SMT Power Inductors – MSS4020



- 4 × 4 mm footprint; 2 mm high shielded inductors
- Low DCR and excellent current handling

Designer's Kit C381 contains 3 each of all values.
Core material Ferrite
Core and winding loss See www.coilcraft.com/coreloss
Terminations RoHS compliant matte tin over nickel over phos bronze. Other terminations available at additional cost.
Weight: 81.0 – 87.8 mg
Ambient temperature –40°C to +85°C with Irms 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 2000/13″ reel; Plastic tape: 12 mm wide, 0.3 mm thick, 8 mm pocket spacing, 2.2 mm pocket depth
PCB washing Only pure water or alcohol recommended

Part number[1]	Inductance[2] ±20% (µH)	DCR max (Ohms)	SRF typ[3] (MHz)	Isat (A)[4] 10% drop	20% drop	30% drop	Irms (A)[5] 20°C rise	40°C rise
MSS4020-332ML_	3.3	0.085	109.0	0.94	1.10	1.20	1.25	1.60
MSS4020-472ML_	4.7	0.115	93.0	0.73	0.87	0.95	1.10	1.50
MSS4020-562ML_	5.6	0.130	85.0	0.70	0.82	0.89	1.05	1.40
MSS4020-682ML_	6.8	0.175	75.0	0.65	0.76	0.83	0.96	1.30
MSS4020-822ML_	8.2	0.190	70.0	0.61	0.71	0.77	0.89	1.20
MSS4020-103ML_	10	0.210	63.0	0.50	0.60	0.67	0.86	1.15
MSS4020-123ML_	12	0.280	55.0	0.47	0.55	0.60	0.75	1.00
MSS4020-153ML_	15	0.330	50.0	0.45	0.53	0.58	0.71	0.95
MSS4020-183ML_	18	0.360	42.0	0.40	0.47	0.52	0.67	0.85
MSS4020-223ML_	22	0.480	38.0	0.39	0.45	0.49	0.60	0.80
MSS4020-273ML_	27	0.560	35.0	0.30	0.36	0.39	0.54	0.71
MSS4020-333ML_	33	0.620	28.0	0.29	0.34	0.38	0.50	0.67
MSS4020-393ML_	39	0.820	30.0	0.28	0.32	0.36	0.44	0.58
MSS4020-473ML_	47	0.930	28.0	0.25	0.28	0.31	0.42	0.56
MSS4020-563ML_	56	1.200	22.0	0.23	0.27	0.29	0.35	0.47
MSS4020-683ML_	68	1.330	18.0	0.20	0.24	0.26	0.32	0.43
MSS4020-823ML_	82	1.500	17.0	0.18	0.21	0.23	0.30	0.40
MSS4020-104ML_	100	2.100	15.0	0.15	0.18	0.20	0.27	0.36

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

MSS4020-104M L D

Termination: **L** = RoHS compliant matte tin 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: **D** = 13″ machine-ready reel. EIA-481 embossed plastic tape (2000 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 measured at 100 kHz, 0.1 Vrms, 0 Adc using a Coilcraft SMD-A fixture in an Agilent/HP 4263B LCR meter or equivalent.
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 from 25°C ambient.
6. Electrical specifications at 25°C.

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

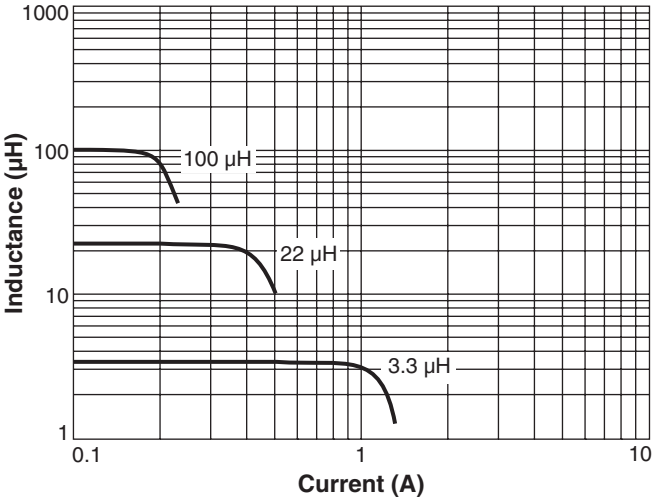
1102 Silver Lake Road Cary, Illinois 60013 **Phone** 847/639-6400 **Fax** 847/639-1469
E-mail info@coilcraft.com **Web** http://www.coilcraft.com

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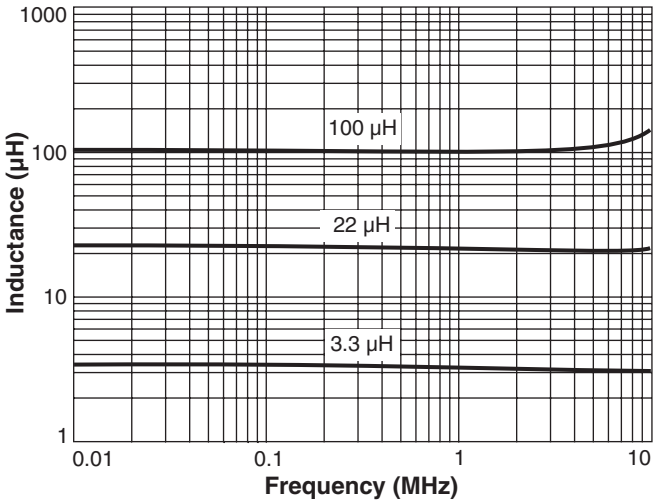
SMT Power Inductors – MSS4020

SPICE models
ON OUR WEB SITE OR CD

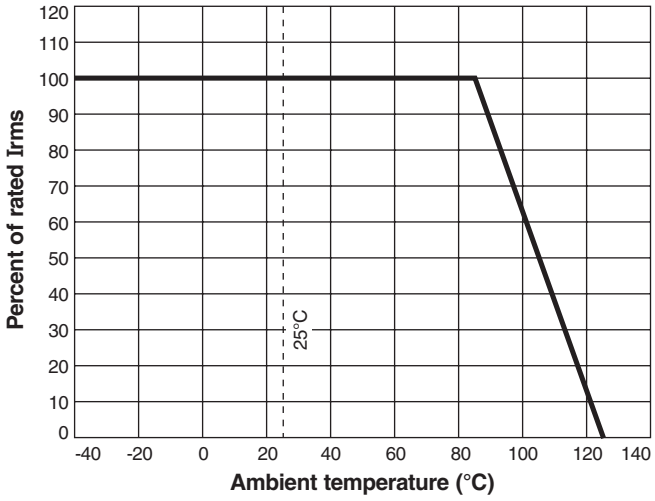
Typical L vs Current

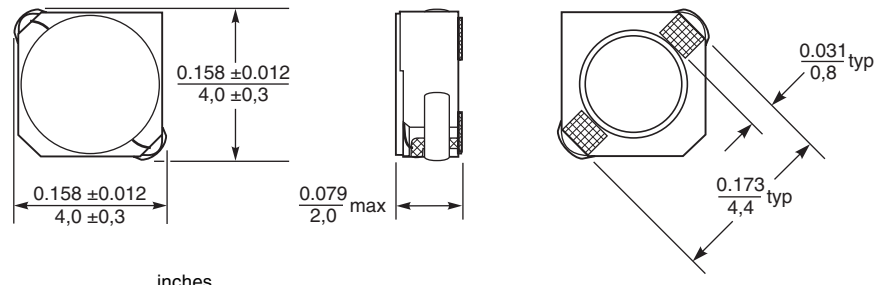


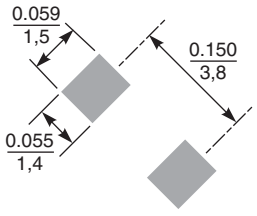
Typical L vs Frequency



Current Derating







Recommended Land Pattern

Dimensions are in inches / mm

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