



SMT Power Inductors - MSS4020 Series



- High efficiency in a rugged, low cost, low profile part
- Magnetic shielding allows high density mounting
- 20 inductance values from 3.3 to 100 μH

Designer's Kit C381 contains 3 each of all values.

Core material Ferrite

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 $+85^{\circ}\text{C}$ with I_{rms} current, $+85^{\circ}\text{C}$ to $+100^{\circ}\text{C}$ with derated current

Storage temperature Component: -55°C to $+85^{\circ}\text{C}$.
Packaging: -55°C to $+80^{\circ}\text{C}$

Resistance to soldering heat Max three 40 second reflows at $+260^{\circ}\text{C}$, parts cooled to room temperature between cycles

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at $<30^{\circ}\text{C}$ / 85% relative humidity)

Mean Time Between Failures (MTBF) 26,315,789 hours

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	L $\pm 20\%$ ² (μH)	DCR max (Ohms)	SRF ³ typ (MHz)	Isat ⁴ (A)	Irms ⁵ (A)
MSS4020-332ML_	3.3	0.085	109.0	1.10	1.10
MSS4020-472ML_	4.7	0.115	93.0	0.80	0.80
MSS4020-562ML_	5.6	0.130	85.0	0.73	0.73
MSS4020-682ML_	6.8	0.175	75.0	0.66	0.66
MSS4020-822ML_	8.2	0.190	70.0	0.60	0.60
MSS4020-103ML_	10	0.210	63.0	0.54	0.54
MSS4020-123ML_	12	0.280	55.0	0.50	0.50
MSS4020-153ML_	15	0.330	50.0	0.44	0.44
MSS4020-183ML_	18	0.360	42.0	0.40	0.40
MSS4020-223ML_	22	0.480	38.0	0.36	0.36
MSS4020-273ML_	27	0.560	35.0	0.32	0.32
MSS4020-333ML_	33	0.620	28.0	0.30	0.30
MSS4020-393ML_	39	0.820	30.0	0.27	0.27
MSS4020-473ML_	47	0.930	28.0	0.25	0.25
MSS4020-563ML_	56	1.200	22.0	0.23	0.23
MSS4020-683ML_	68	1.330	18.0	0.20	0.20
MSS4020-823ML_	82	1.500	17.0	0.19	0.19
MSS4020-104ML_	100	2.100	15.0	0.17	0.17

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

MSS4020-104ML 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 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 20% (typ) from its value without current.

5. Current that causes a 15°C (max) temperature rise from 25°C ambient.

6. Electrical specifications at 25°C.

See Qualification Standards section for environmental and test data.

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

SPICE models
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Coilcraft[®]

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Please check our website for latest information.

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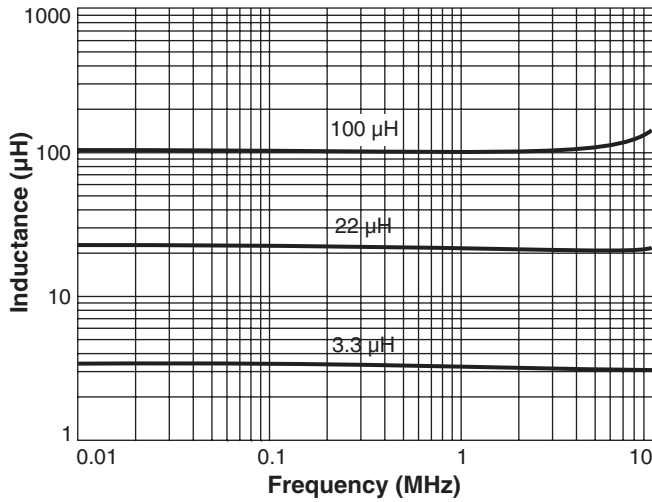
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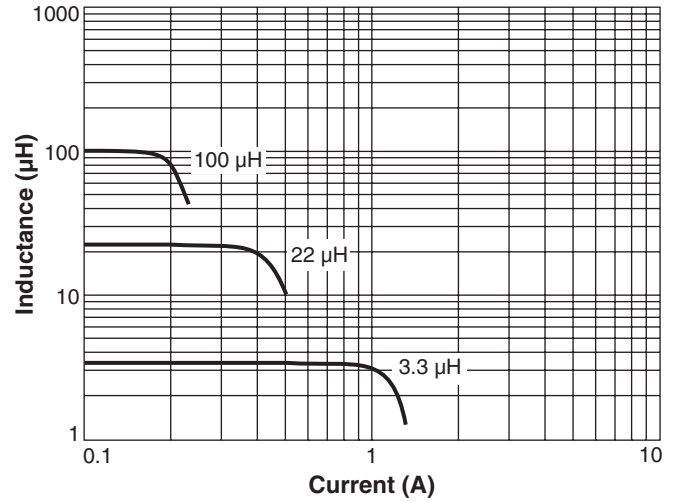


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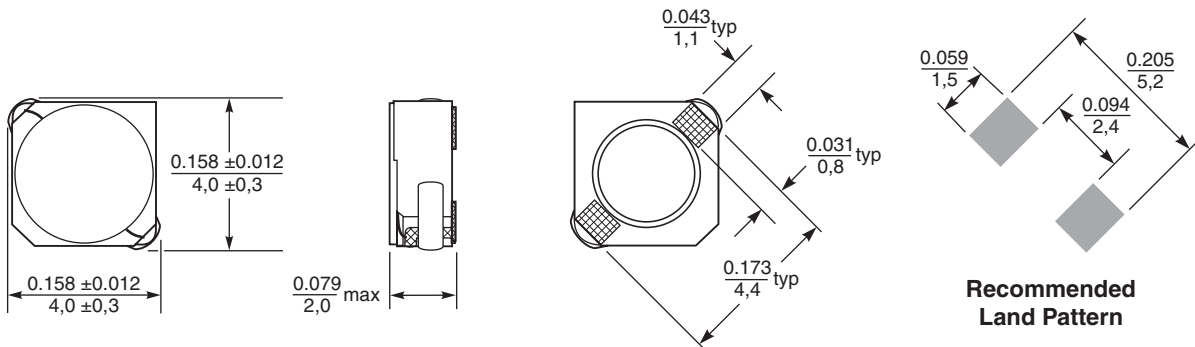
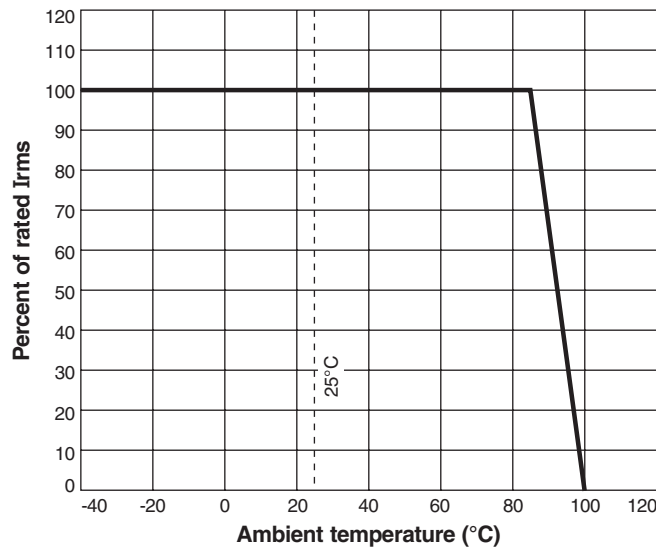
Typical L vs Frequency



Typical L vs Current



Current Derating



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

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