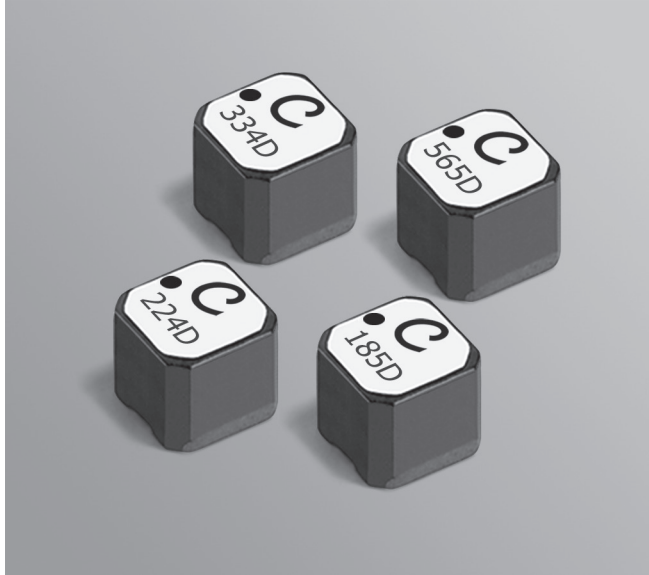


**NEW!**

# Shielded Power Inductors - LPS5050



- Very low DCR; excellent current handling
- High inductance values up to 10 mH
- AEC-Q200 Grade 1 (-40°C to +125°C)

**Designer's Kit C493** contains 3 each of all values

**Core material** Ferrite

**Environmental** RoHS compliant, halogen free

**Terminations** RoHS compliant matte tin over nickel over silver. Other terminations available at additional cost.

**Weight** 226 – 244 mg

**Ambient temperature** -40°C to +125°C with (40°C rise) Irms current.

**Maximum part temperature** +165°C (ambient + temp rise). [Derating](#).

**Storage temperature** Component: -40°C to +165°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)

**Packaging** 250/7" reel; 1000/13" reel Plastic tape: 16 mm wide, 0.3 mm thick, 12 mm pocket spacing, 5.26 mm pocket depth

**Recommended pick and place nozzle** OD: 5 mm; ID: ≤ 2.5 mm

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).

Part number <sup>1</sup>	Inductance <sup>2</sup> ±20% (µH)	DCR max <sup>3</sup> (Ohms)	SRF typ <sup>4</sup> (MHz)	Isat (A) <sup>5</sup>			Irms (A) <sup>6</sup>	
				10% drop	20% drop	30% drop	20°C rise	40°C rise
LPS5050-154MR_	150	0.555	6.3	0.235	0.260	0.280	0.60	0.82
LPS5050-224MR_	220	0.625	4.9	0.195	0.225	0.235	0.56	0.75
LPS5050-334MR_	330	0.935	4.2	0.165	0.185	0.195	0.47	0.63
LPS5050-474MR_	470	1.22	3.4	0.135	0.150	0.160	0.40	0.54
LPS5050-564MR_	560	1.51	3.2	0.125	0.145	0.150	0.35	0.48
LPS5050-684MR_	680	1.76	2.6	0.120	0.135	0.145	0.31	0.42
LPS5050-824MR_	820	2.20	2.2	0.088	0.107	0.115	0.28	0.38
LPS5050-105MR_	1000	2.90	2.2	0.086	0.102	0.110	0.27	0.36
LPS5050-155MR_	1500	4.40	1.7	0.070	0.082	0.088	0.21	0.30
LPS5050-185MR_	1800	4.55	1.7	0.060	0.073	0.080	0.20	0.28
LPS5050-225MR_	2200	5.55	1.4	0.056	0.066	0.072	0.19	0.25
LPS5050-335MR_	3300	8.60	1.2	0.054	0.060	0.064	0.15	0.20
LPS5050-475MR_	4700	12.10	1.0	0.044	0.051	0.054	0.13	0.17
LPS5050-565MR_	5600	15.30	0.89	0.036	0.042	0.046	0.12	0.16
LPS5050-685MR_	6800	19.15	0.77	0.034	0.040	0.043	0.11	0.14
LPS5050-825MR_	8200	21.50	0.71	0.028	0.035	0.038	0.10	0.13
LPS5050-106MR_	10000	23.25	0.62	0.026	0.030	0.034	0.09	0.12

1. Please specify **termination** and **packaging** codes:

**LPS5050-106MRC**

**Termination:** R= RoHS compliant matte tin over nickel over silver.

Special order, added cost:

**Q** = RoHS tin-silver-copper (95.5/4/0.5) or **P** = non-RoHS tin-lead (63/37).

**Packaging:** **C**= 7" machine-ready reel. EIA-481 embossed plastic tape (750 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge)

**D**= 13" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (1000 parts per full reel).

2. Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc using an Agilent/HP 4192A impedance analyzer or equivalent.

3. DCR measured on a micro-ohmmeter.

4. SRF measured using Agilent/HP 8753ES or equivalent.

5. DC current at 25°C that causes the specified inductance drop from its value without current.

[Click for temperature derating information.](#)

6. 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.](#)

7. Electrical specifications at 25°C.

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



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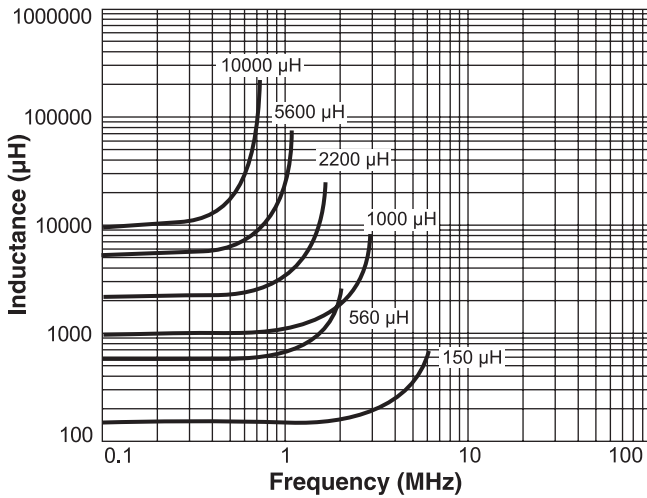
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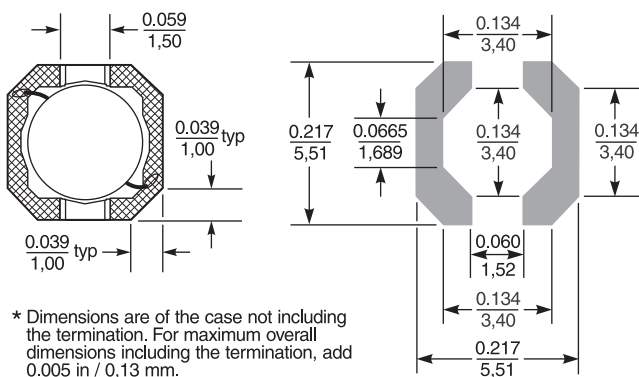
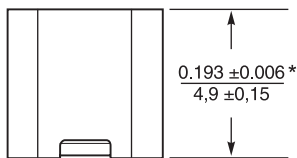
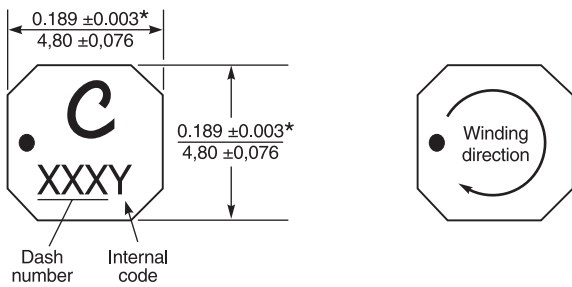
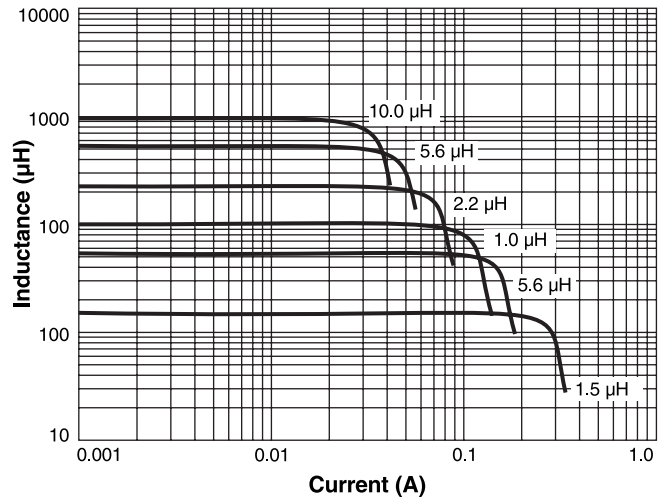


# Shielded Power Inductors – LPS5050 Series

## Typical L vs Frequency



## Typical L vs Current



\* Dimensions are of the case not including the termination. For maximum overall dimensions including the termination, add 0.005 in / 0.13 mm.  
For optional tin-lead and tin-silver-copper terminations, dimensions are for the mounted part. Dimensions before mounting can be an additional 0.005 inch / 0.13 mm).

Dimensions are in  $\frac{\text{inches}}{\text{mm}}$



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