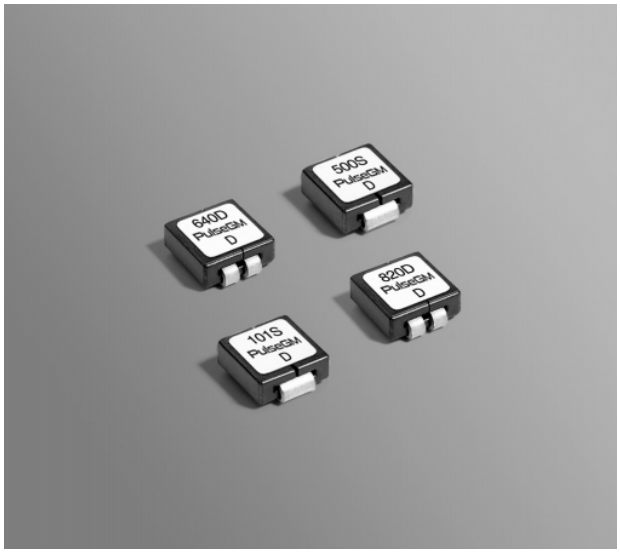
Shielded Power Inductors – HC7530



- Designed for high-speed switch mode applications
- Can be used as a 1:1 transformer or in SEPIC applications

Designer's Kit C379 contains 3 each of all values.
Designer's Kit C467 contains 3 each of select values.
Core material Ferrite
Core and winding loss
Terminations RoHS compliant matte tin over nickel over copper. Other terminations available at additional cost.
Weight: 0.44 – 0.47 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 500/7″ reel; 1700/13″ reel; Plastic tape: 16 mm wide, 0.33 mm thick, 12 mm pocket spacing, 3.12 mm pocket depth **PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash.

Single Conductor

Part number[1]	L±20%[2] (µH)	DCR ±5%[3] (mOhms)	SRF typ[4] (GHz)	Isat[5] (A)	Irms[6] (A)
HC7530S-500ML_	0.050	0.123	3.80	50	40
HC7530S-640ML_	0.064	0.123	3.65	32	40
HC7530S-820ML_	0.082	0.123	3.75	22	40
HC7530S-101ML_	0.100	0.123	3.75	20	40

Irms Testing

Irms testing was performed on 0.75 inch wide × 0.25 inch thick copper traces in still air.

Temperature rise is highly dependent on many factors including pcb land pattern, trace size, and proximity to other components. Therefore temperature rise should be verified in application conditions.

Dual Conductor

	Leads connected in parallel					Leads connected in series				
Part number[1]	L±20%[2] (µH)	DCR ±5%[3] (mOhms)	SRF typ[4] (GHz)	Isat[5] (A)	Irms[6] (A)	L±20%[2] (µH)	DCR max[3] (mOhms)	SRF typ[4] (GHz)	Isat[5] (A)	Irms[6] (A)
HC7530D-500ML_	0.050	0.209	3.75	50	38	0.188	1.00	1.50	21	28
HC7530D-640ML_	0.064	0.209	3.65	32	38	0.272	1.00	1.30	14	28
HC7530D-820ML_	0.082	0.209	3.75	22	38	0.350	1.00	1.20	11	28
HC7530D-101ML_	0.100	0.209	3.75	20	38	0.400	1.00	0.950	8	28

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

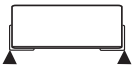
HC7530S-101MLC

Termination: L = RoHS compliant matte tin over nickel 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 (500 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 (1700 parts per full reel).

2. Inductance tested at 100 kHz, 0.1 Vrms using an Agilent/HP 4263B LCR meter or equivalent.

3. DCR is measured on a micro-ohmmeter at points indicated in the diagram.



▲Points used for measuring DCR

4. SRF measured using an Agilent/HP 8753ES network analyzer and a Coilcraft SMD-D fixture.
5. DC current at 25°C that causes a 20% (typ) inductance drop from its value without current.
6. Current that causes a 40°C temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.
7. Electrical specifications at 25°C.

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

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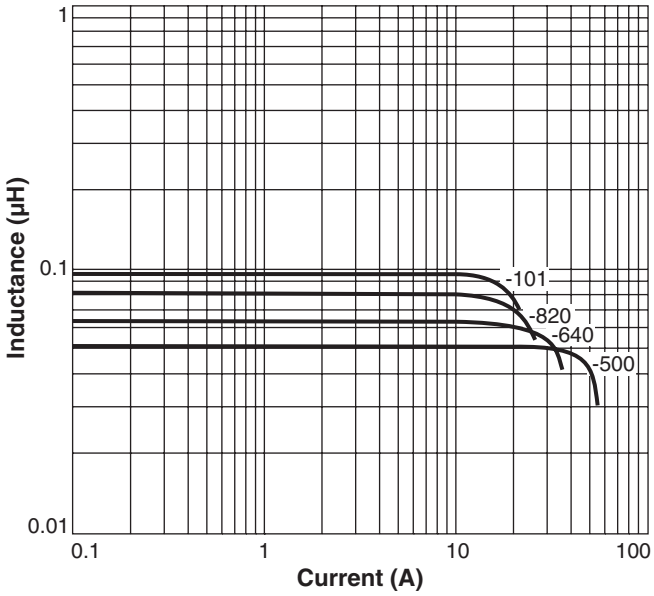
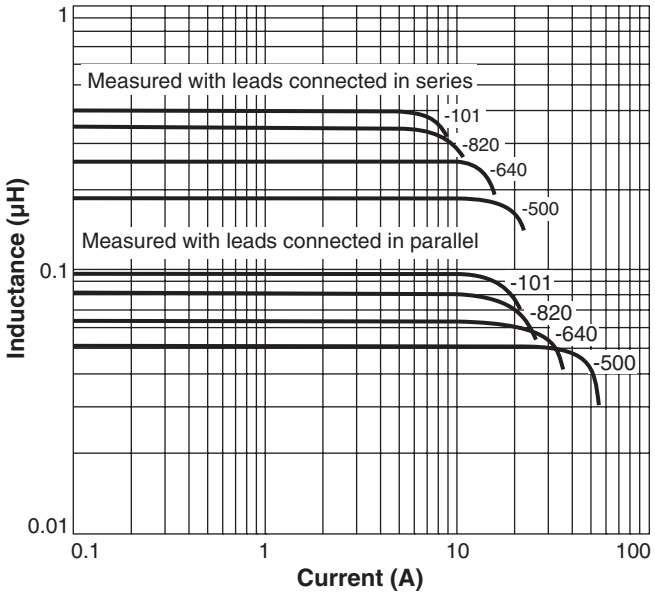
Shielded Power Inductors - HC7530 Series

Typical L vs Current

Single Conductor

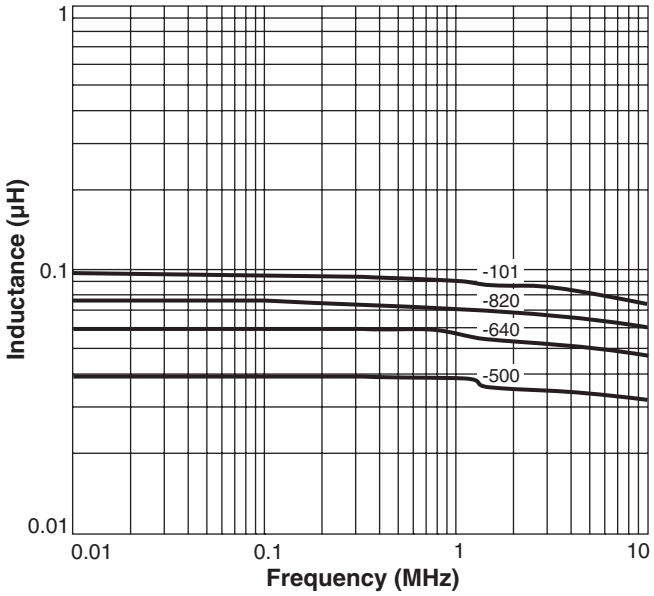


Dual Conductor

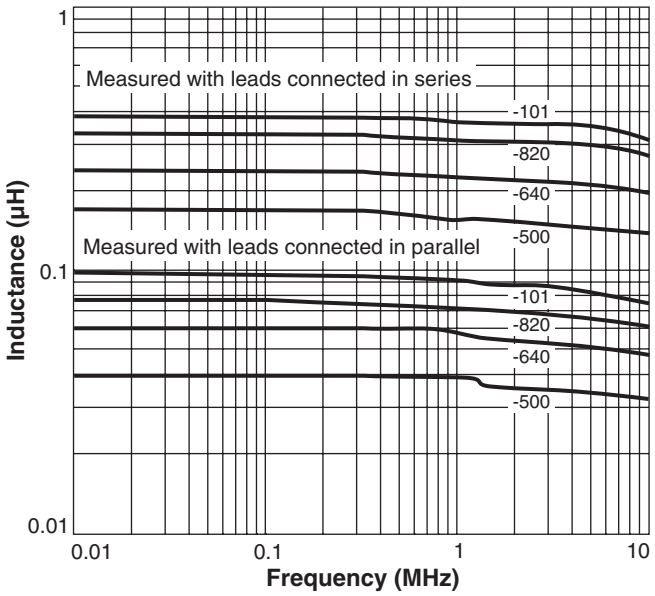


Typical L vs Frequency

Single Conductor



Dual Conductor



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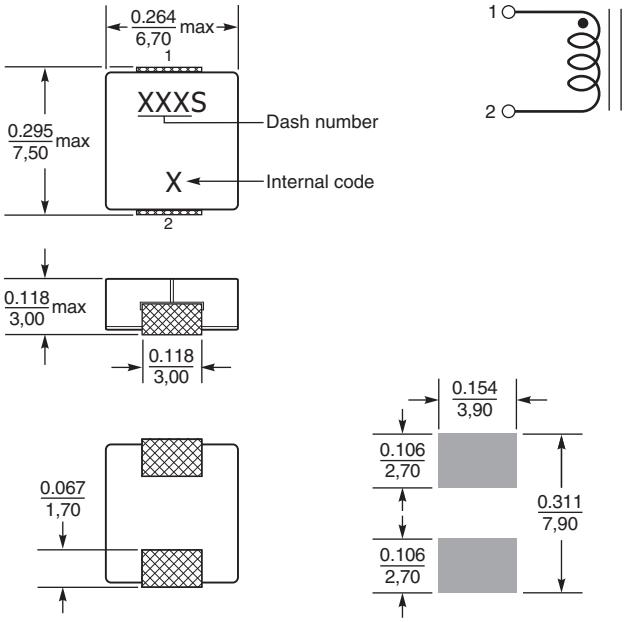
RoHS/ REACH COMPLIANT

AEC Q200 +85°C

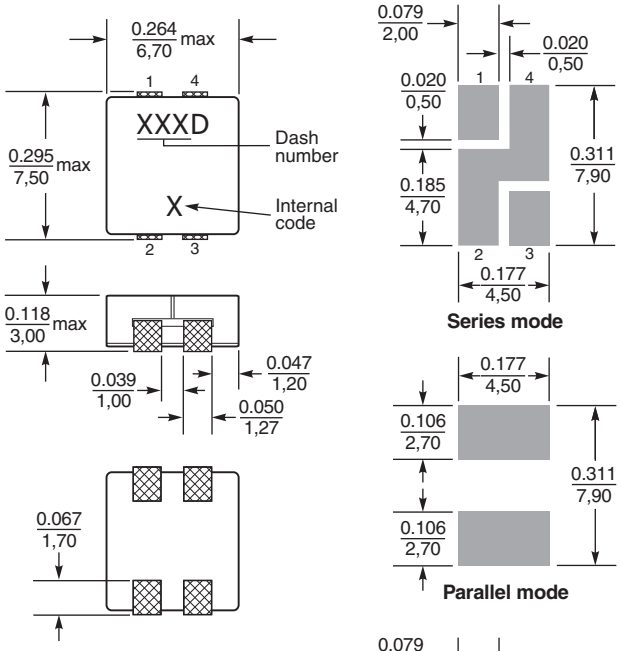
Dimensions – Single Conductor



Recommended Land Pattern

Dimensions are in inches / mm

Dimensions – Dual Conductor

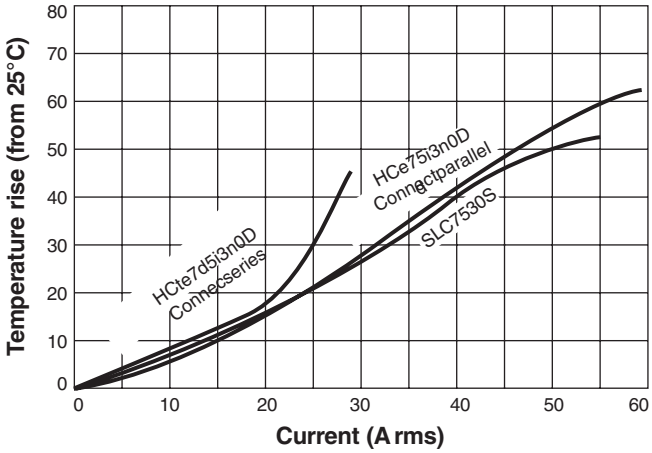


Winding-to-winding isolation: 25 V maximum

Recommended Land Patterns

Dimensions are in inches / mm

Typical Temperature Rise vs Current



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