Shielded 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 (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 2000/13″ reel; Plastic tape: 12 mm wide, 0.3 mm thick, 8 mm pocket spacing, 2.2 mm pocket depth
PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

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	31.0	0.29	0.34	0.38	0.50	0.67
MSS4020-393ML_	39	0.820	28.5	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:

MSS4020-104MLD

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 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.

Coilcraft®
www.coilcraft.com

US +1-847-639-6400 sales@coilcraft.com
UK +44-1236-730595 sales@coilcraft-europe.com
Taiwan +886-2-2264 3646 sales@coilcraft.com.tw
China +86-21-6218 8074 sales@coilcraft.com.cn
Singapore + 65-6484 8412 sales@coilcraft.com.sg

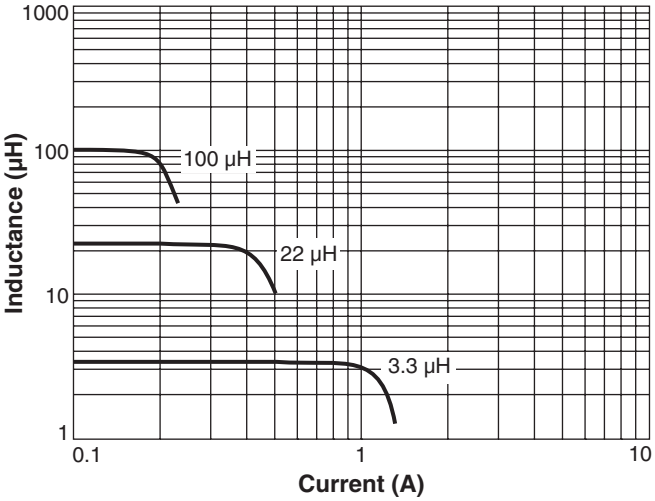
Document 329-1 Revised 09/02/15

© Coilcraft Inc. 2015
This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.

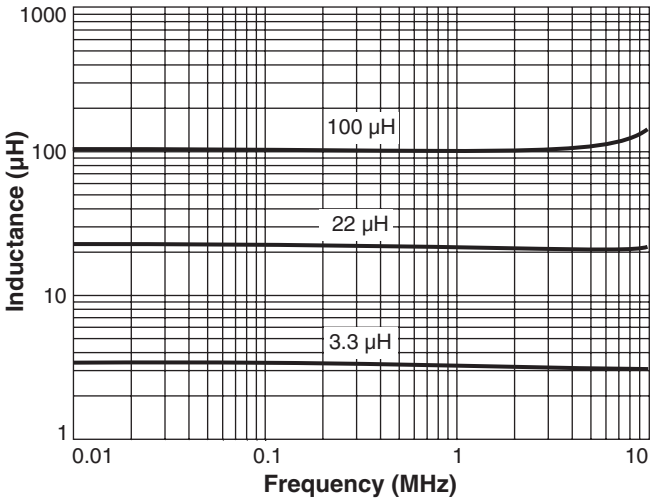
Shielded Power Inductors – MSS4020

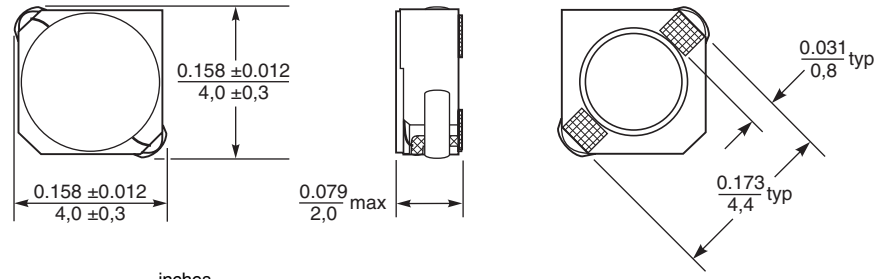
SPICE models
ON OUR WEB SITE

Typical L vs Current



Typical L vs Frequency





Recommended Land Pattern

Dimensions are in inches / mm

Coilcraft®
www.coilcraft.com

US +1-847-639-6400 sales@coilcraft.com
UK +44-1236-730595 sales@coilcraft-europe.com
Taiwan +886-2-2264 3646 sales@coilcraft.com.tw
China +86-21-6218 8074 sales@coilcraft.com.cn
Singapore + 65-6484 8412 sales@coilcraft.com.sg

Document 329-2 Revised 09/02/15

© Coilcraft Inc. 2015
This product may not be used in medical or high risk applications without prior Coilcraft approval.
Specification subject to change without notice.
Please check web site for latest information.