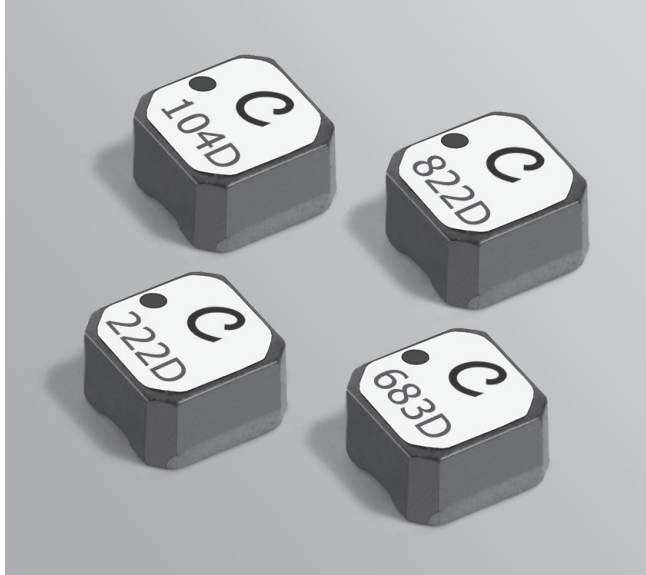




Shielded Power Inductors - LPS6235



- Low DCR; high current; shielded construction
- Perfect for backlight applications

Designer's Kit C345 contains 3 each of all values

Core material Ferrite

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

Terminations RoHS compliant silver-palladium-platinum-glass frit. Other terminations available at additional cost.

Weight 460 – 480 mg

Ambient temperature –40°C to +85°C with Irms current, +85°C to +125°C with derated current

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 350/7" reel; 1500/13" reel Plastic tape: 16 mm wide, 0.3 mm thick, 8 mm pocket spacing, 3.68 mm pocket depth

Recommended pick and place nozzle OD: 6.2 mm; ID: ≤ 3.1 mm

PCB washing Only pure water or alcohol recommended

| Part number ¹ | Inductance ² ±20% (µH) | DCR max ³ (Ohms) | SRF typ ⁴ (MHz) | Isat (A) ⁵ | | | Irms (A) ⁶ | |
|--------------------------|--------------------------------------|-----------------------------------|----------------------------------|-----------------------|-------------|-------------|-----------------------|--------------|
| | | | | 10% drop | 20% drop | 30% drop | 20°C rise | 40°C rise |
| LPS6235-682ML | 6.8 | 0.075 | 55 | 2.6 | 2.7 | 2.8 | 1.30 | 1.90 |
| LPS6235-822ML | 8.2 | 0.095 | 48 | 2.5 | 2.6 | 2.7 | 1.30 | 1.85 |
| LPS6235-103ML | 10.0 | 0.100 | 37 | 2.3 | 2.4 | 2.5 | 1.28 | 1.80 |
| LPS6235-123ML | 12.0 | 0.110 | 29 | 1.9 | 2.2 | 2.3 | 1.25 | 1.75 |
| LPS6235-153ML | 15.0 | 0.125 | 25 | 1.9 | 2.0 | 2.0 | 1.22 | 1.70 |
| LPS6235-183ML | 18.0 | 0.140 | 24 | 1.7 | 1.8 | 1.9 | 1.20 | 1.65 |
| LPS6235-223ML | 22.0 | 0.145 | 24 | 1.6 | 1.7 | 1.7 | 1.10 | 1.60 |
| LPS6235-333ML | 33.0 | 0.180 | 16 | 1.3 | 1.4 | 1.5 | 1.00 | 1.30 |
| LPS6235-473ML | 47.0 | 0.245 | 13 | 1.1 | 1.2 | 1.2 | 0.80 | 1.15 |
| LPS6235-563ML | 56.0 | 0.280 | 12 | 1.0 | 1.0 | 1.1 | 0.75 | 1.07 |
| LPS6235-683ML | 68.0 | 0.345 | 10.8 | 0.90 | 0.94 | 0.96 | 0.73 | 1.00 |
| LPS6235-823ML | 82.0 | 0.315 | 10.0 | 0.46 | 0.52 | 0.55 | 0.72 | 0.95 |
| LPS6235-104ML | 100.0 | 0.375 | 9.0 | 0.46 | 0.52 | 0.54 | 0.70 | 0.90 |
| LPS6235-124ML | 120.0 | 0.435 | 8.3 | 0.44 | 0.48 | 0.51 | 0.60 | 0.80 |
| LPS6235-154ML | 150.0 | 0.535 | 7.3 | 0.37 | 0.43 | 0.45 | 0.53 | 0.73 |
| LPS6235-224ML | 220.0 | 0.820 | 5.6 | 0.31 | 0.36 | 0.37 | 0.45 | 0.64 |
| LPS6235-334ML | 330.0 | 1.20 | 4.4 | 0.26 | 0.29 | 0.30 | 0.40 | 0.50 |
| LPS6235-474ML | 470.0 | 1.60 | 3.6 | 0.22 | 0.25 | 0.26 | 0.32 | 0.43 |
| LPS6235-564ML | 560.0 | 2.00 | 3.1 | 0.20 | 0.22 | 0.23 | 0.29 | 0.38 |
| LPS6235-684ML | 680.0 | 2.20 | 2.8 | 0.17 | 0.19 | 0.21 | 0.28 | 0.37 |
| LPS6235-824ML | 820.0 | 2.70 | 2.5 | 0.16 | 0.18 | 0.19 | 0.26 | 0.33 |
| LPS6235-105ML | 1000.0 | 3.40 | 2.2 | 0.14 | 0.17 | 0.18 | 0.24 | 0.30 |
| LPS6235-155ML | 1500.0 | 4.60 | 1.9 | 0.12 | 0.13 | 0.14 | 0.19 | 0.26 |
| LPS6235-185ML | 1800.0 | 5.42 | 1.7 | 0.11 | 0.12 | 0.13 | 0.18 | 0.23 |
| LPS6235-225ML | 2200.0 | 6.70 | 1.5 | 0.090 | 0.11 | 0.11 | 0.16 | 0.22 |
| LPS6235-335ML | 3300.0 | 9.50 | 1.1 | 0.080 | 0.090 | 0.10 | 0.14 | 0.180 |
| LPS6235-475ML | 4700.0 | 14.5 | 0.94 | 0.070 | 0.077 | 0.084 | 0.11 | 0.150 |
| LPS6235-565ML | 5600.0 | 16.4 | 0.86 | 0.060 | 0.070 | 0.080 | 0.10 | 0.130 |
| LPS6235-685ML | 6800.0 | 21.4 | 0.80 | 0.057 | 0.065 | 0.069 | 0.090 | 0.120 |
| LPS6235-825ML | 8200.0 | 24.5 | 0.70 | 0.052 | 0.060 | 0.067 | 0.085 | 0.115 |
| LPS6235-106ML | 10000.0 | 29.5 | 0.61 | 0.050 | 0.055 | 0.060 | 0.075 | 0.095 |

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

LPS6235-106MLC

Termination: L = RoHS compliant silver-palladium-platinum-glass frit.

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 (350 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 (1500 parts per full reel).

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

3. DCR measured on a micro-ohmmeter.

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

5. DC current that causes the specified inductance drop from its value without current.

6. Current that causes the specified temperature rise from 25°C ambient.

7. Electrical specifications at 25°C.

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

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Document 587-1 Revised 12/01/11

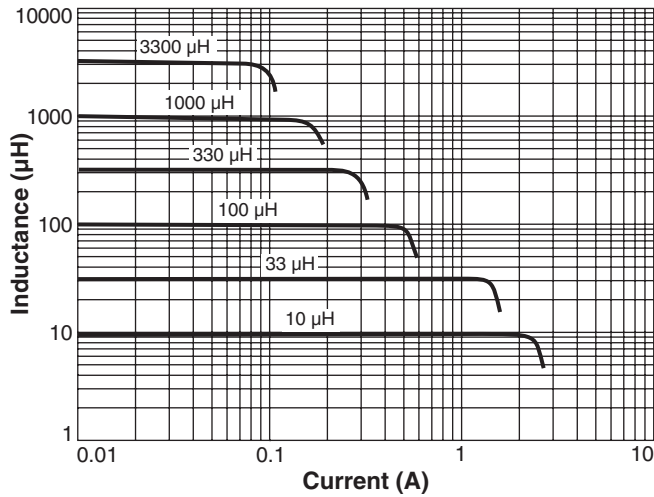
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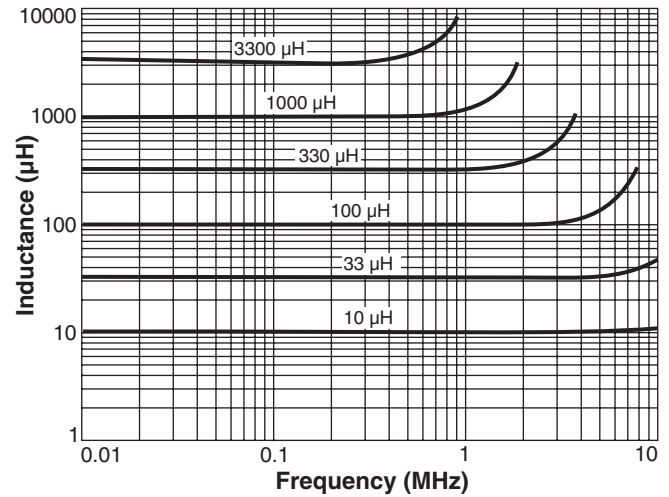


Shielded SMT Power Inductors – LPS6235 Series

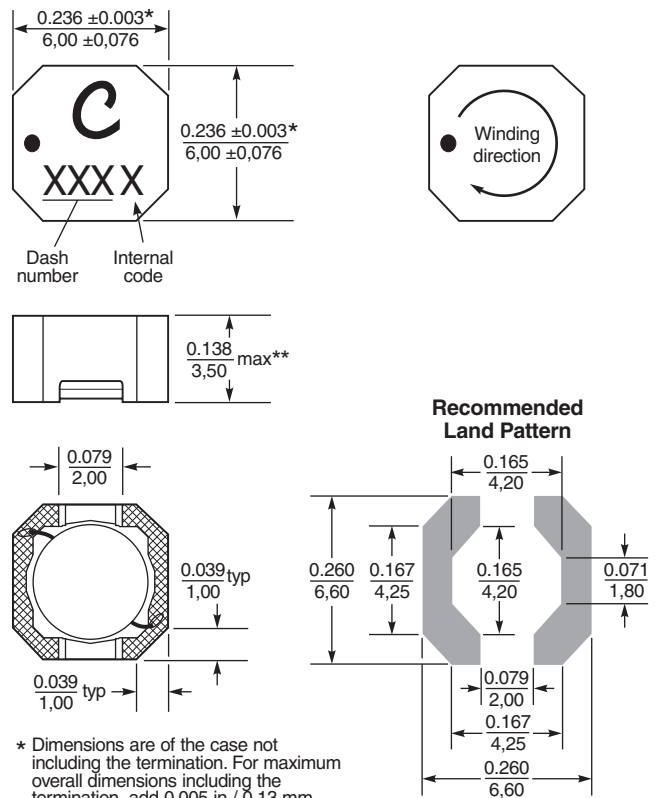
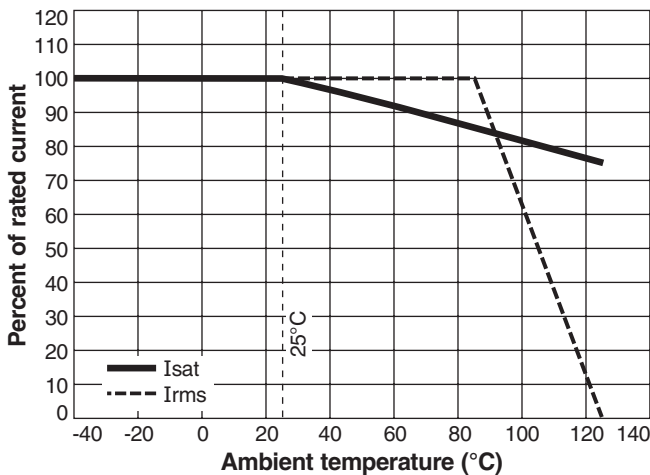
Typical L vs Current



Typical L vs Frequency



Typical Current Derating



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



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Document 587-2 Revised 12/01/11

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