



Shielded Power Inductors—MSS1210H



- 12.3 × 12.3 mm footprint; 10 mm high shielded inductors
- 27 inductance values from 10 μ H to 10 mH
- Low DCR and excellent current handling
- AEC-Q200 Grade 1 (–40°C to +125°C)
- **Designer's Kit C498** contains 3 of each part

Core material Ferrite

Core and winding loss See www.coilcraft.com/coreloss

Environment RoHS compliant, halogen free

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

Weight: 5.1–6.2 g

Operating voltage 400 V max

Ambient temperature –40°C to +125°C with (40°C rise) Irms current.

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

Storage temperature Component: –55°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)

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

Part number ¹	Inductance ² (μ H)	DCR (Ohms) ³		SRF typ ⁴ (MHz)	Isat (A) ⁵			Irms (A) ⁶	
		typ	max		10% drop	20% drop	30% drop	20°C rise	40°C rise
MSS1210H-103MED	10 \pm 20%	0.010	0.013	18.00	7.50	8.70	9.40	6.58	9.10
MSS1210H-153MED	15 \pm 20%	0.016	0.018	13.00	6.00	7.00	7.50	5.15	6.99
MSS1210H-223MED	22 \pm 20%	0.021	0.027	11.00	5.10	5.90	6.40	3.96	5.45
MSS1210H-333MED	33 \pm 20%	0.031	0.036	8.00	4.10	4.80	5.20	3.09	4.05
MSS1210H-473MED	47 \pm 20%	0.037	0.045	6.50	3.50	4.00	4.30	2.85	3.89
MSS1210H-683MED	68 \pm 20%	0.056	0.065	5.30	2.90	3.30	3.60	2.55	3.40
MSS1210H-104KED	100 \pm 10%	0.078	0.096	4.30	2.40	2.80	3.00	2.45	3.26
MSS1210H-124KED	120 \pm 10%	0.088	0.110	4.00	2.20	2.50	2.70	2.22	3.01
MSS1210H-154KED	150 \pm 10%	0.100	0.123	3.80	1.90	2.20	2.40	1.98	2.75
MSS1210H-184KED	180 \pm 10%	0.130	0.163	2.90	1.80	2.00	2.20	1.55	2.19
MSS1210H-224KED	220 \pm 10%	0.160	0.185	2.80	1.60	1.80	2.00	1.35	1.84
MSS1210H-334KED	330 \pm 10%	0.230	0.280	2.30	1.30	1.50	1.60	1.08	1.52
MSS1210H-474KED	470 \pm 10%	0.340	0.400	1.90	1.10	1.30	1.40	0.91	1.27
MSS1210H-684KED	680 \pm 10%	0.490	0.596	1.40	0.91	1.00	1.10	0.89	1.17
MSS1210H-105KED	1000 \pm 10%	0.630	0.768	1.30	0.75	0.87	0.94	0.68	1.07
MSS1210H-125KED	1200 \pm 10%	0.830	1.013	1.10	0.69	0.80	0.86	0.63	0.86
MSS1210H-155KED	1500 \pm 10%	0.970	1.178	1.00	0.61	0.71	0.77	0.58	0.82
MSS1210H-185KED	1800 \pm 10%	1.10	1.28	0.86	0.56	0.65	0.70	0.57	0.80
MSS1210H-225KED	2200 \pm 10%	1.50	1.75	0.82	0.51	0.59	0.63	0.46	0.63
MSS1210H-275KED	2700 \pm 10%	1.70	2.01	0.75	0.46	0.53	0.57	0.43	0.59
MSS1210H-335KED	3300 \pm 10%	2.20	2.70	0.63	0.41	0.48	0.52	0.38	0.53
MSS1210H-395KED	3900 \pm 10%	2.40	3.00	0.58	0.38	0.44	0.48	0.37	0.51
MSS1210H-475KED	4700 \pm 10%	2.70	3.35	0.53	0.35	0.40	0.43	0.35	0.48
MSS1210H-565KED	5600 \pm 10%	3.55	4.20	0.52	0.32	0.37	0.40	0.28	0.40
MSS1210H-685KED	6800 \pm 10%	4.00	4.82	0.50	0.29	0.33	0.36	0.27	0.39
MSS1210H-825KED	8200 \pm 10%	5.25	6.33	0.41	0.26	0.30	0.33	0.22	0.29
MSS1210H-106KED	10000 \pm 10%	5.95	7.10	0.38	0.24	0.27	0.30	0.22	0.30

1. Specify termination code:

MSS1210H-106KED

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

Packaging: D = 13" machine-ready reel. EIA-481 embossed plastic tape (300 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

2. Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc using an Agilent/HP 4263B LCR meter or equivalent.
3. DCR measured on a micro-ohmmeter and a Coilcraft CCF858 test fixture.
4. SRF measured using Agilent/HP 4191A or equivalent.
5. DC current at 25°C that causes the specified inductance drop from its value without current.
[Click for temperature derating information.](#)
6. Current that causes the specified temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.
[Click for temperature derating information.](#)
7. Electrical specifications at 25°C.

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



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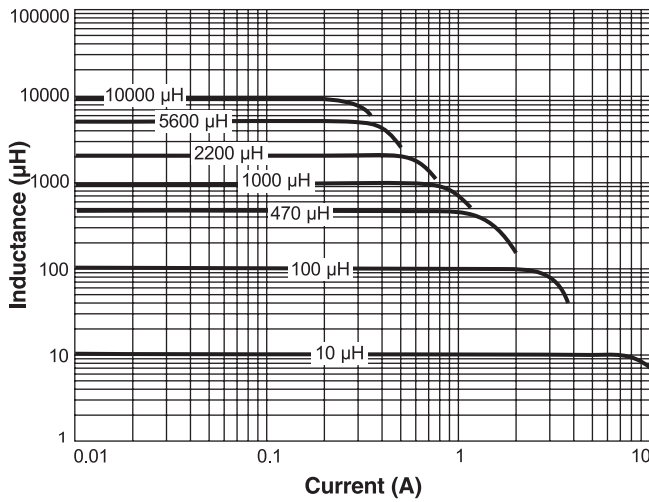
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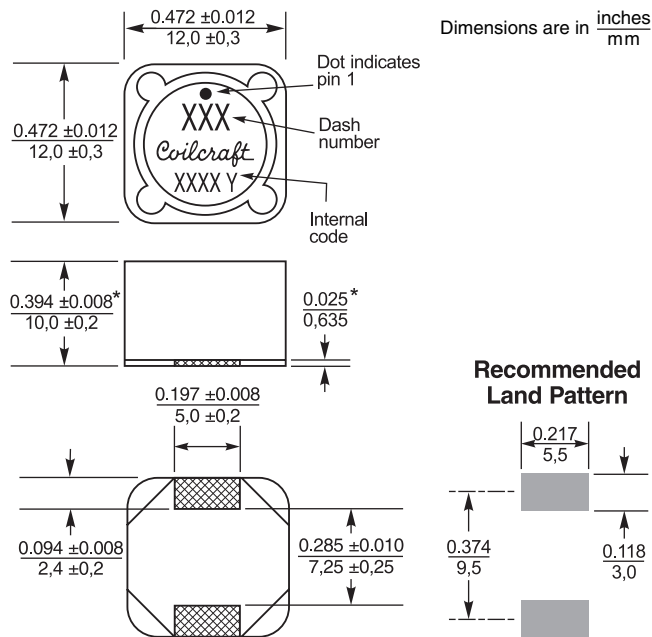
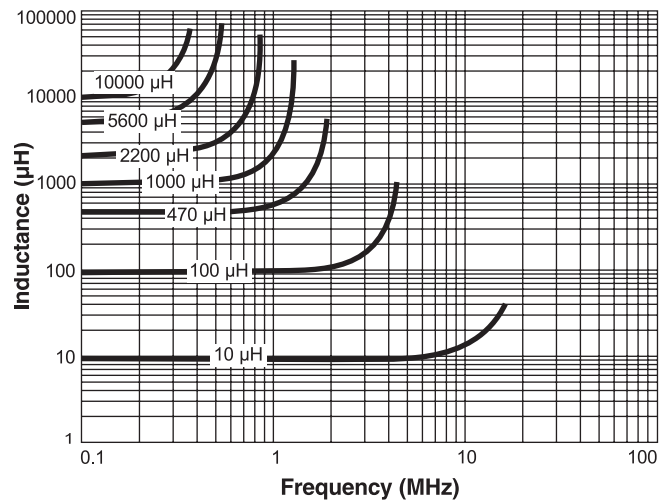


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Typical L vs Current



Typical L vs Frequency



* 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).

Packaging 300/13" reel; Plastic tape: 24 mm wide, 0.5 mm thick, 20 mm pocket spacing, 10.3 mm pocket depth



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