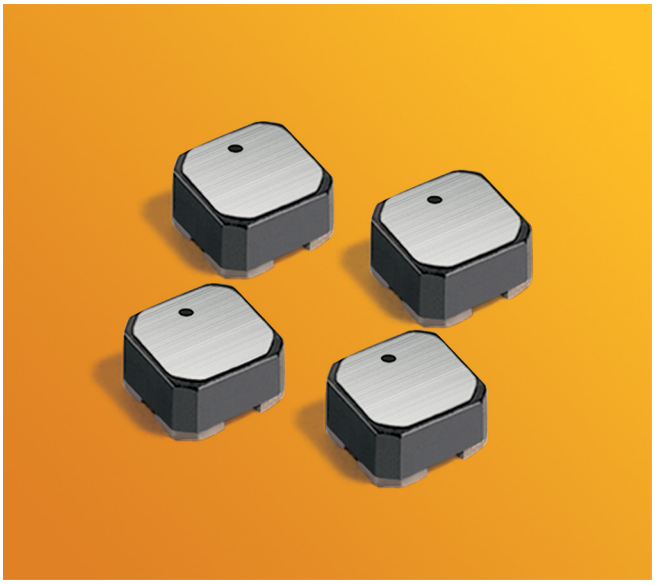
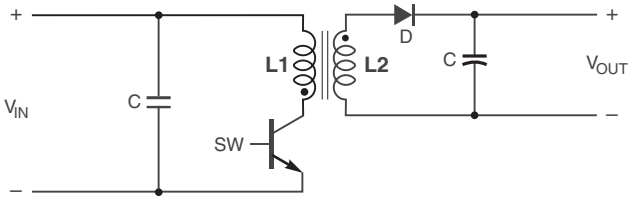
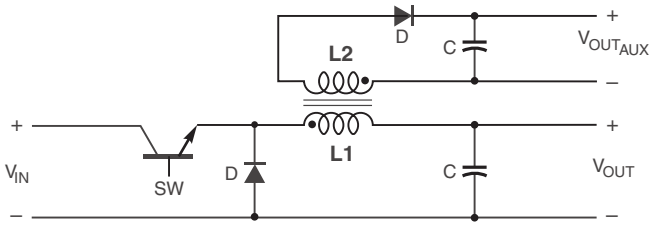
Coupled Inductors for Critical Applications



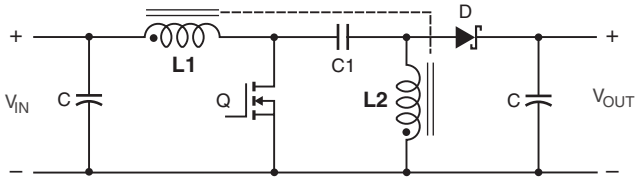
- Only 3 mm high and 5 mm square
- Ideal for use in flyback, multi-output buck and SEPIC applications.
- High inductance, high efficiency and excellent current handling
- Can also be used as two single inductors connected in series or parallel or as a common mode choke.



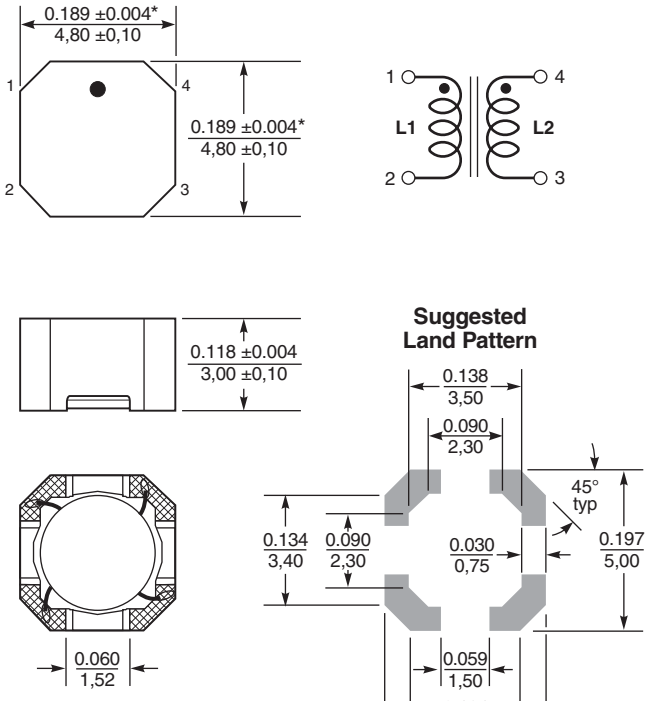
Typical Flyback Converter



Typical Buck Converter with auxiliary output



Typical SEPIC schematic



*Dimensions are of the case not including the termination. For maximum overall dimensions including the termination, add 0.005 in / 0,13 mm.

Dimensions are in inches / mm

Core material Ferrite
Core and winding loss Go to online calculator
Weight 210 – 300 mg
Terminations Silver-palladium-platinum-glass frit.
Ambient temperature –55°C to +105°C with Irms current,t
Maximum part temperature +155°C (ambient + temp rise)
Storage temperature Component: –55°C to +155°C. Packaging: –55°C to +80°C
Winding to winding isolation 100 V
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)
Packaging 750 per 7″ 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: ≤ 2.5 mm

Coilcraft CPS
CRITICAL PRODUCTS & SERVICES

1102 Silver Lake Road
Cary, IL 60013
Phone 800-981-0363

Fax 847-639-1508
Email cps@coilcraft.com
www.coilcraft-cps.com

Document ML757-1 Revised 05/24/17

ML466PJD Series Coupled Inductors

Part number[1]	Inductance[2] (µH)	DCR max[3] (Ohms)	SRF typ[4] (MHz)	Coupling coefficient typ	Leakage L typ[5] (µH)	Isat (A)[6] 10% drop	Isat (A)[6] 20% drop	Isat (A)[6] 30% drop	Irms (A) both windings[7]	Irms (A) one winding[8]
ML466PJD102NLZ	1.0 ±30%	0.042	153	0.95	0.09	4.30	4.49	4.67	2.20	3.11
ML466PJD152MLZ	1.5 ±20%	0.048	118	0.97	0.09	3.90	4.20	4.30	2.05	2.90
ML466PJD222MLZ	2.2 ±20%	0.067	87.0	0.98	0.10	2.80	2.98	3.07	1.95	2.76
ML466PJD332MLZ	3.3 ±20%	0.077	61.0	0.98	0.10	2.50	2.70	2.80	1.70	2.40
ML466PJD472MLZ	4.7 ±20%	0.111	49.0	0.99	0.11	2.10	2.20	2.20	1.40	1.98
ML466PJD562MLZ	5.6 ±20%	0.125	44.0	0.99	0.11	1.80	1.80	1.89	1.35	1.91
ML466PJD682MLZ	6.8 ±20%	0.159	40.0	0.99	0.12	1.40	1.48	1.48	1.20	1.70
ML466PJD103MLZ	10 ±20%	0.210	28.0	0.99	0.13	1.20	1.20	1.20	1.05	1.48
ML466PJD153MLZ	15 ±20%	0.298	23.0	0.99	0.15	1.00	1.17	1.17	0.85	1.20
ML466PJD223MLZ	22 ±20%	0.452	17.0	>0.99	0.17	0.89	0.98	0.98	0.70	0.99
ML466PJD333MLZ	33 ±20%	0.565	16.0	>0.99	0.20	0.73	0.77	0.78	0.60	0.85
ML466PJD473MLZ	47 ±20%	0.806	12.0	>0.99	0.24	0.59	0.63	0.65	0.50	0.71
ML466PJD683MLZ	68 ±20%	1.13	9.00	>0.99	0.29	0.50	0.54	0.55	0.43	0.61
ML466PJD104MLZ	100 ±20%	1.79	8.44	>0.99	0.37	0.47	0.54	0.56	0.33	0.47
ML466PJD154MLZ	150 ±20%	2.43	6.72	>0.99	0.46	0.38	0.43	0.45	0.28	0.40
ML466PJD224MLZ	220 ±20%	3.30	5.53	>0.99	0.54	0.31	0.35	0.36	0.24	0.34
ML466PJD334MLZ	330 ±20%	5.36	4.17	>0.99	0.65	0.25	0.25	0.32	0.18	0.25
ML466PJD474MLZ	470 ±20%	7.51	3.52	>0.99	0.76	0.21	0.24	0.26	0.15	0.21
ML466PJD684MLZ	680 ±20%	10.8	2.93	>0.99	0.89	0.17	0.20	0.21	0.13	0.18
ML466PJD105MLZ	1000 ±20%	16.5	2.33	>0.99	1.20	0.15	0.17	0.17	0.10	0.14

1. When ordering, please specify **termination** and **testing** codes:

   ML466PJD105MLZ

   Termination: **L** = Silver-palladium-platinum-glass frit.
   R = Matte tin over nickel over silver.
   Testing: **Z** = Unscreened
   H = Group A screening per Coilcraft CP-SA-10001
   T = Screening per MIL-STD-981
   U = Screening per EEE-INST-002
   F = Screening per ESCC 3201
   All screening performed to the document's latest revision
   Custom screening also available
2. 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.
3. 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.
4. SRF measured using an Agilent/HP 4191A or equivalent. When leads are connected in parallel, SRF is the same value.
5. Leakage Inductance is for L1 and is measured with L2 shorted.
6. 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.
7. Equal current when applied to each winding simultaneously that causes a 40°C temperature rise from 25°C ambient. Calculate temperature rise.
8. 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. Calculate temperature rise.
9. Electrical specifications at 25°C.

Coupled Inductor Core and Winding Loss Calculator

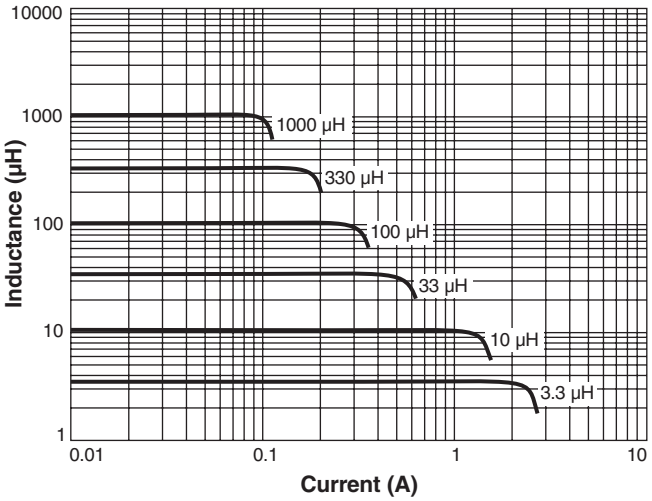
This web-based utility allows you to enter frequency, peak-to-peak (ripple) current, and Irms current to predict temperature rise and overall losses, including core loss. Go to online calculator.

Coilcraft CPS
CRITICAL PRODUCTS & SERVICES
1102 Silver Lake Road
Cary, IL 60013
Phone 800-981-0363
Fax 847-639-1508
Email cps@coilcraft.com
www.coilcraft-cps.com

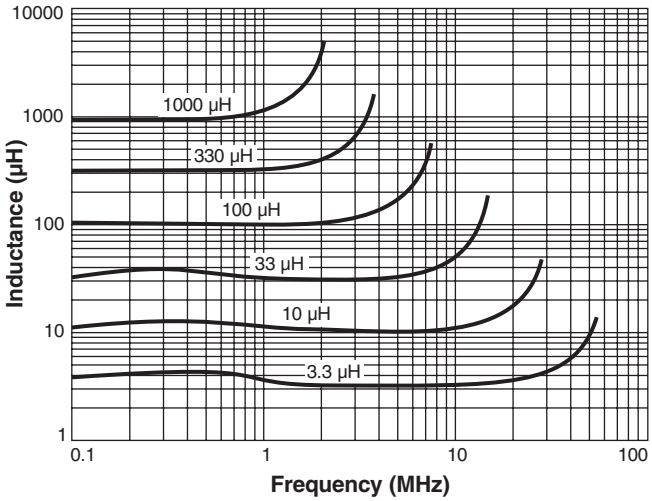
Document ML757-2 Revised 05/24/17

ML466PJD Series Coupled Inductors

Typical L vs Current



Typical L vs Frequency



Coilcraft CPS
CRITICAL PRODUCTS & SERVICES

1102 Silver Lake Road
Cary, IL 60013
Phone 800-981-0363

Fax 847-639-1508
Email cps@coilcraft.com
www.coilcraft-cps.com

Document ML757-3 Revised 05/24/17