



# 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](http://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 <sup>1</sup>	Inductance <sup>2</sup> ±20% (μH)	DCR max (Ohms)	SRF typ <sup>3</sup> (MHz)	Isat (A) <sup>4</sup>			Irms (A) <sup>5</sup>	
				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).

- Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc using an Agilent/HP 4263B LCR meter or equivalent.
- SRF measured using an Agilent/HP 4191A or equivalent.
- DC current at 25°C that causes the specified inductance drop from its value without current. [Click for temperature derating information.](#)
- 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.](#)
- 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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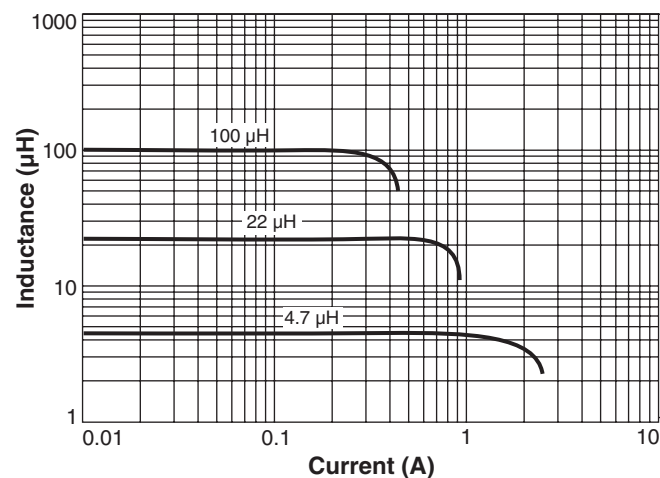
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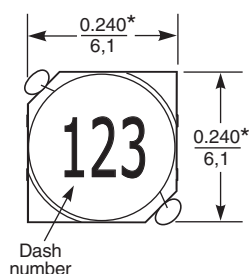
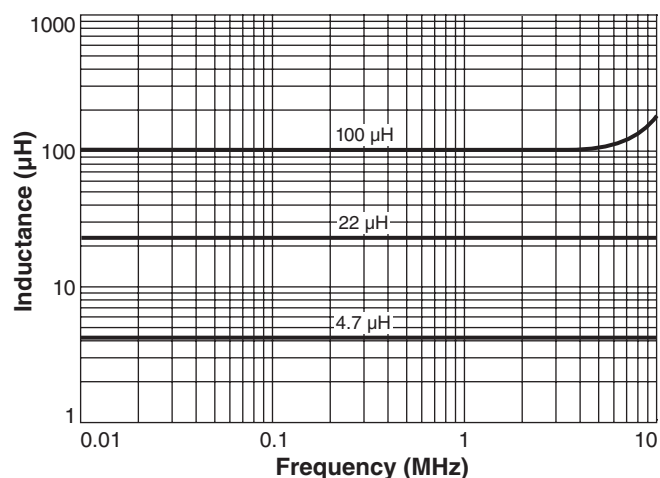


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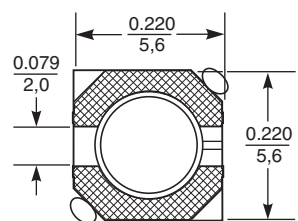
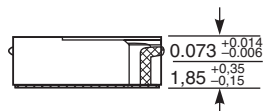
## Typical L vs Current



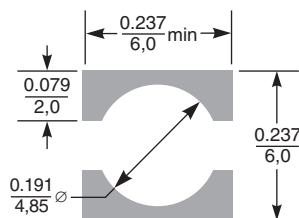
## Typical L vs Frequency



\*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  $\frac{\text{inches}}{\text{mm}}$

# Mouser Electronics

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