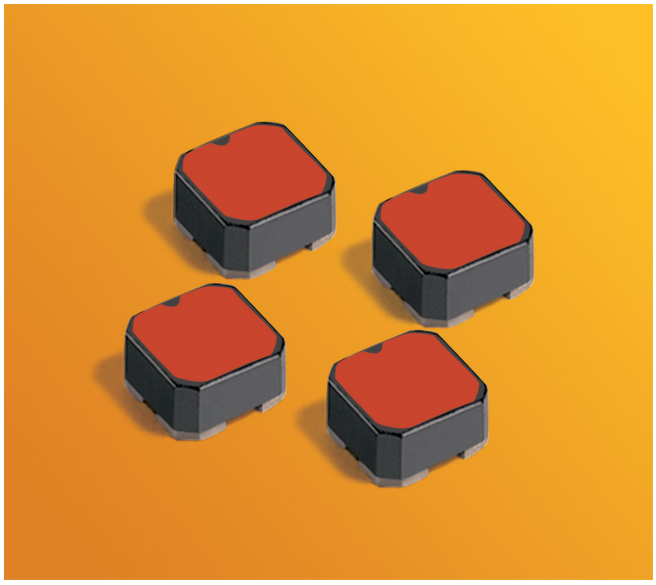
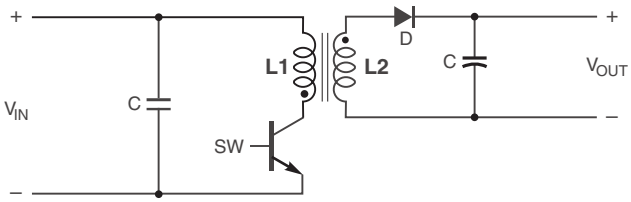
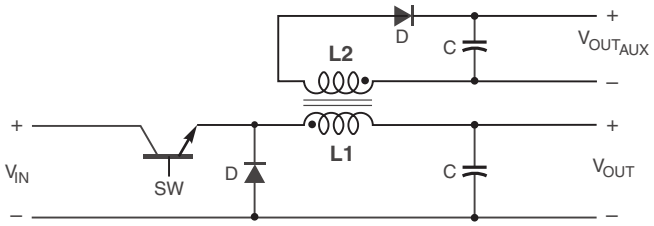
Outgassing Compliant Coupled Inductors



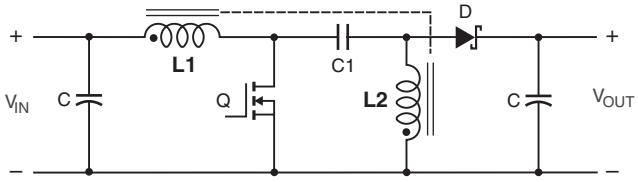
- Only 3 mm high and 5 mm square
- Passes NASA low outgassing specifications
- Ideal for use in flyback, multi-output buck and SEPIC applications.
- High inductance, high efficiency and excellent current handling
- Can also be used as two single inductors connected in series or parallel or as a common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



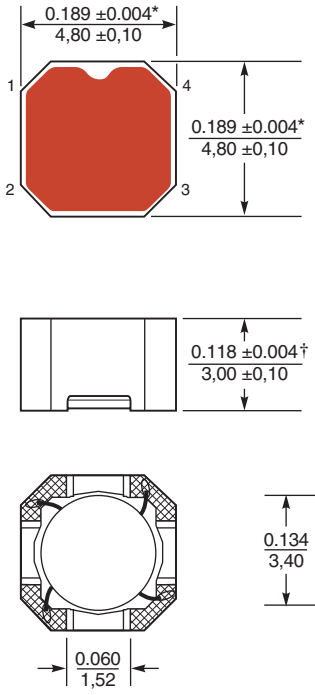
Typical Flyback Converter



Typical Buck Converter with auxiliary output



Typical SEPIC schematic



*Dimensions are of the case not including termination. For maximum overall dimensions including the termination, add 0.010 in / 0,254 mm.

†Height dimension is after mounting. For maximum height dimension before mounting, add 0.006 in / 0,152 mm.

Dimensions are in inches / mm

Core material Ferrite
Core and winding loss Go to online calculator
Weight 190 – 255 mg
Terminations Tin-lead (63/37) over tin over nickel
Ambient temperature –55°C to +105°C with Irms current
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

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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

AR466PJD 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]
AR466PJD102NSZ	1.0 ±30%	0.042	153	0.95	0.09	4.30	4.49	4.67	2.20	3.11
AR466PJD152MSZ	1.5 ±20%	0.048	118	0.97	0.09	3.90	4.20	4.30	2.05	2.90
AR466PJD222MSZ	2.2 ±20%	0.067	87.0	0.98	0.10	2.80	2.98	3.07	1.95	2.76
AR466PJD332MSZ	3.3 ±20%	0.077	61.0	0.98	0.10	2.50	2.70	2.80	1.70	2.40
AR466PJD472MSZ	4.7 ±20%	0.111	49.0	0.99	0.11	2.10	2.20	2.20	1.40	1.98
AR466PJD562MSZ	5.6 ±20%	0.125	44.0	0.99	0.11	1.80	1.80	1.89	1.35	1.91
AR466PJD682MSZ	6.8 ±20%	0.159	40.0	0.99	0.12	1.40	1.48	1.48	1.20	1.70
AR466PJD103MSZ	10 ±20%	0.210	28.0	0.99	0.13	1.20	1.20	1.20	1.05	1.48
AR466PJD153MSZ	15 ±20%	0.298	23.0	0.99	0.15	1.00	1.17	1.17	0.85	1.20
AR466PJD223MSZ	22 ±20%	0.452	17.0	>0.99	0.17	0.89	0.98	0.98	0.70	0.99
AR466PJD333MSZ	33 ±20%	0.565	16.0	>0.99	0.20	0.73	0.77	0.78	0.60	0.85
AR466PJD473MSZ	47 ±20%	0.806	12.0	>0.99	0.24	0.59	0.63	0.65	0.50	0.71
AR466PJD683MSZ	68 ±20%	1.13	9.00	>0.99	0.29	0.50	0.54	0.55	0.43	0.61
AR466PJD104MSZ	100 ±20%	1.79	8.44	>0.99	0.37	0.47	0.54	0.56	0.33	0.47
AR466PJD154MSZ	150 ±20%	2.43	6.72	>0.99	0.46	0.38	0.43	0.45	0.28	0.40
AR466PJD224MSZ	220 ±20%	3.30	5.53	>0.99	0.54	0.31	0.35	0.36	0.24	0.34
AR466PJD334MSZ	330 ±20%	5.36	4.17	>0.99	0.65	0.25	0.25	0.32	0.18	0.25
AR466PJD474MSZ	470 ±20%	7.51	3.52	>0.99	0.76	0.21	0.24	0.26	0.15	0.21
AR466PJD684MSZ	680 ±20%	10.8	2.93	>0.99	0.89	0.17	0.20	0.21	0.13	0.18
AR466PJD105MSZ	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 **testing** code:

   AR466PJD105MSZ

   Testing: Z = Unscreened

   All screening performed to the document's latest revision
   H = Group A screening per Coilcraft CP-SA-10001
   N = Group A screening per Coilcraft CP-SA-10004
   J = Group A screening per Coilcraft CP-SA-10006
   T = Screening per MIL-STD-981
   U = Screening per EEE-INST-002
   F = Screening per ESCC 3201
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 25°C, 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. This information is for reference only and does not represent absolute maximum ratings. See temperature rise calculation.
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. See temperature rise calculation.
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.

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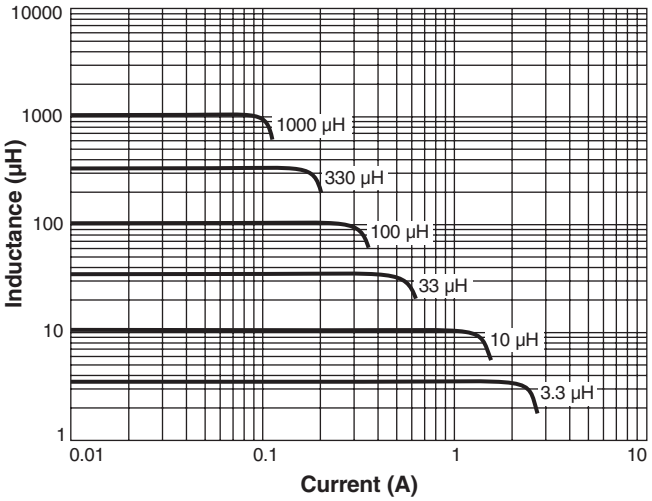
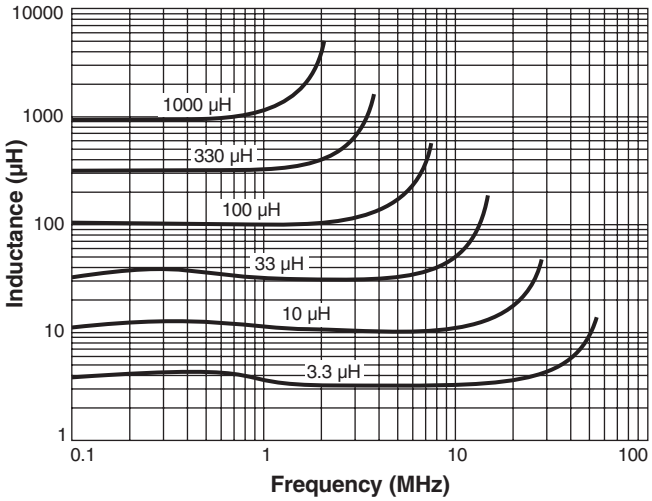
AR466PJD Series Coupled Inductors

Typical L vs Current



Typical L vs Frequency



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