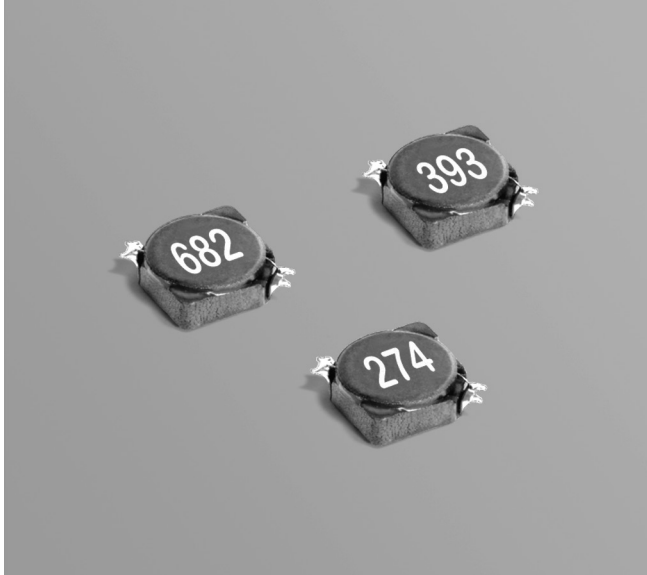




# Shielded Power Inductors – MSS5121



- 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](http://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)

**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](#).

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:

MSS5121-394MLC

**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). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

B = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to C.

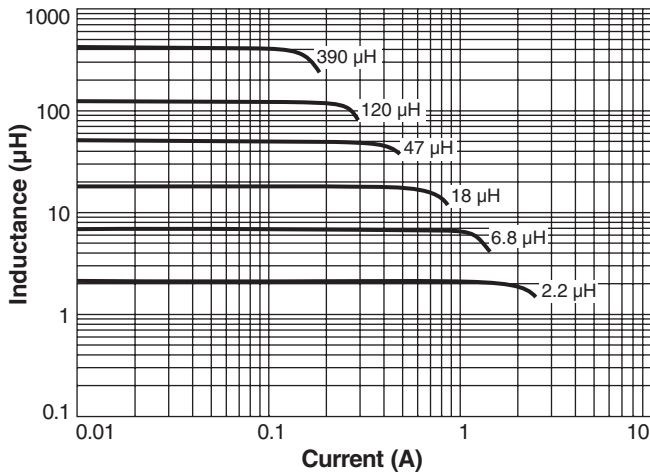
D = 13" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (2500 parts per full reel).

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 25°C that causes the specified inductance drop from its value without current.  
[Click for temperature derating information.](#)
5. 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.](#)
6. Electrical specifications at 25°C.  
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

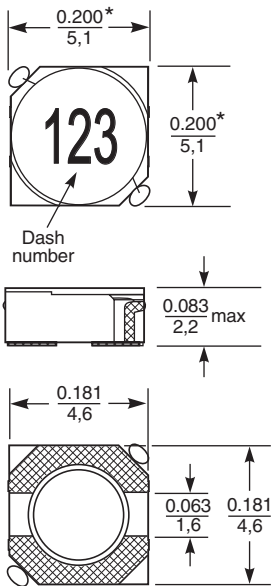
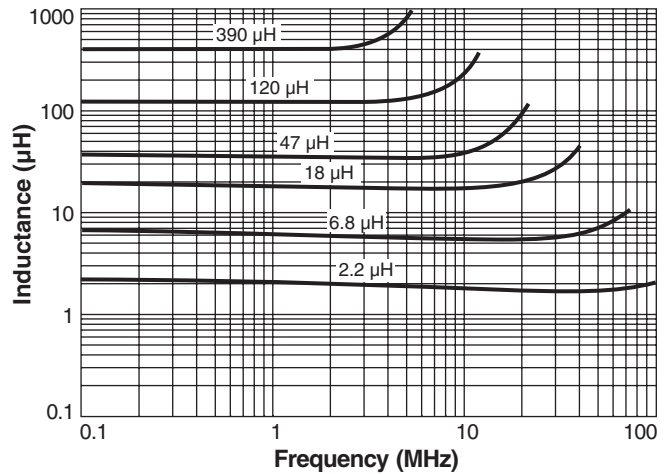


# Shielded Power Inductors – MSS5121 Series

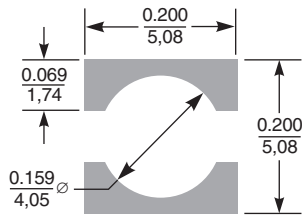
## Typical L vs Current



## 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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