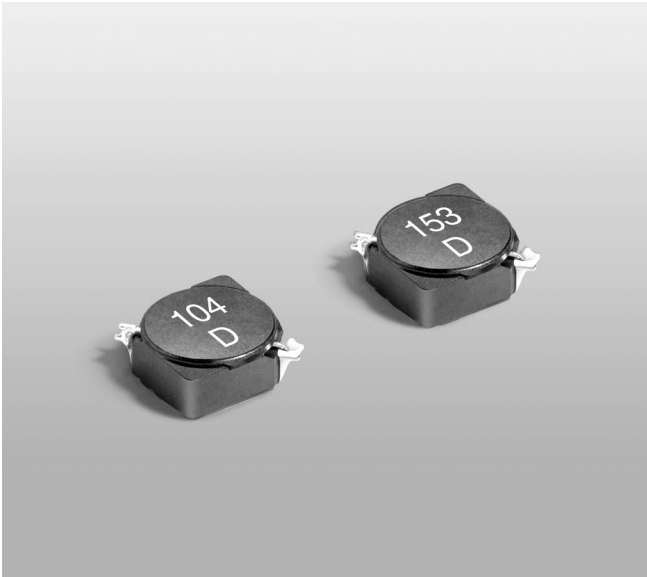




# Shielded Power Inductors – MSS7331



- 7.0 × 7.0 mm footprint; 3.1 mm high shielded inductors
- Low DCR and excellent current handling

**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. Other terminations available at additional cost.

**Weight** 0.48 – 0.51 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)

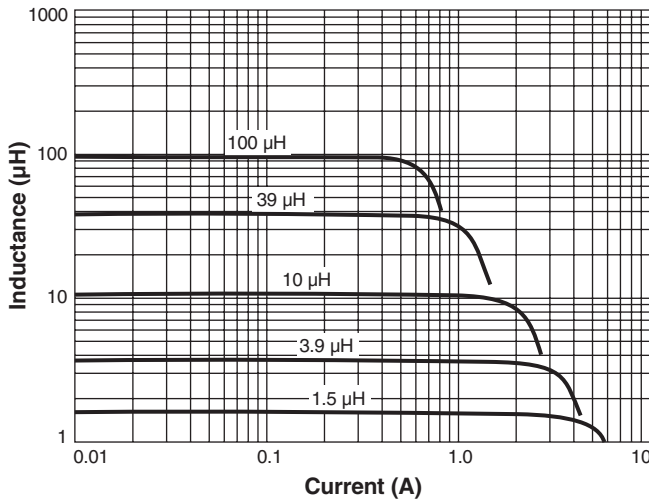
**Failures in Time (FIT) / Mean Time Between Failures (MTBF)**

38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

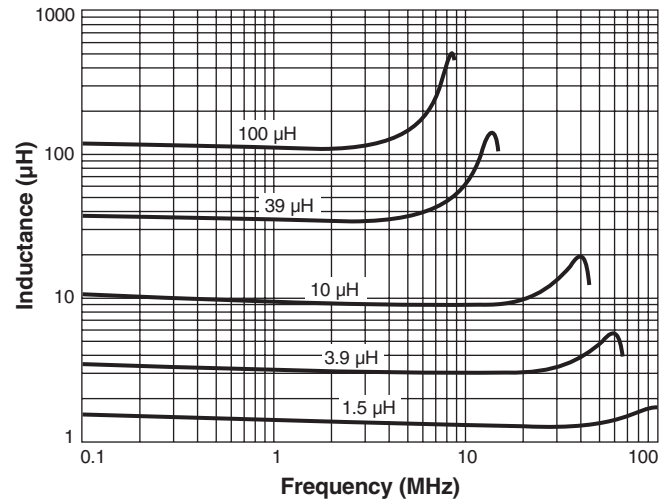
**Packaging** 350/7" reel, 1500/13" reel; Plastic tape: 16 mm wide, 0.40 mm thick, 12 mm pocket spacing, 3.7 mm pocket depth

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).

## Typical L vs Current



## Typical L vs Frequency





# Shielded Power Inductors – MSS7331

Part number <sup>1</sup>	Inductance <sup>2</sup> ( $\mu$ H)	DCR (Ohms)		SRF typ <sup>3</sup> (MHz)	Isat (A) <sup>4</sup>			Irms (A) <sup>5</sup>	
		typ	max		10% drop	20% drop	30% drop	20°C rise	40°C rise
MSS7331-152NL_	1.5 $\pm$ 30%	0.009	0.012	80.0	3.5	4.4	5.1	4.8	6.9
MSS7331-302NL_	3.0 $\pm$ 30%	0.014	0.020	55.0	2.3	3.0	3.5	4.2	6.0
MSS7331-392NL_	3.9 $\pm$ 30%	0.017	0.023	45.0	2.2	2.8	3.2	4.1	5.7
MSS7331-502ML_	5.0 $\pm$ 20%	0.022	0.030	40.0	2.0	2.4	2.8	3.3	4.5
MSS7331-602ML_	6.0 $\pm$ 20%	0.025	0.033	38.0	1.8	2.2	2.6	3.4	4.6
MSS7331-732ML_	7.3 $\pm$ 20%	0.035	0.045	35.0	1.8	2.2	2.5	2.8	3.8
MSS7331-862ML_	8.6 $\pm$ 20%	0.038	0.048	33.5	1.6	2.0	2.2	2.5	3.4
MSS7331-103ML_	10 $\pm$ 20%	0.046	0.052	30.0	1.4	1.7	1.9	2.4	3.2
MSS7331-123ML_	12 $\pm$ 20%	0.058	0.066	26.0	1.3	1.6	1.7	2.1	2.8
MSS7331-153ML_	15 $\pm$ 20%	0.067	0.075	24.0	1.2	1.4	1.6	2.0	2.7
MSS7331-183ML_	18 $\pm$ 20%	0.071	0.088	22.0	1.1	1.3	1.4	1.9	2.6
MSS7331-223ML_	22 $\pm$ 20%	0.095	0.113	21.0	0.98	1.2	1.3	1.6	2.2
MSS7331-273ML_	27 $\pm$ 20%	0.105	0.132	17.0	0.89	1.1	1.2	1.5	2.0
MSS7331-333ML_	33 $\pm$ 20%	0.123	0.150	16.0	0.80	0.97	1.1	1.4	1.9
MSS7331-393ML_	39 $\pm$ 20%	0.161	0.180	14.5	0.70	0.86	0.96	1.2	1.6
MSS7331-473ML_	47 $\pm$ 20%	0.180	0.215	12.5	0.67	0.80	0.89	1.2	1.6
MSS7331-563ML_	56 $\pm$ 20%	0.240	0.270	11.5	0.61	0.72	0.80	1.0	1.4
MSS7331-683ML_	68 $\pm$ 20%	0.273	0.300	10.5	0.55	0.66	0.74	0.92	1.2
MSS7331-823ML_	82 $\pm$ 20%	0.304	0.370	9.5	0.52	0.60	0.67	0.84	1.2
MSS7331-104ML_	100 $\pm$ 20%	0.419	0.495	8.5	0.45	0.54	0.61	0.79	1.1

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

## MSS7331-104MLC

**Termination:** L = RoHS compliant gold over nickel over phos bronze

### Special order:

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

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

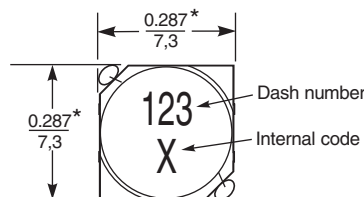
**Packaging:** **C** = 7" machine-ready reel. EIA-481 embossed plastic tape (350 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

**D** = 13" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (1500 parts per full reel).

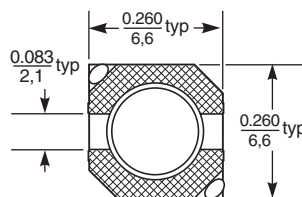
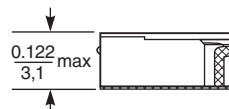
**B** = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to C.

- Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc using an Agilent/HP 4284A LCR meter or equivalent.
- For SRF >13 MHz, SRF measured using an Agilent/HP 8753D network Analyzer or equivalent. For SRF <13 MHz, SRF measured using an Agilent/HP 4192A 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.

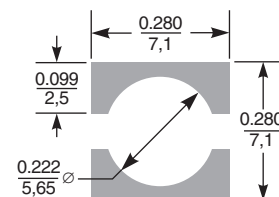
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



\*Dimensions are of the case not including the termination. For maximum overall dimensions including the termination, add 0.02 in / 0,51 mm.



Dimensions are in inches  
mm



**Recommended  
Land Pattern**



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