



SMT Power Inductors – DS3316P



Magnetic shielding and high efficiency are features of the DS3316 family of power inductors. They are designed for high performance DC-DC converter applications, especially those requiring shielding.

The terminations wrap around the end of the base, ensuring a sound solder fillet and simplifying inspection.

Saturation current ratings up to 11 A and rms current ratings as high as 5 A are available. DC resistance as low as 0.021 Ohms keeps power losses to a minimum.

For new designs, consider the MSS1038 as an alternative to this series. The MSS1038 series is more cost effective, features a smaller footprint, lower profile, lower DCR and better current handling. We will continue to manufacture and support the DS3316 indefinitely.

SPICE models ON OUR WEB SITE

Part number ¹	L ±20% ² (μH)	DCR max (Ohms)	SRF typ (MHz)	Isat ³ (A)	Irms ⁴ (A)
DS3316P-102ML_	1.0	0.021	140	11.0	5.0
DS3316P-152ML_	1.5	0.022	120	9.5	4.5
DS3316P-222ML_	2.2	0.032	80	7.8	3.8
DS3316P-332ML_	3.3	0.039	70	6.0	3.3
DS3316P-472ML_	4.7	0.054	40	5.4	2.7
DS3316P-682ML_	6.8	0.075	38	4.5	2.2
DS3316P-822ML_	8.2	0.085	36	4.0	2.1
DS3316P-103ML_	10	0.101	35	3.5	2.0
DS3316P-153ML_	15	0.150	25	3.0	1.5
DS3316P-223ML_	22	0.207	19	2.0	1.3
DS3316P-333ML_	33	0.334	15	1.8	1.1
DS3316P-473ML_	47	0.472	13	1.4	0.80
DS3316P-683ML_	68	0.660	10	1.3	0.70
DS3316P-104ML_	100	1.11	7	1.2	0.60
DS3316P-154ML_	150	1.55	6	0.80	0.50
DS3316P-224ML_	220	2.00	5	0.70	0.37
DS3316P-105ML_	1000	8.30	2	0.32	0.17

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

DS3316P-105MLD

Termination: L = RoHS compliant gold 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 (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.

2. Inductance tested at 0.1 Vrms, 100 kHz, 0 Adc.
3. DC current at which the inductance drops 10% (typ) from its value without current.
4. Current that causes a 40°C temperature rise from 25°C ambient.
5. **Ambient temperature range:** -40°C to +85°C with Irms current
+85°C to +125°C with derated current
6. **Storage temperature range:** Component: -40°C to +125°C
Packaging: -40°C to +80°C
7. **Resistance to soldering heat:** Three reflows at >217°C for 90 seconds (+260°C ±5°C for 20 – 40 seconds), allowing parts to cool to room temperature between.
8. Electrical specifications at 25°C.
See Qualification Standards section for environmental and test data.
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



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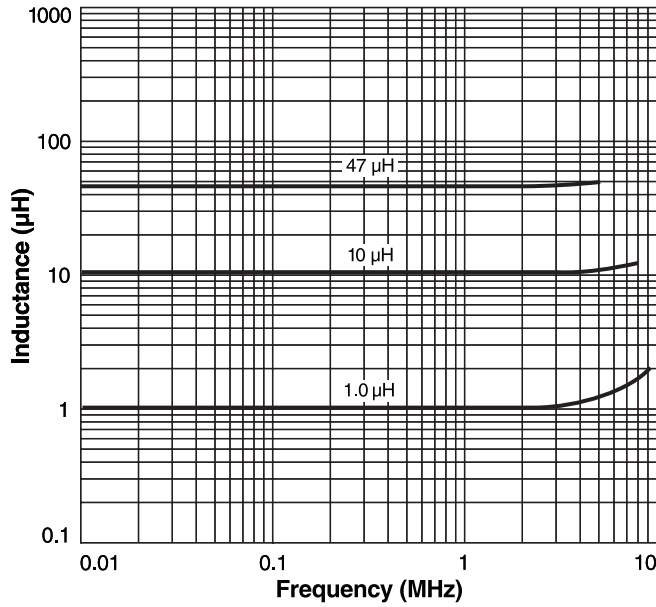
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This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.

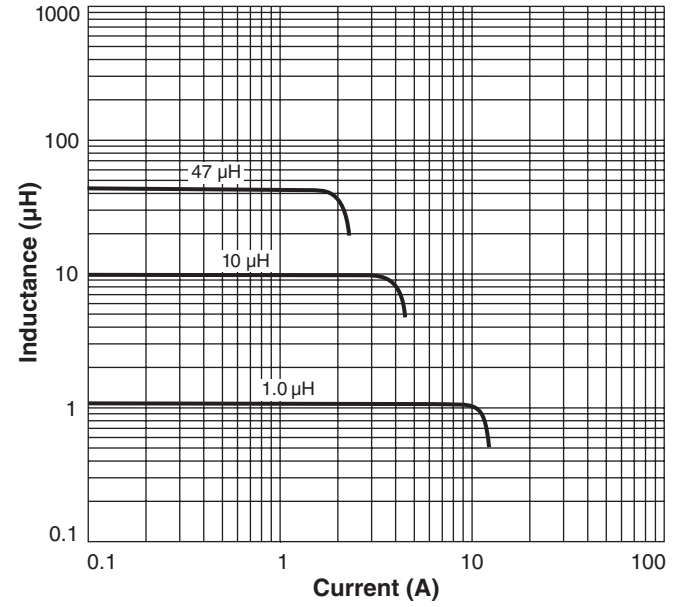


SMT Power Inductors - DS3316P Series

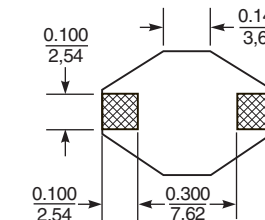
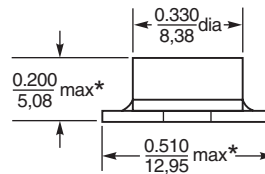
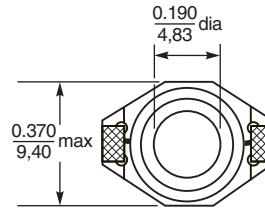
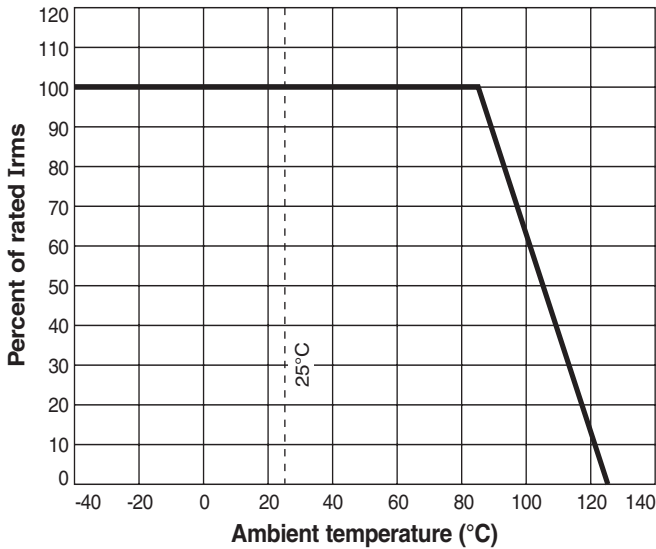
Typical L vs Frequency



Typical L vs Current

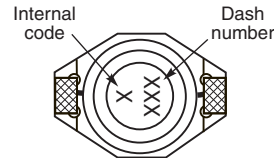
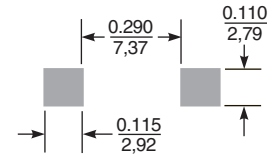


Irms Derating



* Allow an additional 0.01/0,254 in length and 0.005/0,127 in height for optional tin-lead and tin-silver-copper application.

Recommended Land Pattern



Part marking since Feb. 2005. Parts manufactured prior to that date may have color dots. Visit www.coilcraft.com/colrpowr.cfm for color dot marking details.

Weight: 0.82 – 0.87 g
Tape and reel: 1000/13" reel 24 mm tape width
 For packaging data see Tape and Reel Specifications section.



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