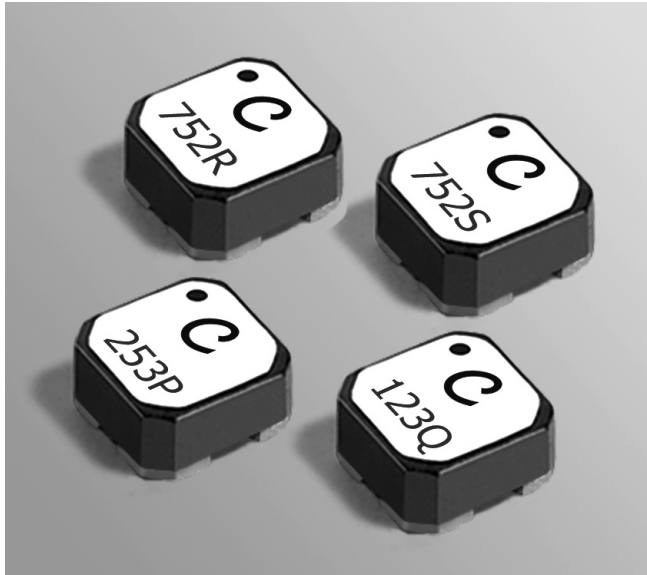




# Coupled Inductors - LPR6235

## For Step-Up, Resonant & Flyback Applications



- Can be used as step-up or flyback transformers in DC-DC converters or as autotransformers
- Perfect for low voltage step-up in energy harvesting applications
- Selected by Linear Technology for the LTC3108 and LTC3109 Ultralow Voltage Step-Up Converter and Power Managers

These shielded parts are only 3.5 mm high and 6 mm square. The excellent coupling coefficient ( $k = 0.95$ ) makes them ideal for use in a variety of applications. They can be used as flyback transformers and step-up pulse transformers.

The high  $I_{sat}$  and low DCR ratings of these parts provide high efficiency and excellent current handling in a rugged, low cost design.

Custom inductance values and turn ratios may be available upon request.

Part number <sup>1</sup>	Turns ratio	Primary (L1) inductance <sup>2</sup> ±20% (μH)	DCR max (Ohms)		SRF typ <sup>3</sup> (kHz)	Isat <sup>4</sup> (A)
			L1	L2		
LPR6235-253LML_	1: 10	25	0.74	13.7	1300	1.3
LPR6235-253PML_	1: 20	25	0.20	72	580	0.7
LPR6235-123QML_	1: 50	12.5	0.085	200	360	0.9
LPR6235-752RML_	1: 90	7.5	0.085	285	257	1.6
LPR6235-752SML_	1: 100	7.5	0.085	316	230	1.6

1. When ordering, please specify **packaging** code:

**LPR6235-253PMLC**

**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 D instead.

**D** = 13" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (1500 parts per full reel).

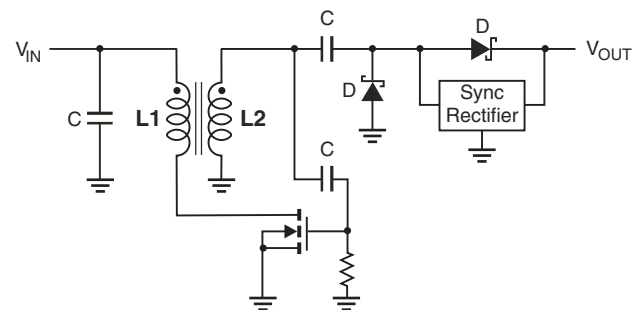
2. Inductance is measured at 100 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4284A LCR meter or equivalent.

3. SRF measured using an Agilent/HP 4191A or equivalent.

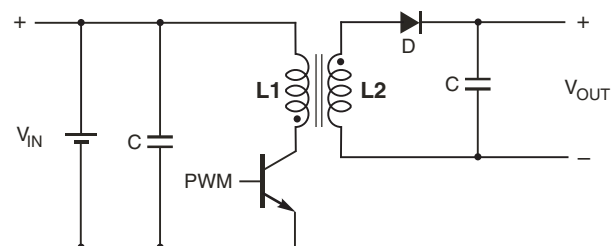
4. DC current applied to L1, at which the inductance drops 10% from its value without current.

5. Electrical specifications at 25°C.

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



Typical Step-Up Converter



Typical Flyback Converter



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**Taiwan** +886-2-2264 3646 sales@coilcraft.com.tw  
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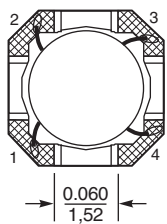
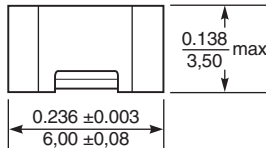
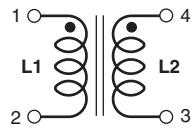
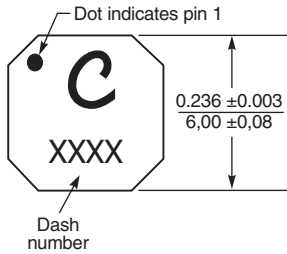
Document 752-1 Revised 10/22/13

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

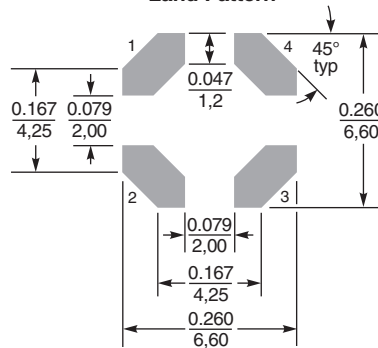


# Step-Up/Flyback Transformers – LPR6235



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

## Recommended Land Pattern



**Core material** Ferrite

**Weight** 460 – 480 mg

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

**Ambient temperature**  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  with Irms current,  $+85^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$  with derated current

**Storage temperature** Component:  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ . Tape and reel packaging:  $-40^{\circ}\text{C}$  to  $+80^{\circ}\text{C}$

**Winding to winding isolation** 300 Vrms

**Resistance to soldering heat** Max three 40 second reflows at  $+260^{\circ}\text{C}$ , parts cooled to room temperature between cycles

**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at  $<30^{\circ}\text{C}$  / 85% relative humidity)

**Mean Time Between Failures (MTBF)** 26,315,789 hours

**Failures in Time (FIT)** 38 per one billion hours

**Packaging** 350/7" reel; 1500/13" reel Plastic tape: 16 mm wide, 0.3 mm thick, 12 mm pocket spacing, 3.68 mm pocket depth

**Recommended pick and place nozzle** OD: 6.2 mm; ID:  $\leq 3.1$  mm

**PCB washing** Tested with pure water or alcohol only. For other solvents, see Doc787\_PCB\_Washing.pdf.

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