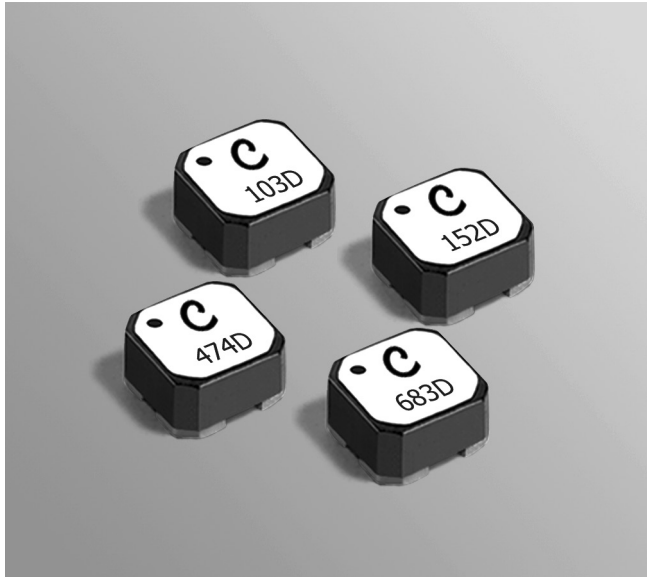
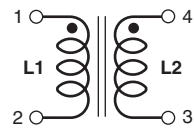
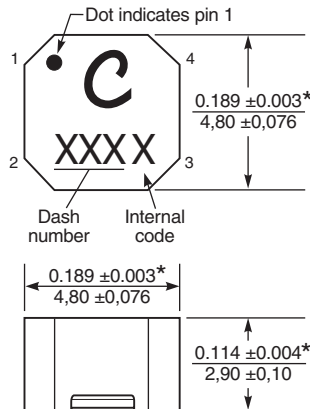
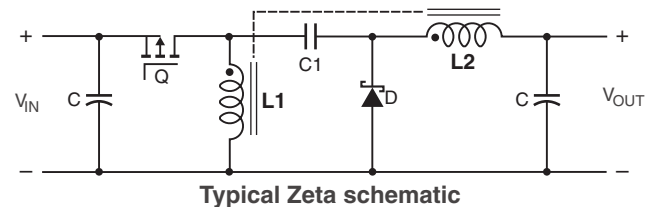
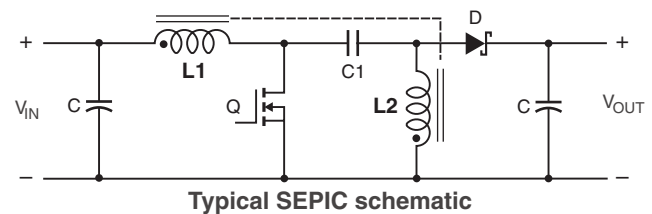
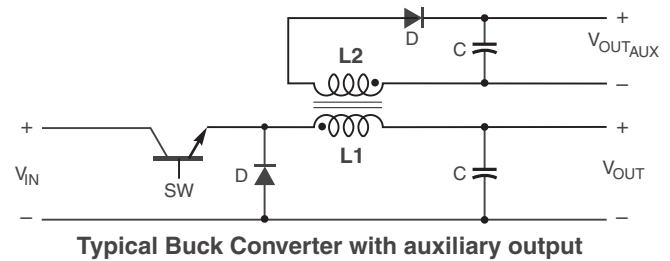
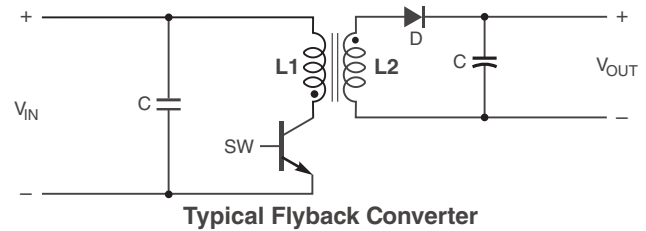


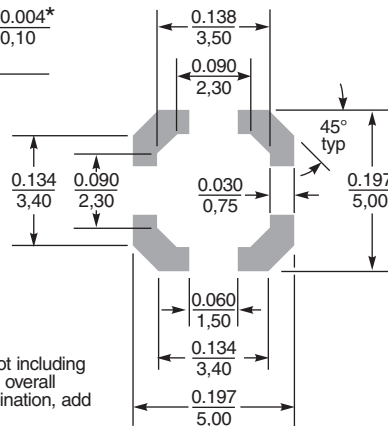
Shielded Coupled Inductors LPD5030



The LPD5030 coupled miniature shielded inductors are only 3 mm high and 5 mm square. They are ideal for use in flyback, multi-output buck, SEPIC and Zeta applications. These inductors provide high inductance, high efficiency and excellent current handling in a rugged, low cost part. They can also be used as two single inductors connected in series or parallel or as a common mode choke.



Recommended Land Pattern



* 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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 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.



Coupled Inductors for SEPIC Applications – LPD5030 Series

Part number ¹	Inductance ² (μ H)	DCR max ³ (Ohms)	SRF typ ⁴ (MHz)	Coupling coefficient typ	Leakage L typ ⁵ (μ H)	Isat (A) ⁶			Irms (A)	
						10% drop	20% drop	30% drop	both windings ⁷	one winding ⁸
LPD5030-571NR_	0.57 \pm 30%	0.031	233	0.93	0.07	5.60	5.80	6.03	2.30	3.25
LPD5030-781NR_	0.78 \pm 30%	0.038	172	0.94	0.08	4.60	4.80	5.00	2.25	3.18
LPD5030-102NR_	1.0 \pm 30%	0.042	153	0.95	0.09	4.30	4.49	4.67	2.20	3.11
LPD5030-152MR_	1.5 \pm 20%	0.048	118	0.97	0.09	3.90	4.20	4.30	2.05	2.90
LPD5030-222MR_	2.2 \pm 20%	0.067	87.0	0.98	0.10	2.80	2.98	3.07	1.95	2.76
LPD5030-332MR_	3.3 \pm 20%	0.077	61.0	0.98	0.10	2.50	2.70	2.80	1.70	2.40
LPD5030-472MR_	4.7 \pm 20%	0.111	49.0	0.99	0.11	2.10	2.20	2.20	1.40	1.98
LPD5030-562MR_	5.6 \pm 20%	0.125	44.0	0.99	0.11	1.80	1.80	1.89	1.35	1.91
LPD5030-682MR_	6.8 \pm 20%	0.159	40.0	0.99	0.12	1.40	1.48	1.48	1.20	1.70
LPD5030-103MR_	10 \pm 20%	0.210	28.0	0.99	0.13	1.20	1.20	1.20	1.05	1.48
LPD5030-153MR_	15 \pm 20%	0.298	23.0	0.99	0.15	1.00	1.17	1.17	0.85	1.20
LPD5030-223MR_	22 \pm 20%	0.452	17.0	>0.99	0.17	0.89	0.98	0.98	0.70	0.99
LPD5030-333MR_	33 \pm 20%	0.565	16.0	>0.99	0.20	0.73	0.77	0.78	0.60	0.85
LPD5030-473MR_	47 \pm 20%	0.806	12.0	>0.99	0.24	0.59	0.63	0.65	0.50	0.71
LPD5030-683MR_	68 \pm 20%	1.13	9.00	>0.99	0.29	0.50	0.54	0.55	0.43	0.61
LPD5030-104MR_	100 \pm 20%	1.79	8.44	>0.99	0.37	0.47	0.54	0.56	0.33	0.47
LPD5030-154MR_	150 \pm 20%	2.43	6.72	>0.99	0.46	0.38	0.43	0.45	0.28	0.40
LPD5030-224MR_	220 \pm 20%	3.30	5.53	>0.99	0.54	0.31	0.35	0.36	0.24	0.34
LPD5030-334MR_	330 \pm 20%	5.36	4.17	>0.99	0.65	0.25	0.25	0.32	0.18	0.25
LPD5030-474MR_	470 \pm 20%	7.51	3.52	>0.99	0.76	0.21	0.24	0.26	0.15	0.21
LPD5030-684MR_	680 \pm 20%	10.8	2.93	>0.99	0.89	0.17	0.20	0.21	0.13	0.18
LPD5030-105MR_	1000 \pm 20%	16.5	2.33	>0.99	1.20	0.15	0.17	0.17	0.10	0.14

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

LPD5030-105MRC

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

Special order:

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).

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 (2500 parts per full reel).

- Inductance shown for each winding, measured at 100 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4284A LCR meter or equivalent. When leads are connected in parallel, inductance is the same value. When leads are connected in series, inductance is four times the value.
 - DCR is for each winding. When leads are connected in parallel, DCR is half the value. When leads are connected in series, DCR is twice the value.
 - SRF measured using an Agilent/HP 4191A or equivalent. When leads are connected in parallel, SRF is the same value.
 - Leakage Inductance is for L1 and is measured with L2 shorted.
 - DC current at 25°C that causes the specified inductance drop from its value without current. It is the sum of the current flowing in both windings.
 - Equal current when applied to each winding simultaneously that causes a 40°C temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.
 - Maximum current when applied to one winding that causes a 40°C temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.
 - Electrical specifications at 25°C.
- Refer to Doc 639 "Selecting Coupled Inductors for SEPIC Applications."
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

Coupled Inductor Core and Winding Loss Calculator

This web-based utility allows you to enter frequency, peak-to-peak (ripple) current, and Irms current to predict temperature rise and overall losses, including core loss. [Go to online calculator.](#)

Core material Ferrite

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

Weight 210 – 225 mg

Environmental RoHS compliant, halogen free

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

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 winding isolation 100 Vrms, one minute

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

Packaging 750/7" reel; 2500/13" reel Plastic tape: 12 mm wide, 0.32 mm thick, 8 mm pocket spacing, 3.1 mm pocket depth

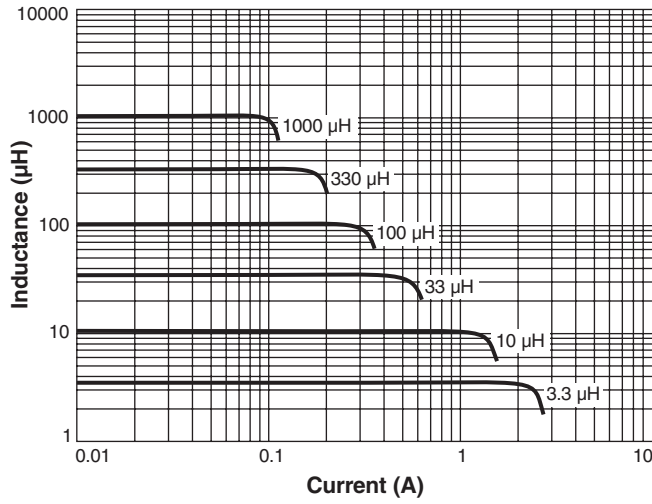
Recommended pick and place nozzle OD: 5 mm; ID: \leq 2.5 mm

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](#).

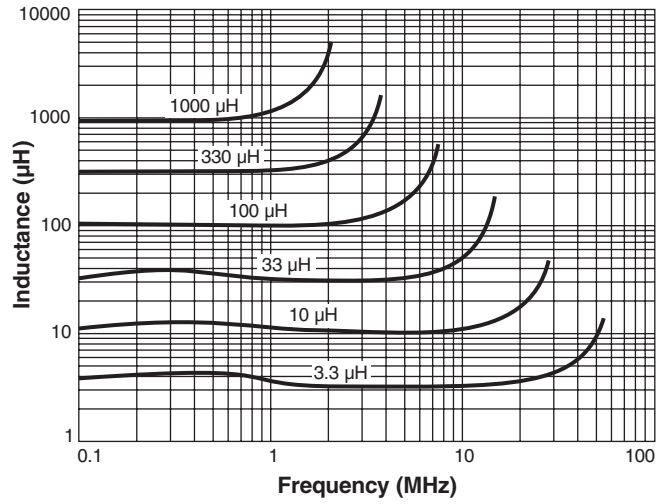


Coupled Inductors for SEPIC Applications – LPD5030 Series

Typical L vs Current



Typical L vs Frequency



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