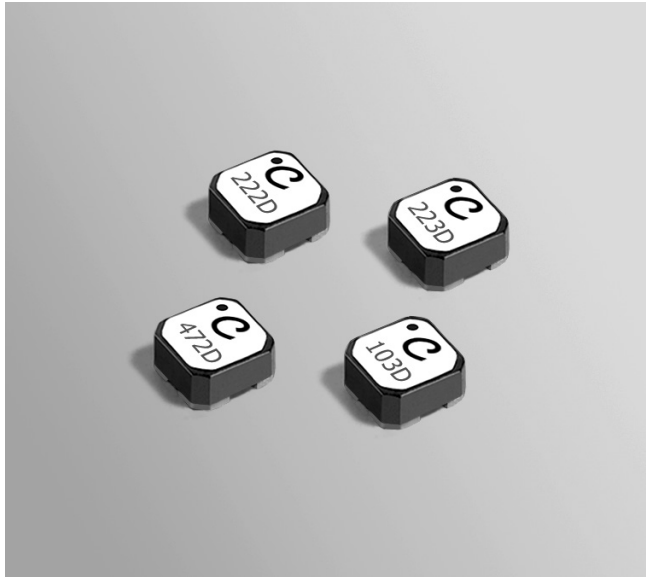


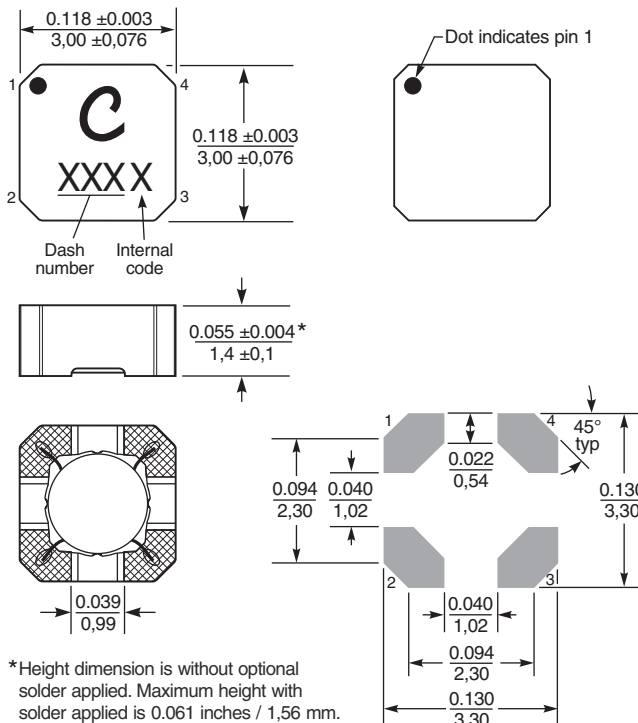
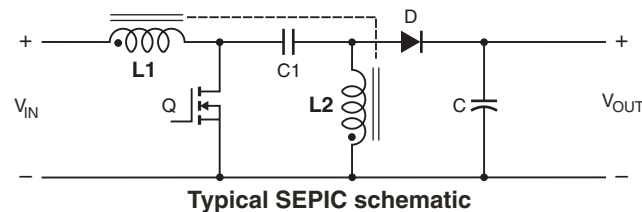
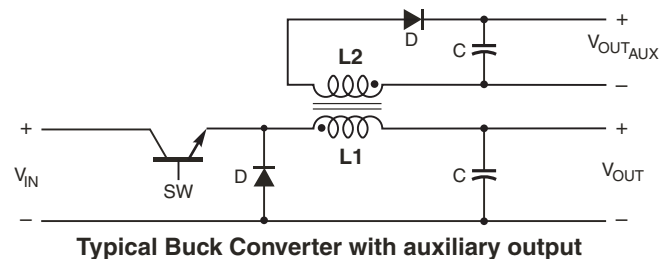
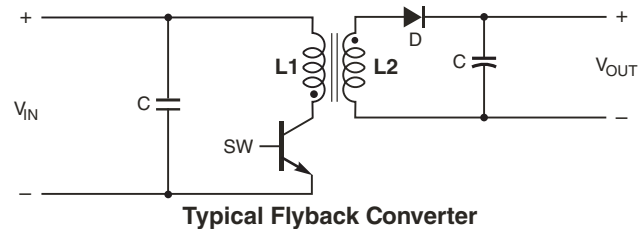


Coupled Inductors – LPD3015

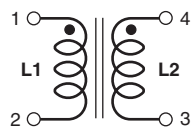
For SEPIC and other Applications



- Only 1.4 mm high and 3 mm square
- Ideal for use in flyback, multi-output buck and SEPIC applications.
- High inductance, high efficiency and excellent current handling
- Can also be used as two single inductors connected in series or parallel or as a common mode choke.



*Height dimension is without optional solder applied. Maximum height with solder applied is 0.061 inches / 1,56 mm.



Core material Ferrite

Core and winding loss [Go to online calculator](#)

Weight 45 – 52 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 100 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)

Failures in Time (FIT) / Mean Time Between Failures (MTBF)

38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

Packaging 1000/7" reel; 3500/13" reel Plastic tape: 12 mm wide, 0.26 mm thick, 8 mm pocket spacing, 1.65 mm pocket depth

Recommended pick and place nozzle OD: 3 mm; ID: ≤ 1.5 mm

PCB washing Tested with pure water or alcohol only. For other solvents, see [Doc787_PCB_Washing.pdf](#).



Coupled Inductors for SEPIC - LPD3015 Series

Part number ¹	Inductance ² ±20% (µH)	DCR max ³ (Ohms)	SRF typ ⁴ (MHz)	Coupling coefficient typ	Leakage L typ ⁵ (µH)	Isat (A) ⁶			Irms (A)	
						10% drop	20% drop	30% drop	both windings ⁷	one winding ⁸
LPD3015-391ML_	0.39	0.071	289	0.89	0.08	3.2	3.3	3.4	1.45	2.05
LPD3015-561ML_	0.56	0.079	235	0.93	0.08	2.7	2.8	2.8	1.37	1.94
LPD3015-102ML_	1.0	0.129	160	0.95	0.09	2.0	2.1	2.2	1.08	1.52
LPD3015-152ML_	1.5	0.204	140	0.96	0.11	1.6	1.7	1.8	0.86	1.20
LPD3015-182ML_	1.8	0.273	135	0.96	0.13	1.5	1.6	1.6	0.78	1.10
LPD3015-222ML_	2.2	0.300	110	0.97	0.14	1.5	1.6	1.6	0.75	1.05
LPD3015-332ML_	3.3	0.337	90	0.98	0.16	1.0	1.1	1.2	0.67	0.94
LPD3015-472ML_	4.7	0.503	79	0.98	0.18	0.86	0.87	0.88	0.54	0.76
LPD3015-682ML_	6.8	0.622	58	0.98	0.22	0.77	0.78	0.79	0.49	0.69
LPD3015-103ML_	10	1.040	48	0.99	0.28	0.58	0.59	0.60	0.38	0.53
LPD3015-153ML_	15	1.420	35	0.99	0.37	0.49	0.50	0.51	0.32	0.46
LPD3015-183ML_	18	1.550	33	0.99	0.42	0.46	0.47	0.48	0.31	0.44
LPD3015-223ML_	22	1.89	30	0.99	0.48	0.42	0.43	0.44	0.28	0.40
LPD3015-333ML_	33	2.84	23	0.99	0.63	0.34	0.35	0.36	0.23	0.32
LPD3015-473ML_	47	4.03	17	0.99	0.81	0.28	0.29	0.30	0.19	0.27
LPD3015-683ML_	68	6.11	14	0.99	1.13	0.24	0.25	0.26	0.16	0.22
LPD3015-104ML_	100	8.54	11	0.99	1.50	0.20	0.21	0.22	0.13	0.19
LPD3015-124ML_	120	9.23	9.0	0.99	1.76	0.19	0.20	0.20	0.13	0.18
LPD3015-154ML_	150	12.40	8.0	0.99	2.22	0.16	0.17	0.18	0.11	0.16
LPD3015-184ML_	180	15.32	7.5	0.99	2.79	0.15	0.16	0.17	0.10	0.14
LPD3015-224ML_	220	18.56	6.0	0.99	3.56	0.13	0.14	0.15	0.09	0.13
LPD3015-334ML_	330	27.70	5.0	0.99	5.18	0.11	0.12	0.12	0.07	0.10

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

LPD3015-334MLC

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 (1000 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 (3500 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 which the inductance drops the specified amount 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. See temperature rise calculation.
- Maximum current when applied to one winding that causes a 40°C temperature rise from 25°C ambient. See temperature rise calculation.
- 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.

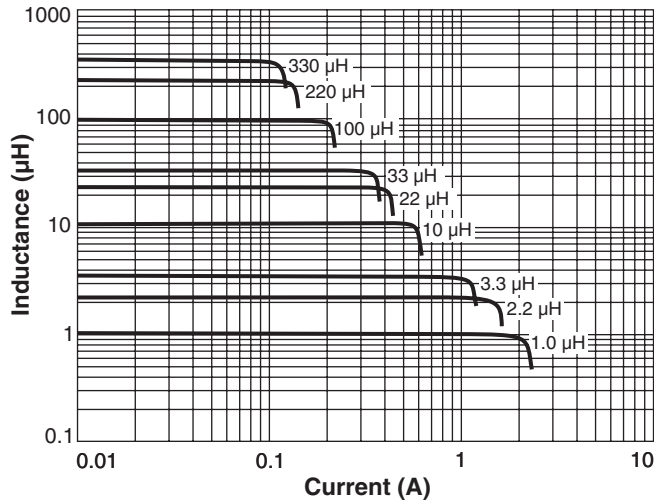
Coupled Inductor Core and Winding Loss Calculator

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.](#)

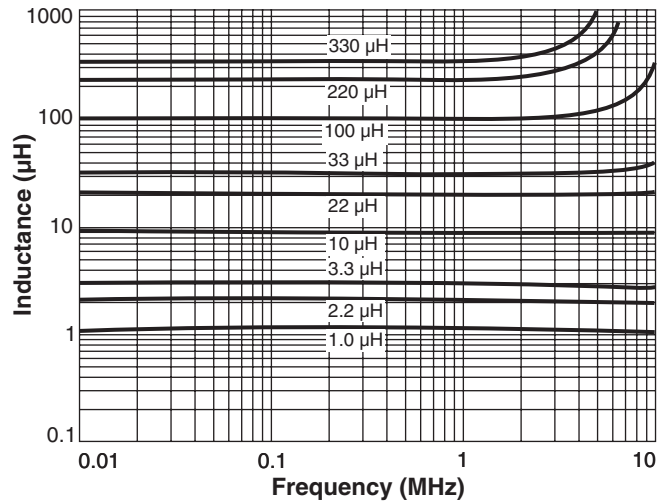


Coupled Inductors for SEPIC - LPD3015 Series

Typical L vs Current



Typical L vs Frequency



Typical Current Derating

