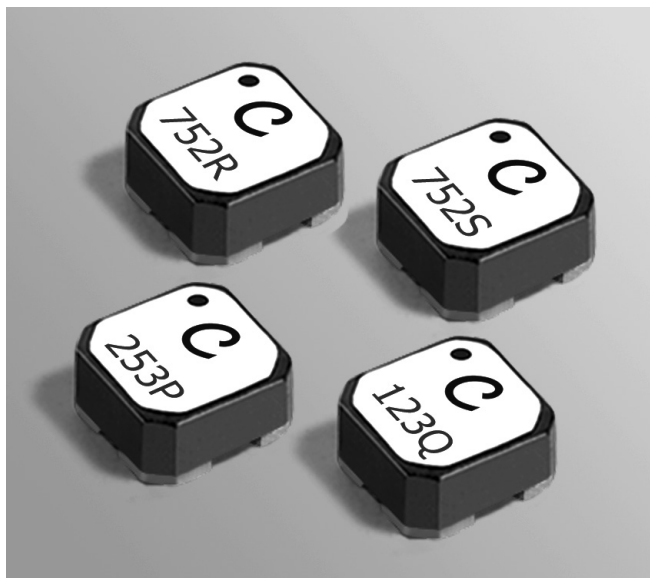




Coupled Inductors – LPR6235

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 ¹	Turns ratio	Primary (L1) inductance ² $\pm 20\%$ (μH)	DCR max (Ohms)		SRF typ ³ (kHz)	I_{sat} ⁴ (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).

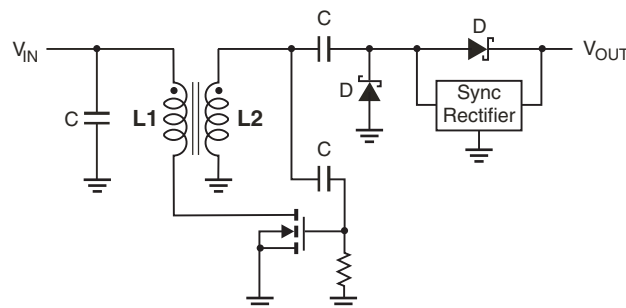
2. Inductance is measured at 100 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4284A LCR meter or equivalent.

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

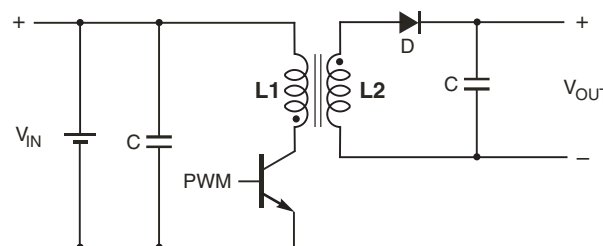
4. DC current applied to L1, at which the inductance drops 10% from its value without current.

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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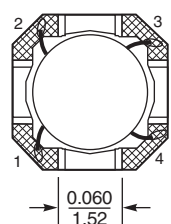
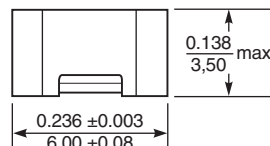
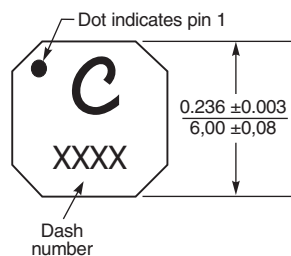
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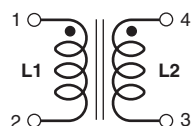
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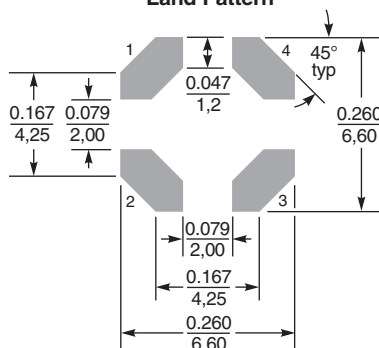
Step-Up/Flyback Transformers – LPR6235



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°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

Winding to winding isolation 300 Vrms

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)

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: ≤ 3.1 mm

PCB washing Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf.



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