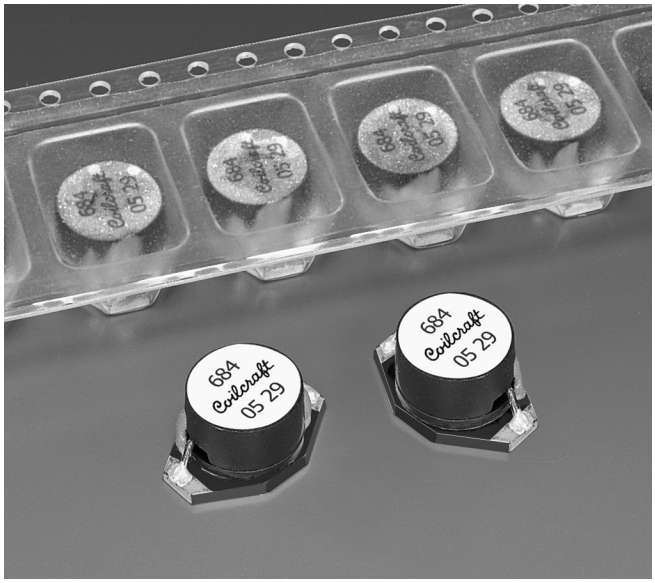
Shielded Power Inductors – DT3316P



Coilcraft will continue to manufacture and support the DT3316P indefinitely. For new designs, consider the MSS7341, MSS1038 or MSS1260 as alternatives. These series are more cost effective and offer better current handling. In addition, the MSS7341 is a significantly smaller part.

Core material Ferrite
Terminations RoHS compliant electroplated gold (<50 µin) over nickel over phos bronze. Other terminations available at additional cost.
Ambient temperature –40°C to +85°C with Irms current
Maximum part temperature +95°C (ambient + temp rise)
Storage temperature Component: –40°C to +85°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
PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

Part number[1]	Inductance[2] ±20% (µH)	DCR (Ohms)	SRF typ (MHz)	Isat (A)[3] 20% drop	Isat (A)[3] 30% drop	Irms[4] (A)	Energy storage max (µJoules)	Switching frequency max
DT3316P-102ML_	1.0	0.025	60.0	4.50	8.00	4.00	9	1 MHz
DT3316P-152ML_	1.5	0.030	55.0	4.00	5.50	4.00	12	1 MHz
DT3316P-222ML_	2.2	0.035	55.0	1.90	3.00	4.00	15	1 MHz
DT3316P-332ML_	3.3	0.040	50.0	1.60	2.80	4.00	16	1 MHz
DT3316P-472ML_	4.7	0.045	45.0	1.50	2.40	3.00	10	1 MHz
DT3316P-682ML_	6.8	0.050	40.0	1.30	2.20	2.50	14	1 MHz
DT3316P-103ML_	10	0.055	35.0	0.80	1.20	2.00	11	1 MHz
DT3316P-153ML_	15	0.060	25.0	0.65	1.10	1.80	12	1 MHz
DT3316P-223ML_	22	0.084	22.0	0.60	1.00	1.50	11	1 MHz
DT3316P-333ML_	33	0.09	18.0	0.55	0.90	1.30	13	1 MHz
DT3316P-473ML_	47	0.11	16.0	0.32	0.50	1.00	13	1 MHz
DT3316P-683ML_	68	0.15	12.0	0.28	0.45	0.90	17	1 MHz
DT3316P-104ML_	100	0.29	9.0	0.28	0.40	0.80	15	1 MHz
DT3316P-154ML_	150	0.36	8.0	0.21	0.35	0.60	15	500 kHz
DT3316P-224ML_	220	0.39	6.0	0.17	0.26	0.50	10	500 kHz
DT3316P-334ML_	330	0.73	5.0	0.13	0.20	0.40	13	500 kHz
DT3316P-474ML_	470	0.88	4.0	0.11	0.18	0.35	13	500 kHz
DT3316P-684ML_	680	1.15	3.0	0.09	0.14	0.30	13	500 kHz
DT3316P-105ML_	1000	1.45	2.5	0.085	0.14	0.25	13	500 kHz

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

DT3316P-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 100 kHz, 0.1 Vrms, 0 Adc.
3. DC current at 25°C that causes the specified inductance drop from its value without current.
4. Current that causes a 10°C temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.
5. Electrical specifications at 25°C.

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

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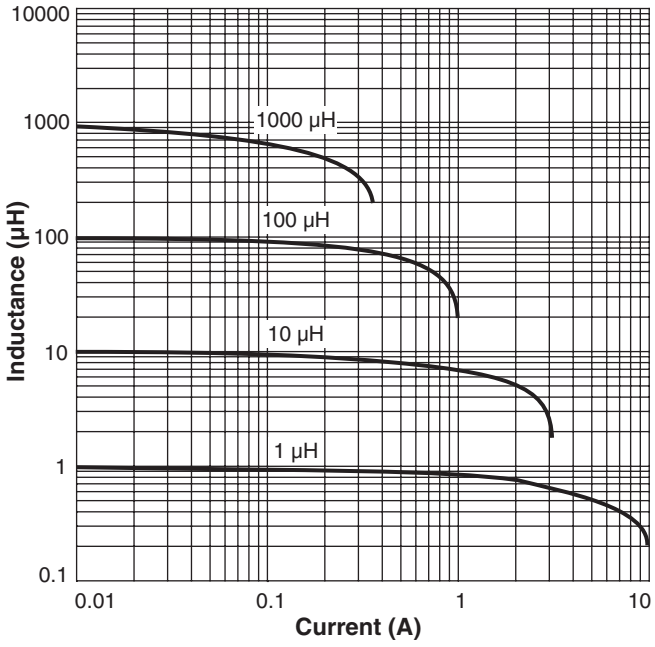
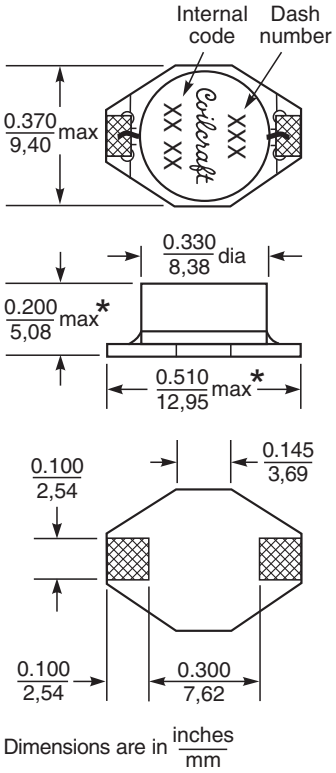
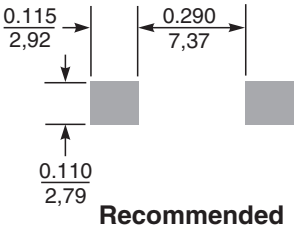
L vs Current





Dimensions are in inches / mm

*Allow an additional 0.02/0,508 in width and 0.01/0,254 in height for optional tin-lead and tin-silver-copper application.



Recommended Land Pattern

Weight: 0.86 – 1.06 g

Packaging 1000 per 13″ reel Plastic tape: 24 mm wide, 0.33 mm thick, 12 mm pocket spacing, 5.8 mm pocket depth

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