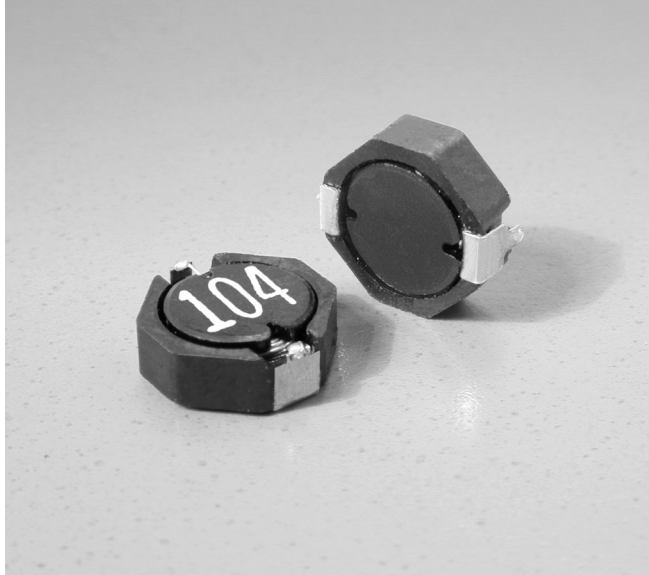




Shielded Power Inductors – MOS6020



- 6.0 × 7.1 mm footprint; 2.4 mm high shielded inductors
- Custom versions up to 4.7 mH are available.

Designer's Kit C359 contains 3 of each value

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 0.21 g

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 500 per 7" reel; 2000 per 13" reel; Plastic tape: 16 mm wide, 0.3 mm thick, 12 mm pocket spacing, 2.5 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			Irms (A) ⁵	
				10% drop	20% drop	30% drop	20°C rise	40°C rise
MOS6020-222ML_	2.2	0.035	110	2.86	3.26	3.56	3.0	4.1
MOS6020-332ML_	3.3	0.046	85	1.90	2.28	2.46	2.6	3.6
MOS6020-472ML_	4.7	0.050	60	1.46	1.82	1.94	2.3	3.1
MOS6020-682ML_	6.8	0.078	55	1.32	1.56	1.72	1.9	2.7
MOS6020-822ML_	8.2	0.085	45	0.94	1.18	1.30	1.7	2.3
MOS6020-103ML_	10	0.092	36	0.79	0.95	1.06	1.6	2.2
MOS6020-153ML_	15	0.130	30	0.83	0.95	1.03	1.3	1.8
MOS6020-223ML_	22	0.182	22	0.79	0.92	0.97	1.0	1.4
MOS6020-333ML_	33	0.290	20	0.57	0.67	0.74	0.80	1.1
MOS6020-473ML_	47	0.420	16	0.45	0.56	0.62	0.50	0.7
MOS6020-683ML_	68	0.520	15	0.37	0.45	0.51	0.45	0.63
MOS6020-104ML_	100	0.800	13	0.35	0.40	0.44	0.40	0.56
MOS6020-154ML_	150	1.28	10	0.26	0.30	0.33	0.35	0.49
MOS6020-224ML_	220	2.00	8	0.22	0.26	0.28	0.30	0.42
MOS6020-334ML_	330	2.84	7	0.18	0.22	0.24	0.25	0.35
MOS6020-474ML_	470	4.40	5	0.15	0.17	0.19	0.22	0.29

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

MOS6020-104MLC

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: C = 7" machine-ready reel. EIA-481 embossed plastic tape (500 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 (2000 parts per full reel).

2. Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc using an Agilent/HP 4263B LCR meter or equivalent.

3. SRF measured using Agilent/HP 8753D network analyzer.

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.



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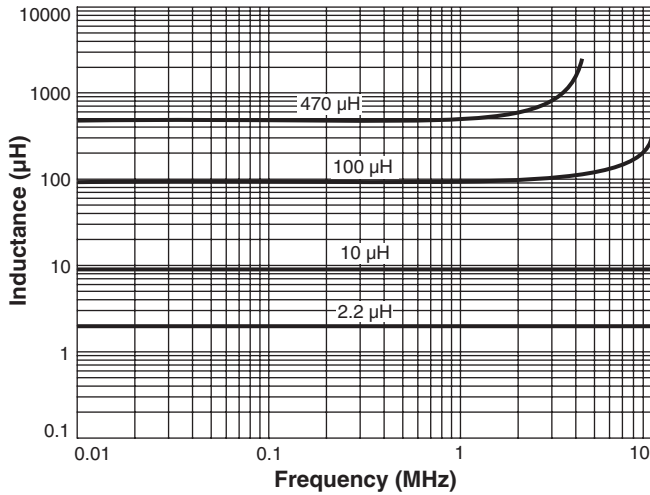
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This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.

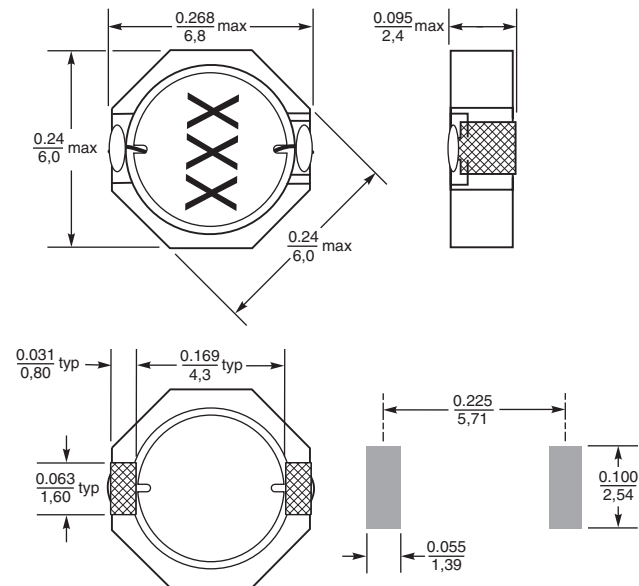
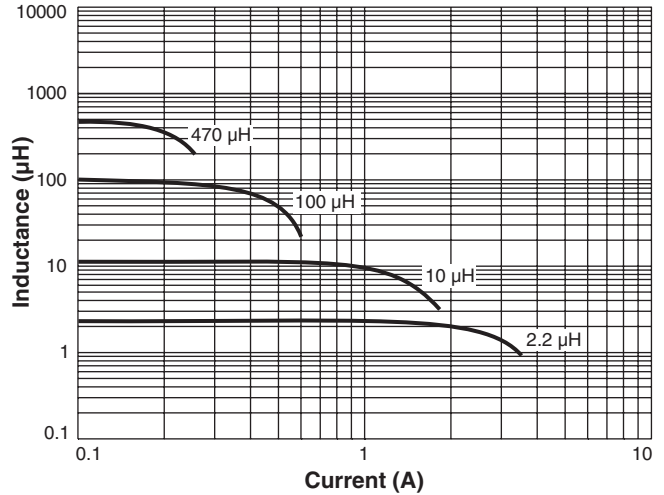


Shielded Power Inductors – MOS6020

Typical L vs Frequency



Typical L vs Current



Recommended Land Pattern

Dimensions are in $\frac{\text{inches}}{\text{mm}}$