



Shielded Power Inductors – DS3316P



Coilcraft will continue to manufacture and support the DS3316P indefinitely, however for new designs, consider the MSS1038 as an alternative. The MSS1038 series is more cost effective, features a smaller footprint, lower profile, lower DCR and better current handling.

Core material Ferrite

Terminations RoHS compliant electroplated gold (<50 µin) over nickel over phos bronze. Other terminations available at additional cost.

Weight 0.82–0.87 g

Ambient temperature –40°C to +85°C with Irms current

Maximum part temperature +125°C (ambient + temp rise)

Storage temperature Component: –40°C to +125°C.

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

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 per 13" reel Plastic tape: 24 mm wide, 0.33 mm thick, 12 mm pocket spacing, 5.8 mm pocket depth

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](#).

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 electroplated gold (<50 µin) 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 25°C that causes an inductance drop of 10% (typ) from its value without current. [Click for temperature derating information.](#)

4. Current that causes a 40°C temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings. [Click for temperature derating information.](#)

5. Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

SPICE models ON OUR WEB SITE



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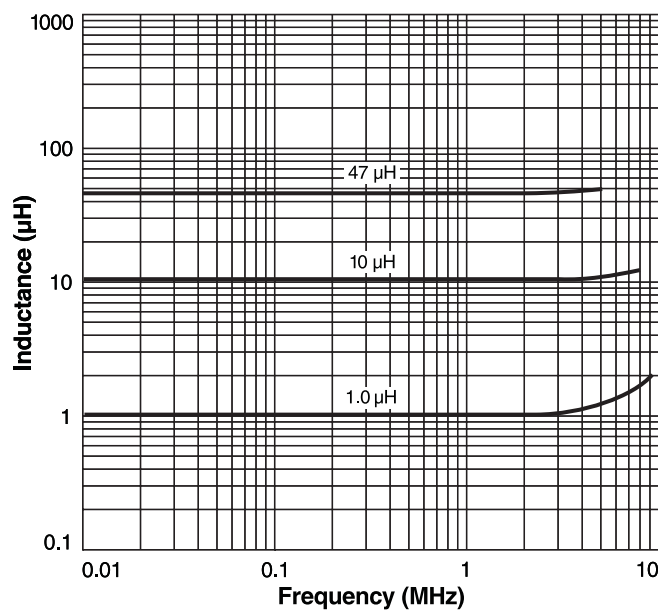
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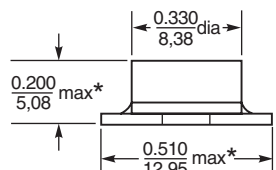
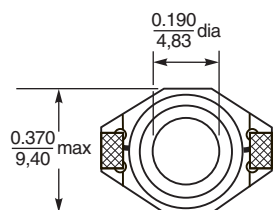
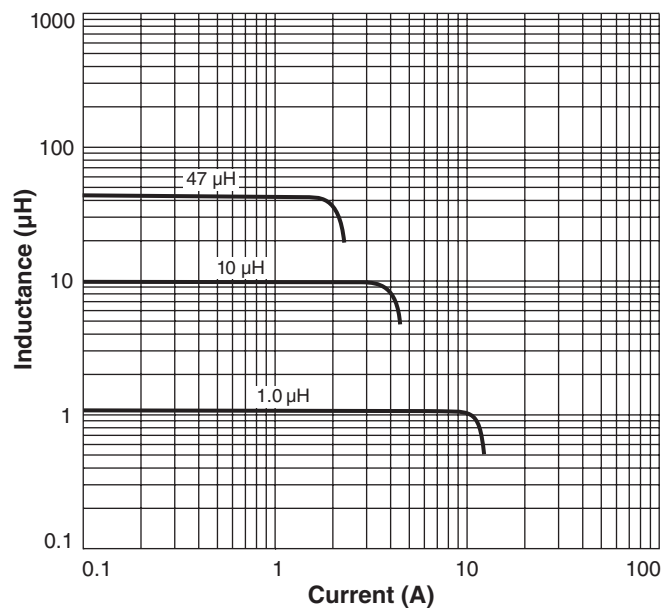


SMT Power Inductors - DS3316P Series

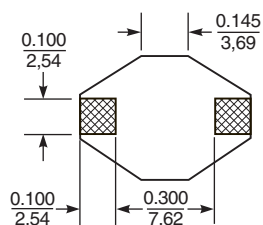
Typical L vs Frequency



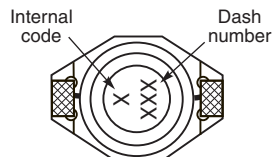
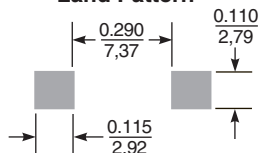
Typical L vs Current



* 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/coilpowr.cfm for color dot marking details.

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



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