

Shielded Power Inductors – MSS5121



- Low profile shielded power inductors
- Low DCR, excellent current handling and low cost

Designer's Kit C411 contains 3 of each value

Core material Ferrite

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

Terminations RoHS compliant matte tin over nickel over phos bronze (current production) or gold over nickel over phos bronze (prior production). Other terminations available at additional cost.

Weight 141 – 147 mg

Ambient temperature –40°C to +85°C with (40°C rise) Irms current.

Maximum part temperature +125°C (ambient + temp rise). [Derating](#).

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 600/7" reel, 2500/13" reel; Plastic tape: 12 mm wide, 0.35 mm thick, 8 mm pocket spacing, 3.25 mm pocket depth

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

Datasheet Directory

Part number ¹	Inductance ² ±20% (µH)	DCR max (Ohms)	SRF typ ³ (MHz)	Isat (A) ⁴			Irms (A) ⁵	
				10% drop	20% drop	30% drop	20°C rise	40°C rise
MSS5121-222ML_	2.2	0.050	120.0	1.86	2.10	2.30	2.1	2.9
MSS5121-332ML_	3.3	0.070	90.0	1.62	1.84	2.00	1.7	2.3
MSS5121-472ML_	4.7	0.095	80.0	1.38	1.54	1.66	1.4	1.9
MSS5121-562ML_	5.6	0.100	73.0	1.28	1.42	1.54	1.3	1.8
MSS5121-682ML_	6.8	0.110	65.0	1.10	1.28	1.38	1.2	1.6
MSS5121-822ML_	8.2	0.135	55.0	1.06	1.22	1.32	1.1	1.5
MSS5121-103ML_	10	0.160	47.0	0.98	1.08	1.18	0.99	1.3
MSS5121-123ML_	12	0.190	41.0	0.87	0.99	1.05	0.91	1.2
MSS5121-153ML_	15	0.280	37.0	0.76	0.85	0.90	0.82	1.1
MSS5121-183ML_	18	0.300	35.0	0.71	0.81	0.87	0.75	1.0
MSS5121-223ML_	22	0.330	32.0	0.68	0.77	0.82	0.71	0.97
MSS5121-273ML_	27	0.420	27.0	0.61	0.69	0.74	0.63	0.85
MSS5121-333ML_	33	0.480	25.0	0.58	0.64	0.67	0.56	0.76
MSS5121-393ML_	39	0.530	23.0	0.48	0.54	0.58	0.55	0.73
MSS5121-473ML_	47	0.750	22.0	0.44	0.51	0.54	0.46	0.63
MSS5121-563ML_	56	0.860	19.0	0.40	0.46	0.49	0.44	0.60
MSS5121-683ML_	68	1.00	18.0	0.37	0.42	0.46	0.41	0.56
MSS5121-823ML_	82	1.20	15.0	0.35	0.40	0.42	0.35	0.47
MSS5121-104ML_	100	1.40	13.5	0.28	0.32	0.35	0.33	0.44
MSS5121-124ML_	120	1.60	12.0	0.26	0.30	0.32	0.31	0.42
MSS5121-154ML_	150	2.10	9.0	0.26	0.29	0.31	0.29	0.38
MSS5121-184ML_	180	2.31	8.5	0.21	0.25	0.27	0.25	0.34
MSS5121-224ML_	220	3.10	7.5	0.21	0.24	0.25	0.22	0.29
MSS5121-274ML_	270	3.50	7.0	0.18	0.20	0.22	0.20	0.27
MSS5121-334ML_	330	4.00	6.5	0.17	0.19	0.20	0.19	0.26
MSS5121-394ML_	390	5.00	5.8	0.15	0.17	0.19	0.15	0.21

1. Please specify **termination** and **packaging** codes:

MSS5121-394MLC

Termination: L = RoHS compliant matte tin over nickel over phos bronze or 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: C = 7" machine-ready reel. EIA-481 embossed plastic tape (600 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 C instead.

D = 13" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (2500 parts per full reel).

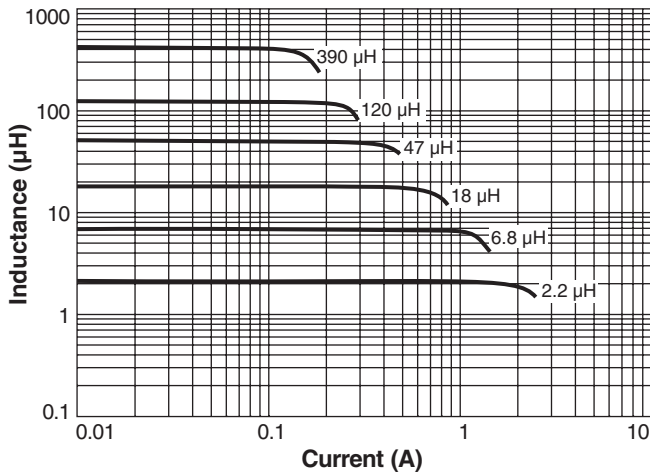
- Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc using Coilcraft SMD-A fixture in an Agilent/HP 4284A impedance analyzer.
- SRF measured using an Agilent/HP 8753D network analyzer and a Coilcraft SMD-D test fixture.
- DC current at 25°C that causes the specified inductance drop from its value without current. [Click for temperature derating information.](#)
- 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.](#)
- Electrical specifications at 25°C.

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

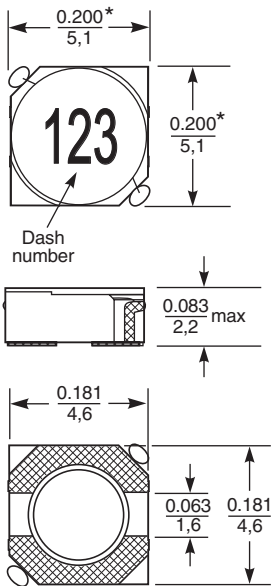
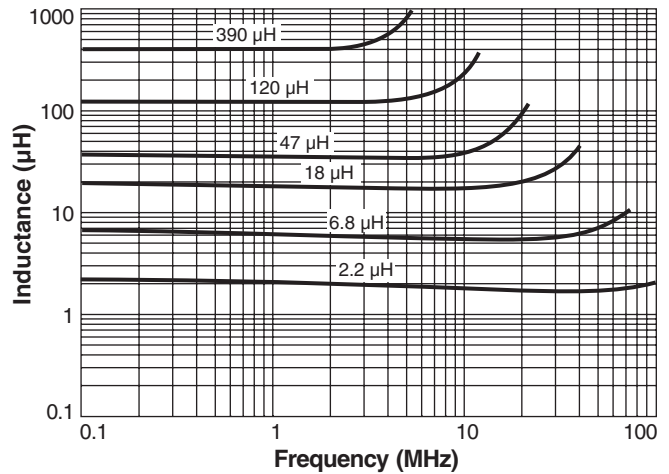


Shielded Power Inductors – MSS5121 Series

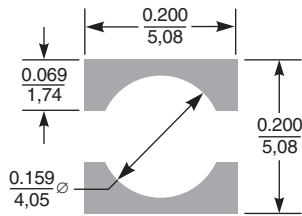
Typical L vs Current



Typical L vs Frequency



*Dimensions are of the case not including the termination. For maximum overall dimensions including the termination, add 0.035 in / 0,9 mm.



Recommended Land Pattern

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



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