



Shielded Power Inductors – MLC75xx



- Soft saturation makes them ideal for VRD/VRM applications
- Special materials eliminate all thermal aging issues.
- AEC-Q200 Grade 3 (–40°C to +85°C)
- Saturation current up to 59 Amps

Core material Iron

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

Weight 0.60 – 0.80 g

Environmental RoHS compliant, halogen free

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

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

Maximum part temperature +125°C (ambient + temperature rise)

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

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

Part number ¹	Inductance ² (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
MLC7532-101NE_	0.10±30%	1.20	1.40	140	21.0	38.0	56.2	24.9	32.5
MLC7532-221ME_	0.22±20%	2.50	2.80	128	22.9	41.0	59.2	20.2	26.5
MLC7542-311ME_	0.31±20%	2.30	2.70	114	12.2	21.9	29.8	20.0	23.8
MLC7542-601ME_	0.60±20%	2.95	3.80	96	9.9	15.7	20.2	16.7	21.9
MLC7540-102ME_	1.00±20%	4.42	5.00	81	7.4	11.3	15.7	13.8	18.2
MLC7540-142ME_	1.40±20%	7.10	8.00	76	6.3	11.0	14.3	10.6	14.1
MLC7540-222ME_	2.17±20%	11.7	13.0	65	5.3	8.3	11.4	8.5	11.3

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

MLC7540-222ME**C**

Termination: E = RoHS 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: C = 7" machine-ready reel. EIA-481 embossed plastic tape.

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.

2. Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc using a Coilcraft SMD-A fixture in an Agilent/HP 4284A LCR meter.

3. SRF measured using an Agilent/HP4291A impedance analyzer and a Coilcraft 16193 fixture.

4. DC current at 25°C that causes the specified inductance drop from its value without current. [Click for temperature derating information.](#)

5. 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.](#)

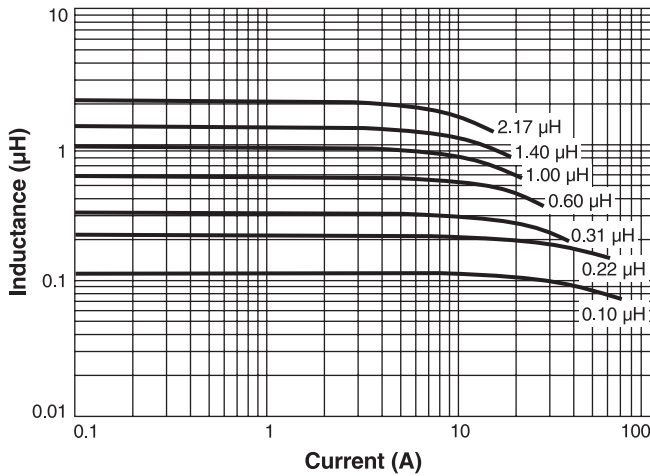
6. Electrical specifications at 25°C.

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

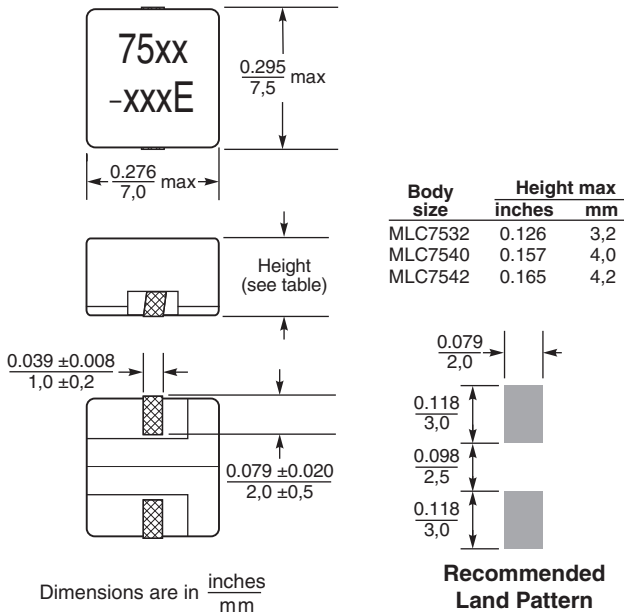
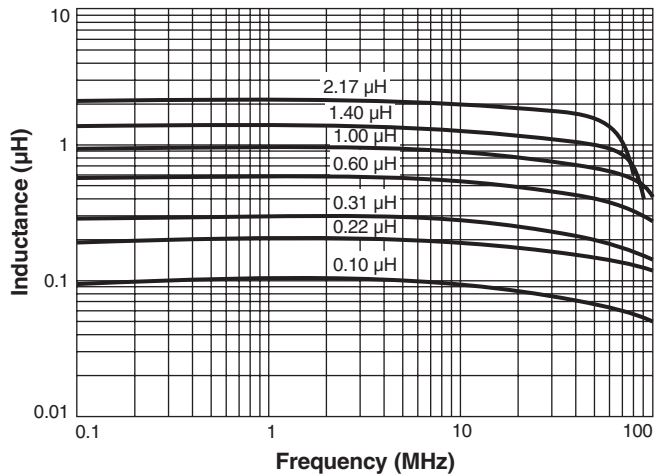


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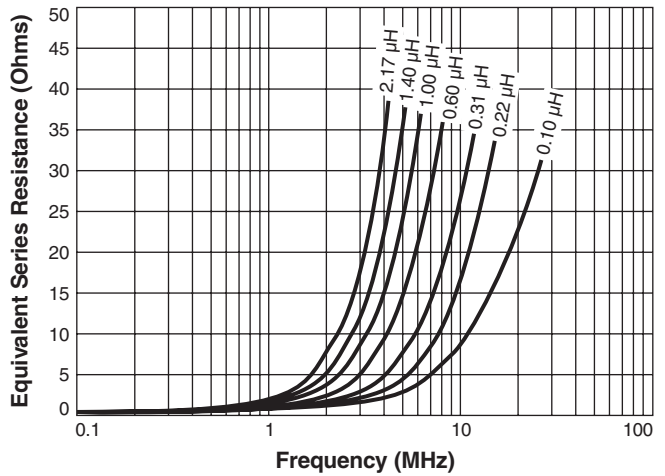
L vs Current



L vs Frequency



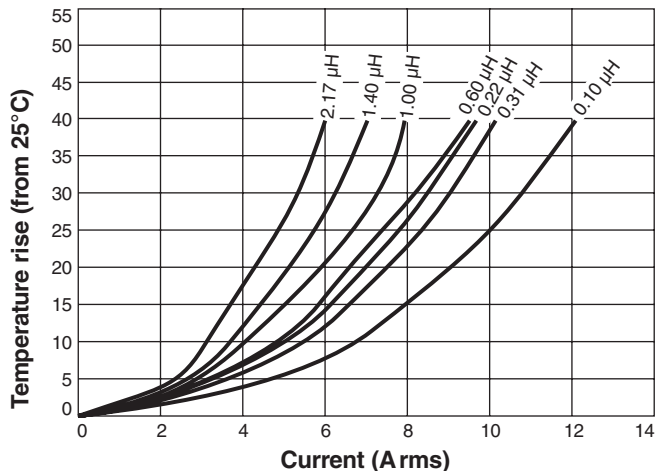
ESR vs Frequency



Packaging

MLC7532 350/7" reel; 1500/13" reel Plastic tape: 16 mm wide, 0.35 mm thick, 12 mm pocket spacing, 3.3 mm pocket depth
MLC7540 250/7" reel; 1200/13" reel Plastic tape: 16 mm wide, 0.35 mm thick, 12 mm pocket spacing, 4.2 mm pocket depth
MLC7542 250/7" reel; 1200/13" reel Plastic tape: 16 mm wide, 0.35 mm thick, 12 mm pocket spacing, 4.2 mm pocket depth

Temperature Rise vs Current



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