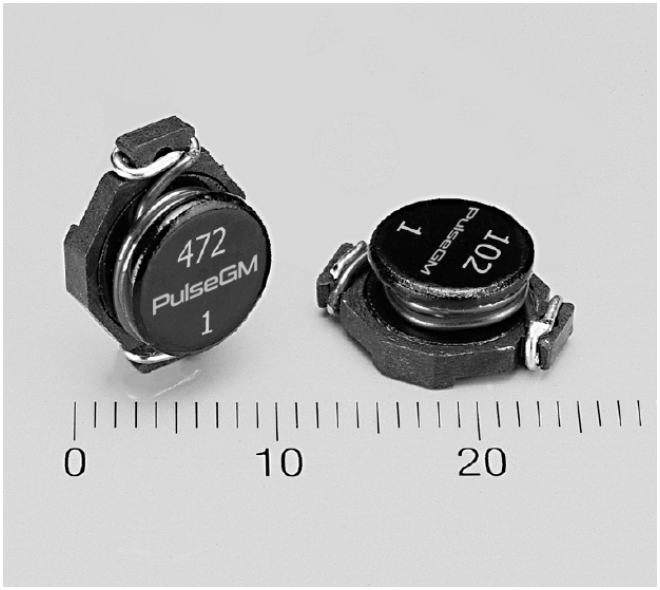
High Temp Power Inductors MO3316T



- Designed for high temperature applications – over 125°C ambient
- AEC-Q200 Grade 1 qualified (–40°C to +125°C ambient)
- Soldered self-leaded construction for excellent solderability
- 10% tolerance for most values
- Low DCR and high current handling

Designer's Kit C396 contains 3 of each 20% value
Core material Ferrite
Core and winding loss
Terminations RoHS compliant tin-silver-copper over copper. Other terminations available at additional cost.
Weight 0.95 – 1.25 g
Ambient temperature –40°C to +125°C with (40°C rise) 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
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 750/13″ reel Plastic tape: 24 mm wide, 0.35 mm thick, 12 mm pocket spacing, 6.4 mm pocket depth
PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash.

Part number[1]	L[2] (µH)	% tol[3]	DCR max (Ohms)	SRF[4] typ (MHz)	Isat[5] (A)	Irms[6] (A)
MO3316T-331ML_	0.33	**20**	0.002	200	20	16
MO3316T-681ML_	0.68	**20**	0.005	200	13	12
MO3316T-102ML_	1.0	**20**	0.006	100	11	10
MO3316T-152ML_	1.5	**20**	0.008	90	9.0	9.0
MO3316T-222_L_	2.2	**20**,10	0.011	90	7.8	7.4
MO3316T-272_L_	2.7	**20**,10	0.012	65	7.0	6.6
MO3316T-332_L_	3.3	**20**,10	0.014	60	6.4	5.9
MO3316T-392_L_	3.9	**20**,10	0.015	50	5.9	5.3
MO3316T-472_L_	4.7	**20**,10	0.018	50	5.4	4.8
MO3316T-562_L_	5.6	**20**,10	0.021	45	4.7	4.65
MO3316T-682_L_	6.8	**20**,10	0.024	43	4.4	4.40
MO3316T-822_L_	8.2	**20**,10	0.032	34	4.0	4.15
MO3316T-103_L_	10	**20**,10	0.034	31	3.9	3.90
MO3316T-123_L_	12	**20**,10	0.036	27	3.4	3.50
MO3316T-153_L_	15	**20**,10	0.045	25	3.1	3.10
MO3316T-183_L_	18	**20**,10	0.050	22	2.8	2.90
MO3316T-223_L_	22	**20**,10	0.070	18	2.5	2.70
MO3316T-273_L_	27	**20**,10	0.085	18	2.3	2.30
MO3316T-333_L_	33	**20**,10	0.100	17	2.0	2.10
MO3316T-393_L_	39	**20**,10	0.120	15	1.8	1.95
MO3316T-473_L_	47	**20**,10	0.150	14	1.65	1.80
MO3316T-563_L_	56	**20**,10	0.165	12	1.45	1.65
MO3316T-683_L_	68	**20**,10	0.220	11	1.40	1.50
MO3316T-823_L_	82	**20**,10	0.250	10	1.30	1.40
MO3316T-104_L_	100	**20**,10	0.280	9.0	1.20	1.30
MO3316T-124_L_	120	**20**,10	0.400	8.0	1.00	1.00
MO3316T-154_L_	150	**20**,10	0.460	6.0	0.90	0.90
MO3316T-184_L_	180	**20**,10	0.520	6.0	0.85	0.85
MO3316T-224_L_	220	**20**,10	0.700	5.0	0.80	0.80
MO3316T-274_L_	270	**20**,10	0.800	5.0	0.75	0.70
MO3316T-334_L_	330	**20**,10	1.07	4.5	0.60	0.60
MO3316T-394_L_	390	**20**,10	1.14	4.0	0.62	0.55
MO3316T-474_L_	470	**20**,10	1.27	3.5	0.50	0.50

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

MO3316T-474MLD

Tolerance: **M** = 20%, **K** = 10% (Table shows stock tolerances in bold.)
Termination: **L** = RoHS compliant tin-silver-copper over copper. Special order: **S** = non-RoHS tin-lead (63/37).
Packaging: **D** = 13″ machine-ready reel. EIA-481 embossed plastic tape (750 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. Tolerances in bold are stocked for immediate shipment.
4. SRF measured using Agilent/HP 8753D network analyzer.
5. DC current at 25°C that causes an inductance drop of 10% (typ) from its value without current.
6. 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.
7. Electrical specifications at 25°C.

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

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Specification subject to change without notice.
Please check web site for latest information.

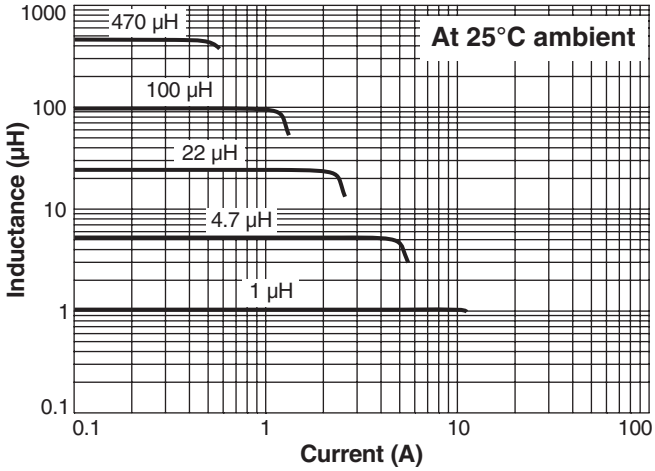
HIGH TEMPERATURE

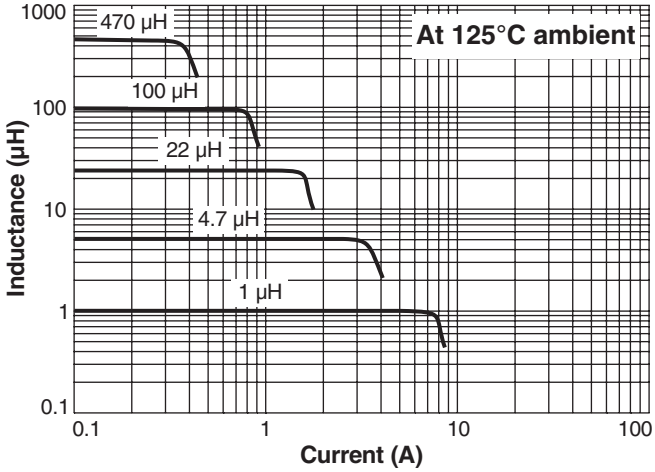
RoHS/ REACH COMPLIANT

AEC Q200 +125°C

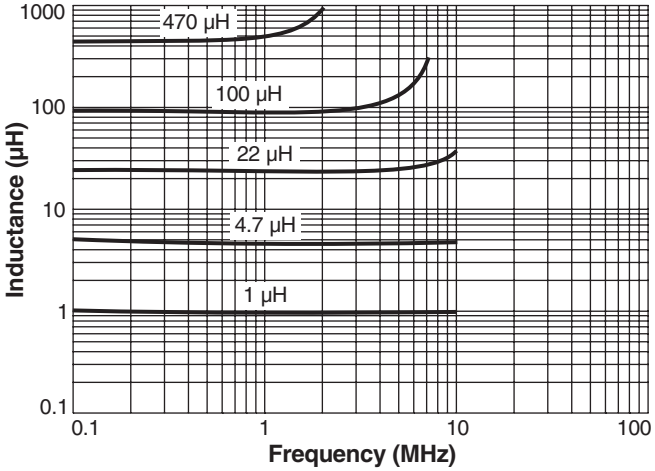
SMT Power Inductors – MO3316T Series

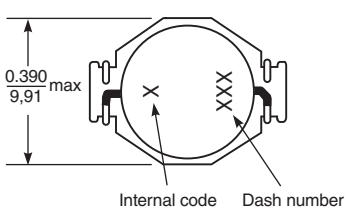
Typical L vs Current

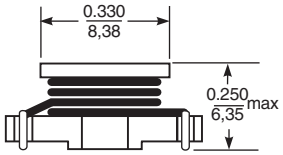


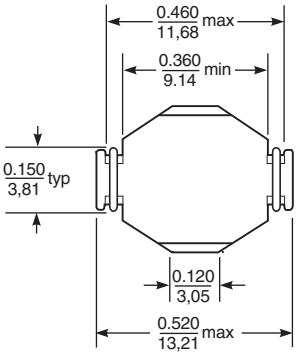


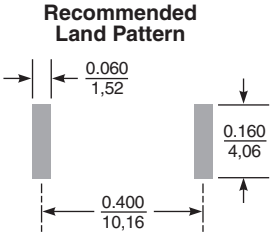
Typical L vs Frequency











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

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Specification subject to change without notice.
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