Shielded Power Inductors – ER1390



- Exceptionally high current carrying capability
- Low DC resistance
- AEC-200 Grade 3 qualified (–40°C to +85°C ambient)

Core material Ferrite
Core and winding loss
Terminations RoHS compliant matte tin over nickel over phos bronze. Other terminations available at additional cost.
Weight 4.0 – 4.8 g
Ambient temperature –40°C to +85°C with (40°C rise) Irms current.
Maximum part temperature +125°C (ambient + temp 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
Packaging 300 per 13″ reel; Plastic tape: 24 mm wide, 0.5 mm thick, 20 mm pocket spacing, 9.6 mm pocket depth
PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash.

Part number[1]	Inductance[2] ±20% (µH)	DCR (mOhm)[3] typ	DCR (mOhm)[3] max	SRF typ[4] (MHz)	Isat (A)[5] 10% drop	Isat (A)[5] 20% drop	Isat (A)[5] 30% drop	Irms (A)[6] 20°C rise	Irms (A)[6] 40°C rise
ER1390-103ML_	10	13.7	15.0	26.9	11.32	12.56	13.16	6.4	9.2
ER1390-153ML_	15	13.7	15.0	24.3	7.20	8.04	8.60	6.4	9.2
ER1390-223ML_	22	21.0	23.1	20.3	6.08	6.80	7.36	5.7	7.7
ER1390-333ML_	33	21.0	23.1	15.7	3.80	4.40	4.76	5.7	7.7
ER1390-473ML_	47	21.0	23.1	13.2	2.60	3.00	3.20	5.7	7.7

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

ER1390-473MLD

Termination: **L** = RoHS compliant matte-tin over nickel over phos bronze.
Special order: **T** = RoHS tin-silver-copper over 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 (300 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.

2. Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4284A or equivalent.
3. DCR measured on a micro-ohmmeter.
4. SRF measured using an Agilent/HP 4395A network analyzer and an Agilent/HP 16193A test fixture.
5. DC current at 25°C that causes the specified inductance drop from its value without current.
6. Current that causes the specified temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maxi-mum ratings.
7. Electrical specifications at 25°C.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

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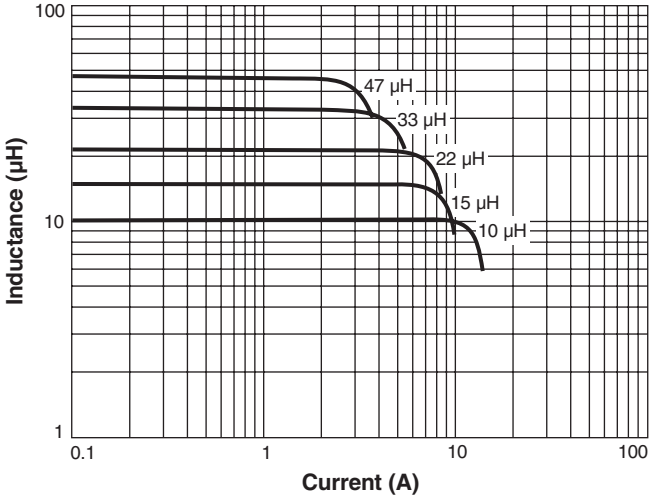
This product may not be used in medical or high risk applications without prior PulseGM approval.
Specification subject to change without notice.
Please check web site for latest information.

RoHS/ REACH COMPLIANT

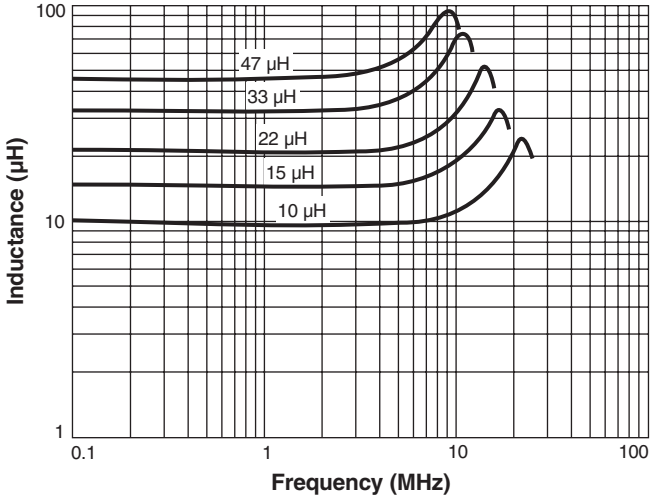
AEC Q200 +85°C

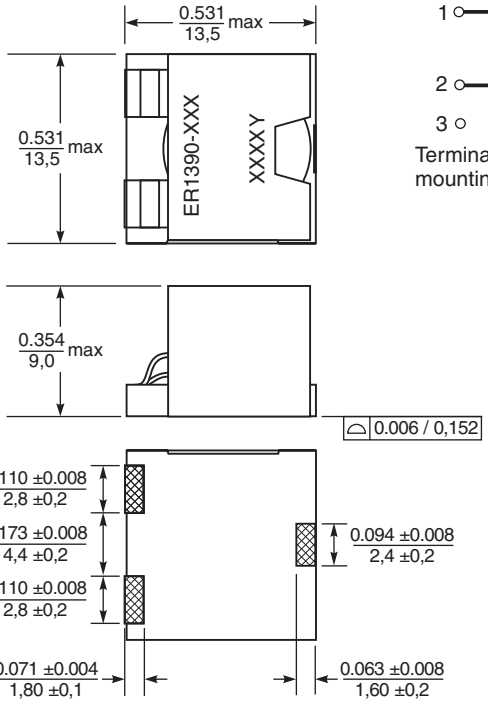
Shielded Power Inductors – SER1390 Series

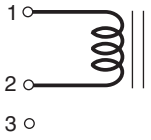
L vs Current



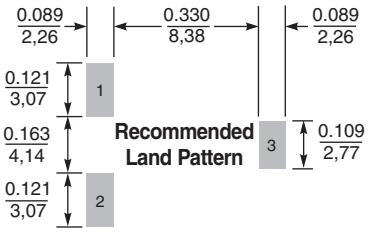
L vs Frequency







Terminal 3 is for mounting stability only.



Dimensions are in inches / mm

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