHS compliant, halogen free

Weight 7.8 – 8.0 g

Terminations RoHS compliant tin-silver (96.5/3.5) over copper. Other terminations available at additional cost.

Ambient temperature –40°C to +85°C with Irms current

Maximum part temperature: The part may be operated without damage as long its temperature (ambient + self-heating) does not exceed +125°C.

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 400 per 13" reel Plastic tape: 24 mm wide, 0.4 mm thick, 24 mm pocket spacing, 7.0 mm pocket depth

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](#).



www.coilcraft.com

US +1-847-639-6400 sales@coilcraft.com

UK +44-1236-730595 sales@coilcraft-europe.com

Taiwan +886-2-2264 3646 sales@coilcraft.com.tw

China +86-21-6218 8074 sales@coilcraft.com.cn

Singapore + 65-6484 8412 sales@coilcraft.com.sg

Document 961-1 Revised 09/08/15

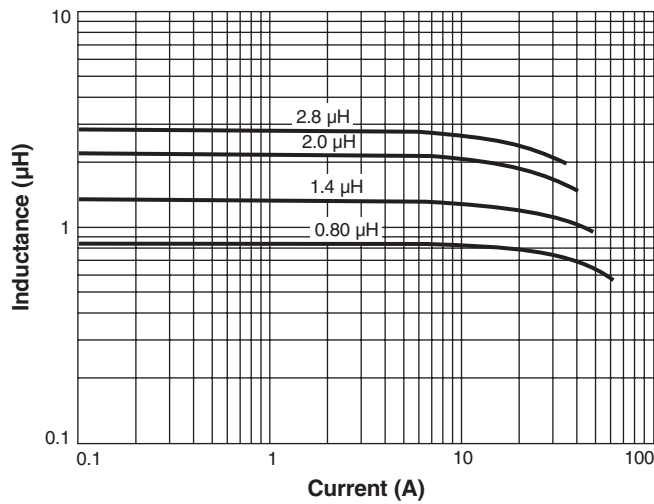
© Coilcraft Inc. 2017

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.

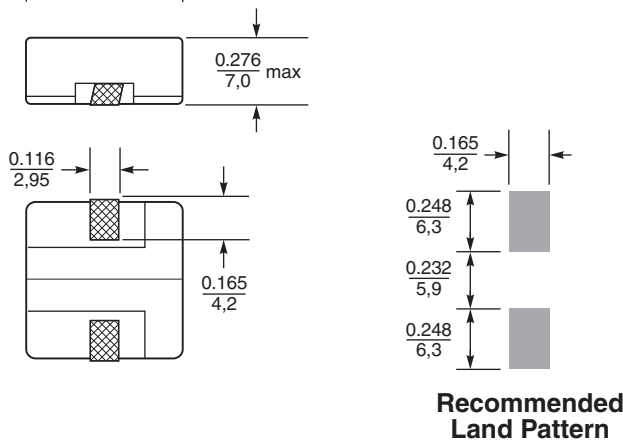
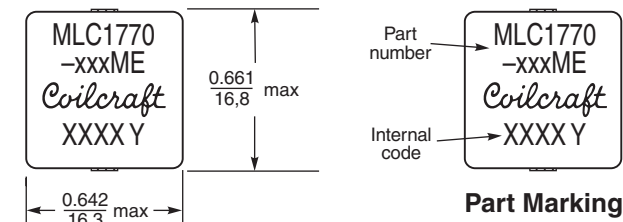
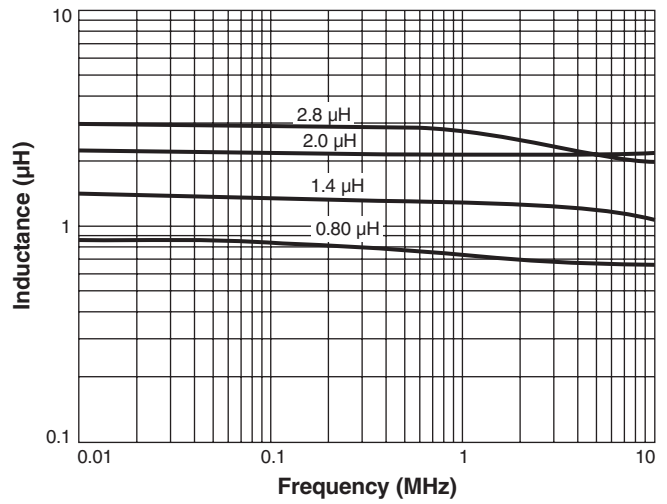


Shielded Power Inductors – MLC1770

L vs Current



L vs Frequency



Dimensions are in inches
mm



US +1-847-639-6400 sales@coilcraft.com
UK +44-1236-730595 sales@coilcraft-europe.com
Taiwan +886-2-2264 3646 sales@coilcraft.com.tw
China +86-21-6218 8074 sales@coilcraft.com.cn
Singapore + 65-6484 8412 sales@coilcraft.com.sg

Document 961-2 Revised 09/08/15
 © Coilcraft Inc. 2017
 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.