

Shielded Power Inductors – MSS6122



- 6.1 × 6.1 mm footprint; 2.2 mm high shielded inductors
- Low DCR and excellent current handling

Designer's Kit C363 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 (current production) or gold over nickel over phos bronze (prior production). Other terminations available at additional cost.

Weight 0.19 – 0.23 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 500/7" reel, 1500/13" reel; Plastic tape: 16 mm wide, 0.3 mm thick, 12 mm pocket spacing, 2.1 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
MSS6122-472ML_	4.7	0.065	65.0	1.44	1.66	1.82	1.60	2.30
MSS6122-562ML_	5.6	0.083	60.0	1.22	1.46	1.60	1.50	2.10
MSS6122-682ML_	6.8	0.100	48.0	1.18	1.36	1.50	1.40	2.00
MSS6122-822ML_	8.2	0.120	44.0	1.12	1.24	1.36	1.30	1.80
MSS6122-103ML_	10	0.150	42.0	0.98	1.10	1.20	1.20	1.70
MSS6122-123ML_	12	0.176	40.0	0.97	1.06	1.14	1.13	1.60
MSS6122-153ML_	15	0.210	38.0	0.85	0.97	1.04	1.06	1.50
MSS6122-183ML_	18	0.280	35.0	0.78	0.89	0.97	0.99	1.40
MSS6122-223ML_	22	0.310	32.0	0.64	0.75	0.82	0.92	1.30
MSS6122-273ML_	27	0.350	26.0	0.62	0.71	0.77	0.85	1.20
MSS6122-333ML_	33	0.460	22.0	0.60	0.69	0.74	0.77	1.10
MSS6122-393ML_	39	0.540	19.0	0.50	0.59	0.64	0.70	1.00
MSS6122-473ML_	47	0.680	18.0	0.47	0.55	0.60	0.63	0.90
MSS6122-563ML_	56	0.740	17.0	0.43	0.50	0.54	0.56	0.80
MSS6122-683ML_	68	1.000	16.0	0.40	0.46	0.50	0.49	0.70
MSS6122-823ML_	82	1.200	15.0	0.37	0.43	0.46	0.42	0.60
MSS6122-104ML_	100	1.370	12.5	0.32	0.37	0.40	0.35	0.50

1. Please specify **termination** and **packaging** codes:

MSS6122-104MLC

Termination: L = RoHS compliant matte tin over nickel over phos bronze (current production) or gold over nickel over phos bronze (prior production)

Special order:

T = RoHS tin-silver-copper (95.5/4/0.5) over gold over nickel over phos bronze or

S = non-RoHS tin-lead (63/37) over gold over nickel over phos bronze.

Packaging: C = 7" machine-ready reel EIA-481 embossed plastic tape (500 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 (1500 per reel 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 an Agilent/HP 4191A or equivalent.
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.

SPICE models

ON OUR WEB SITE OR CD



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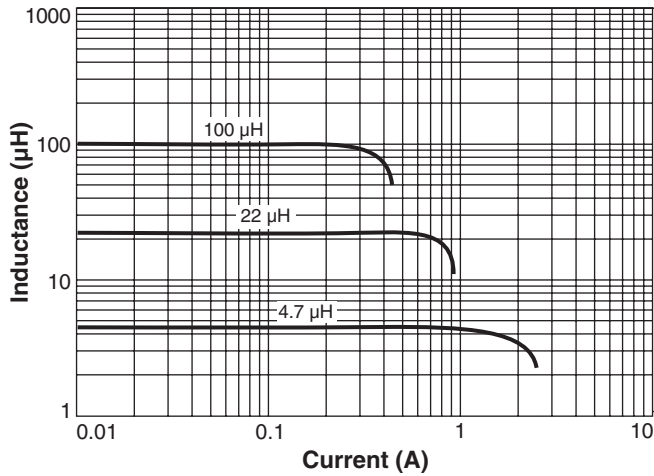
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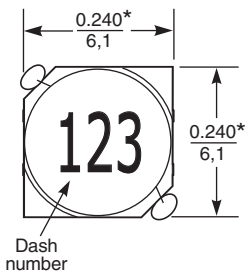
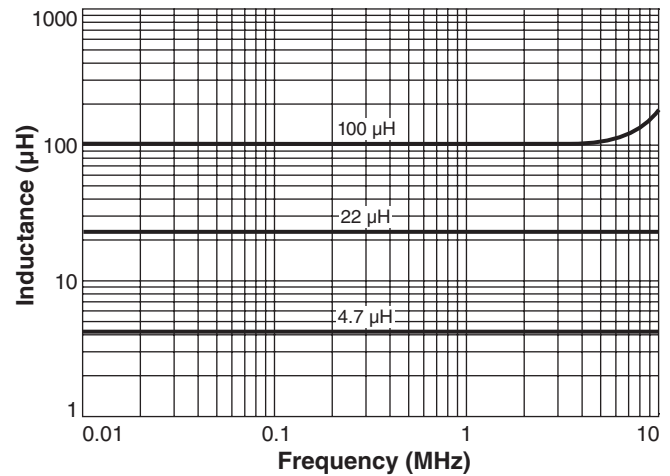


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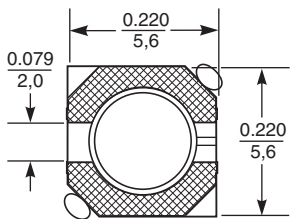
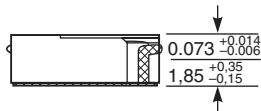
Typical L vs Current



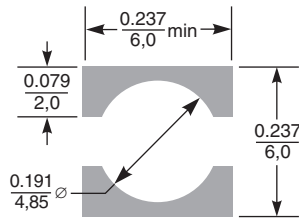
Typical L vs Frequency



*Dimensions are of the case not including the termination. For maximum overall dimensions including the termination, add 0.016 in / 0,4 mm.



Recommended Land Pattern



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



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