

# Shielded Power Inductors MSS1812T



- 7 inductance values from 100  $\mu$ H to 1000  $\mu$ H
- Very low DCR and excellent current handling
- AEC-Q200 Grade 1 ( $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ )
- **Designer's Kit C499** contains 3 of each part

**Core material** Ferrite

**Core and winding loss** See [www.coilcraft.com/coreloss](http://www.coilcraft.com/coreloss)

**Environmental** RoHS compliant, halogen free

**Terminations** RoHS compliant matte tin over nickel over phos bronze. Other terminations available at additional cost.

**Weight:** 11.82 – 13.26 g

**Operating voltage** 400 V max

**Ambient temperature**  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$  with ( $40^{\circ}\text{C}$  rise) Irms current.

**Maximum part temperature**  $+165^{\circ}\text{C}$  (ambient + temp rise). [Derating](#).

**Storage temperature** Component:  $-40^{\circ}\text{C}$  to  $+165^{\circ}\text{C}$ .

Tape and reel packaging:  $-40^{\circ}\text{C}$  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)

**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> ( $\mu$ H)	DCR (Ohms) <sup>3</sup>		SRF typ <sup>4</sup> (MHz)	Isat (A) <sup>5</sup>			Irms (A) <sup>6</sup>	
		typ	max		10% drop	20% drop	30% drop	20°C rise	40°C rise
MSS1812T-104MED	100 $\pm 20\%$	0.045	0.052	3.3	5.2	5.8	6.0	2.87	4.35
MSS1812T-154KED	150 $\pm 10\%$	0.057	0.066	2.8	4.2	4.6	4.8	2.50	3.80
MSS1812T-224KED	220 $\pm 10\%$	0.086	0.098	2.3	3.6	3.8	4.0	2.09	3.16
MSS1812T-334KED	330 $\pm 10\%$	0.13	0.15	1.8	2.9	3.1	3.1	1.68	2.55
MSS1812T-474KED	470 $\pm 10\%$	0.20	0.23	1.35	2.4	2.7	2.8	1.39	2.10
MSS1812T-684KED	680 $\pm 10\%$	0.24	0.27	1.33	2.0	2.2	2.3	1.24	1.88
MSS1812T-105KED	1000 $\pm 10\%$	0.45	0.52	0.85	1.7	1.8	1.8	0.93	1.40

1. When ordering, please specify **termination** code:

MSS1812T-105KED

**Termination: E** = RoHS compliant matte tin over nickel over phos bronze.  
Special order:

**Q** = RoHS tin-silver-copper (95.5/4/0.5) or  
**P** = non-RoHS tin-lead (63/37).

**Packaging: D** = 13" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (175 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

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. DCR measured on a micro-ohmmeter and a Coilcraft CCF858 test fixture.

4. SRF measured using an Agilent/HP 8753D network analyzer and a Coilcraft SMD-D test fixture.

5. DC current at  $25^{\circ}\text{C}$  that causes the specified inductance drop from its value without current.

[Click for temperature derating information..](#)

6. Current that causes the specified temperature rise from  $25^{\circ}\text{C}$  ambient. This information is for reference only and does not represent absolute maximum ratings. [Click for temperature derating information.](#)

7. Electrical specifications at  $25^{\circ}\text{C}$ .

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



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Document 1617-1 Revised 06/07/23

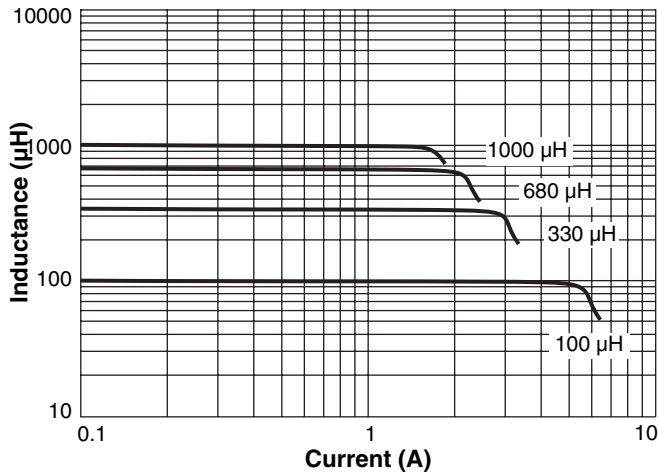
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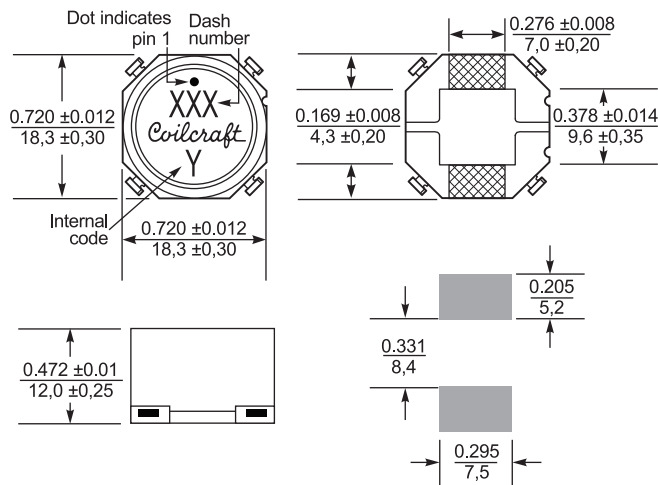
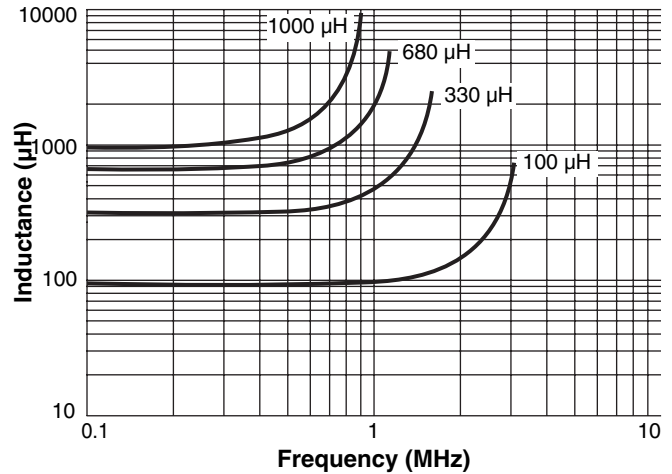


# Shielded Power Inductors – MSS1812T

## Typical L vs Current



## Typical L vs Frequency



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

### Recommended Land Pattern

**Packaging** 175/13" reel; Plastic tape: 44 mm wide, 0.5 mm thick, 28 mm pocket spacing, 12.4 mm pocket depth



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Document 1617-2 Revised 06/07/23

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