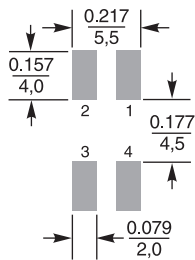
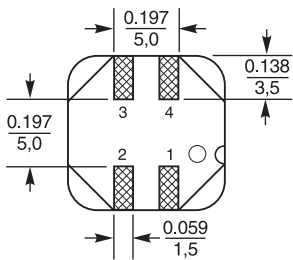
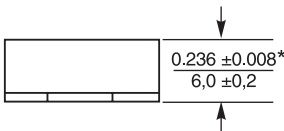
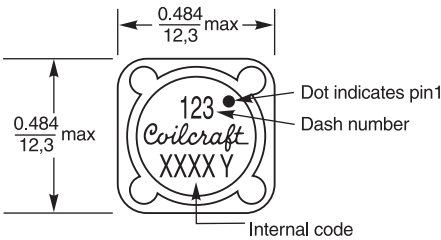
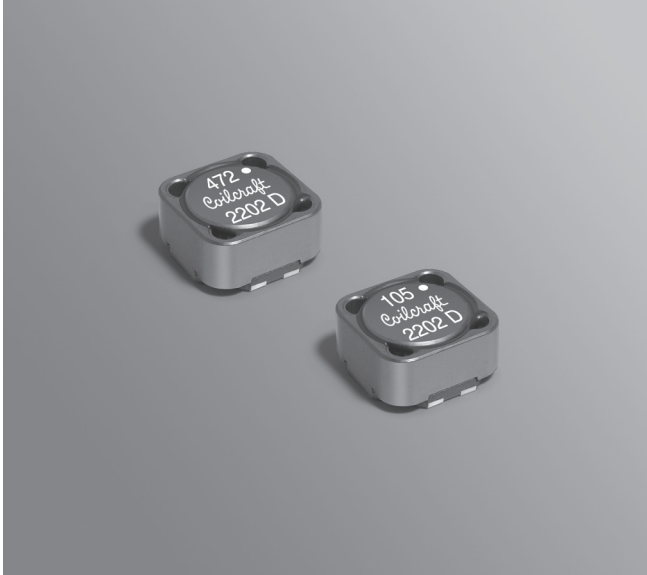


**NEW!**

# Shielded Coupled Inductors MSD1260H



**Recommended Land Pattern**

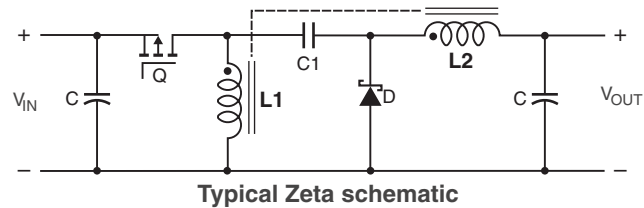
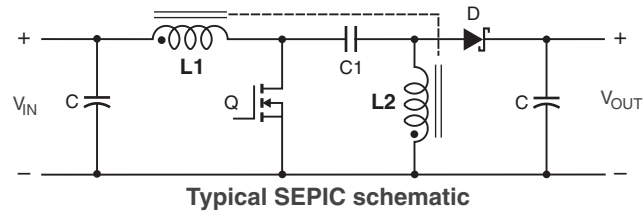
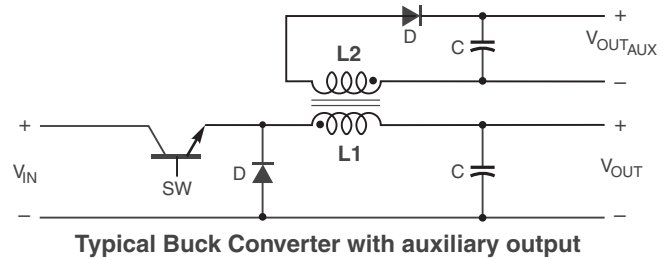
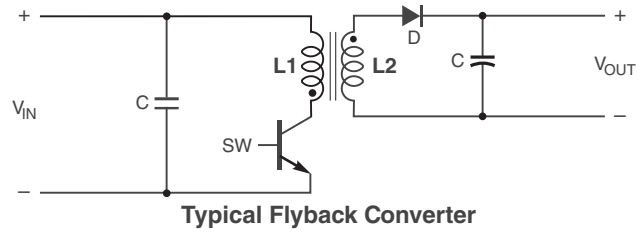
\* For optional tin-lead and tin-silver-copper terminations, dimensions are for the mounted part. Dimensions before mounting can be an additional 0.012 inch (0,3 mm).

Dimensions are in  $\frac{\text{inches}}{\text{mm}}$

The MSD1260H series of shielded coupled inductors was designed specifically for high temperature applications – up to 125°C ambient.

Tight coupling ( $k \geq 0.97$ ) and 500 Vrms isolation make them ideal for use in a variety of circuits including flyback, multi-output buck, SEPIC and Zeta. These parts provide high inductance, high efficiency and excellent current handling.

They can also be used as two single inductors connected in series or parallel or as a common mode choke.





# Shielded Coupled Inductors – MSD1260H

Part number <sup>1</sup>	Inductance <sup>2</sup> ( $\mu$ H)	DCR max <sup>3</sup> (Ohms)	SRF typ <sup>4</sup> (MHz)	Coupling coefficient min	Leakage <sup>5</sup> L typ ( $\mu$ H)	Isat (A) <sup>6</sup>			Irms (A)	
						10% drop	20% drop	30% drop	both windings <sup>7</sup>	one winding <sup>8</sup>
MSD1260H-222M_D	2.2±20%	0.017	57	0.97	0.36	10.1	11.8	13.0	4.50	6.30
MSD1260H-332M_D	3.3±20%	0.020	48	0.97	0.40	8.3	9.6	10.7	4.10	5.70
MSD1260H-472M_D	4.7±20%	0.023	40	0.98	0.40	6.9	8.1	8.9	3.75	5.25
MSD1260H-562M_D	5.6±20%	0.030	36	0.98	0.40	6.3	7.4	8.2	3.45	4.80
MSD1260H-682M_D	6.8±20%	0.033	31	0.98	0.44	5.7	6.7	7.4	3.12	4.30
MSD1260H-822M_D	8.2±20%	0.036	28	0.98	0.50	5.2	6.1	6.8	2.87	4.00
MSD1260H-103M_D	10 ±20%	0.045	24	0.98	0.60	4.7	5.5	6.1	2.60	3.60
MSD1260H-123M_D	12 ±20%	0.050	22	0.98	0.60	4.3	5.0	5.6	2.45	3.40
MSD1260H-153M_D	15 ±20%	0.059	19	0.98	0.70	3.9	4.5	5.0	2.30	3.20
MSD1260H-183M_D	18 ±20%	0.071	17	0.98	0.80	3.5	4.1	4.6	2.10	2.90
MSD1260H-223M_D	22 ±20%	0.083	15	0.98	1.0	3.2	3.7	4.1	1.90	2.60
MSD1260H-273M_D	27 ±20%	0.093	13	0.98	1.0	2.9	3.4	3.7	1.75	2.45
MSD1260H-333M_D	33 ±20%	0.118	12	0.98	1.2	2.6	3.0	3.4	1.60	2.20
MSD1260H-393M_D	39 ±20%	0.132	11	0.98	1.3	2.4	2.8	3.1	1.50	2.10
MSD1260H-473M_D	47 ±20%	0.143	10.5	0.98	1.4	2.2	2.5	2.8	1.40	1.90
MSD1260H-563M_D	56 ±20%	0.186	9.5	0.98	1.6	2.0	2.3	2.6	1.30	1.80
MSD1260H-683M_D	68 ±20%	0.209	8.5	0.98	1.8	1.8	2.1	2.3	1.20	1.70
MSD1260H-823M_D	82 ±20%	0.270	7.5	0.98	2.0	1.7	1.9	2.1	1.08	1.50
MSD1260H-104M_D	100 ±20%	0.310	7.0	0.98	2.5	1.5	1.7	1.9	0.95	1.30
MSD1260H-124K_D	120 ±10%	0.345	6.4	0.98	2.6	1.4	1.6	1.8	0.85	1.20
MSD1260H-154K_D	150 ±10%	0.465	5.4	0.98	2.8	1.2	1.5	1.6	0.75	1.05
MSD1260H-184K_D	180 ±10%	0.525	5.0	0.98	3.0	1.1	1.3	1.4	0.65	0.91
MSD1260H-224K_D	220 ±10%	0.680	4.4	0.98	3.2	1.0	1.2	1.3	0.60	0.84
MSD1260H-274K_D	270 ±10%	0.783	4.0	0.98	3.5	0.91	1.1	1.2	0.55	0.77
MSD1260H-334K_D	330 ±10%	0.916	3.6	0.98	3.8	0.83	0.96	1.1	0.52	0.73
MSD1260H-394K_D	390 ±10%	1.155	3.3	0.98	4.0	0.76	0.89	0.98	0.50	0.70
MSD1260H-474K_D	470 ±10%	1.330	3.0	0.98	4.6	0.69	0.81	0.89	0.45	0.63
MSD1260H-564K_D	560 ±10%	1.738	2.8	0.98	5.1	0.63	0.74	0.82	0.40	0.56
MSD1260H-684K_D	680 ±10%	2.013	2.4	0.98	6.5	0.57	0.67	0.74	0.36	0.50
MSD1260H-824K_D	820 ±10%	2.280	2.3	0.98	7.0	0.52	0.61	0.68	0.32	0.45
MSD1260H-105K_D	1000 ±10%	2.950	2.1	0.98	8.5	0.47	0.55	0.61	0.28	0.39

1. When ordering, please specify **termination** code:

### MSD1260H-105KED

**Termination:** **E** = RoHS compliant matte tin over nickel over phos bronze. Special order: **T** = RoHS tin-silver-copper (95.5/4/0.5) or **S** = non-RoHS tin-lead (63/37).

**Packaging:** **D** = 13" machine-ready reel. EIA-481 embossed plastic tape (500 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

- 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.
- Maximum current when applied to one winding that causes a 40°C temperature rise from 25°C ambient.
- 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** [Go to online calculator](#)

**Terminations** RoHS compliant matte tin over nickel over phos bronze. Other terminations available at additional cost.

**Weight:** 2.8 – 3.2 g

**Ambient temperature** –40°C to +125°C with Irms current

**Maximum part temperature** +165°C (ambient + temp rise)

**Storage temperature** Component: –40°C to +165°C.

Tape and reel packaging: –40°C to +80°C

**Winding-to-winding isolation** 500 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)

**Packaging** 500/13" reel; Plastic tape: 24 mm wide, 0.5 mm thick, 16 mm pocket spacing, 6.9 mm pocket depth

**PCB washing** Tested with pure water or alcohol only. For other solvents, see [Doc787\\_PCB\\_Washing.pdf](#).



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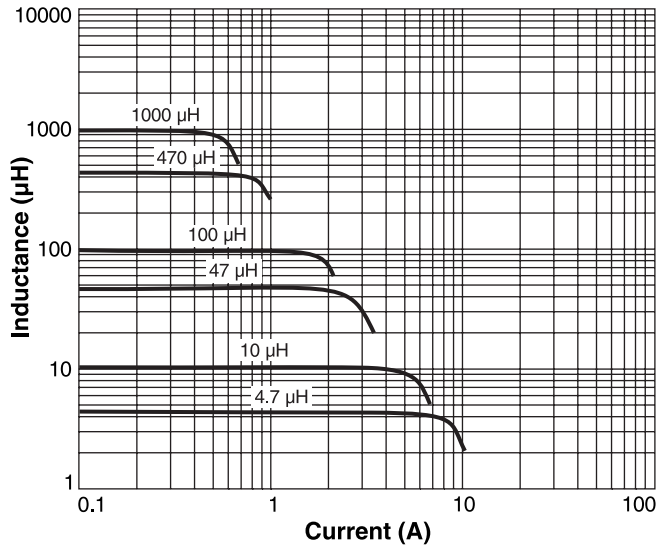
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This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.



# Shielded Coupled Inductors – MSD1260H

## Typical L vs Current



## Typical L vs Frequency

