

**NEW!**

# SMT Power Inductors – Series 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

**Terminations** RoHS compliant gold over nickel over phos bronze. Other terminations available at additional cost.

**Weight** 141 – 147 mg

**Ambient temperature** –40°C to +85°C with I rms current, +85°C to +125°C with derated current

**Storage temperature** Component: –40°C to +125°C.  
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** Only pure water or alcohol recommended

Part number <sup>1</sup>	Inductance <sup>2</sup> ±20% (µH)	DCR max (Ohms)	SRF typ <sup>3</sup> (MHz)	Isat (A) <sup>4</sup>			Irms (A) <sup>5</sup>	
				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:

MSS5121-394ML C

**Termination:** L = RoHS compliant 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).

2. Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc using Coilcraft SMD-A fixture in an Agilent/HP 4284A impedance analyzer.
3. SRF measured using an Agilent/HP 8753D network analyzer and a Coilcraft SMD-D test fixture.
4. DC current at which the inductance drops the specified amount from its value without current.
5. Current that causes the specified temperature rise for 25°C ambient.
6. Electrical specifications at 25°C.  
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

## Coilcraft®

Specifications subject to change without notice.  
Please check our website for latest information.

Document 495-1 Revised 10/20/09

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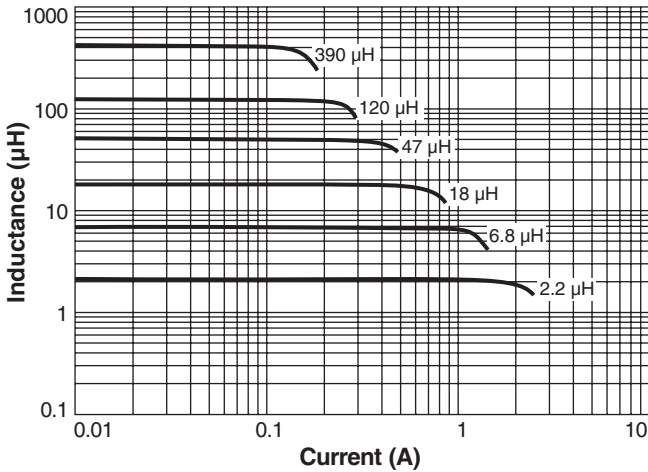
E-mail [info@coilcraft.com](mailto:info@coilcraft.com) Web <http://www.coilcraft.com>



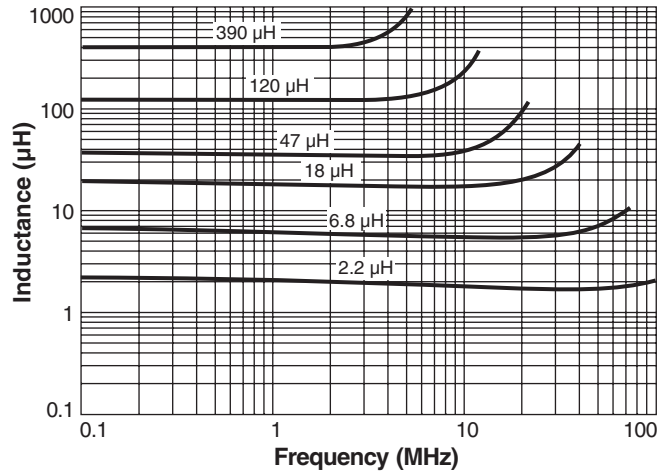
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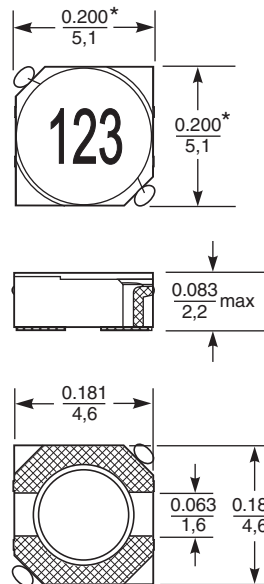
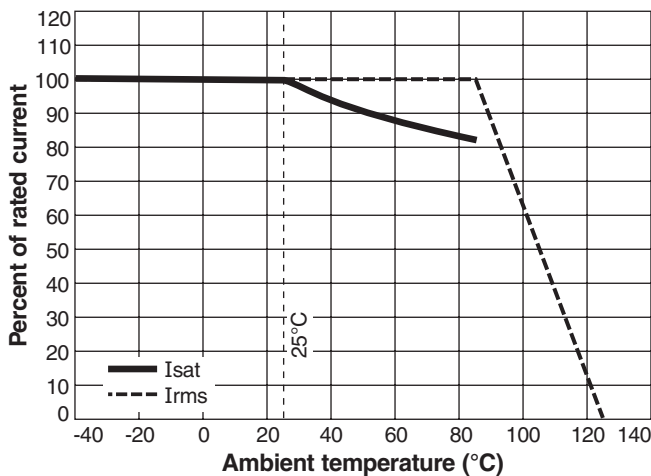
## Typical L vs Current



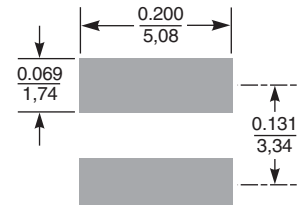
## Typical L vs Frequency



## Current Derating



\*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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Document 495-2 Revised 10/20/09

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