

# High Temp Power Inductors MSS1246H



- Designed for high ambient temperatures
- Magnetic shielding allows high density mounting.
- AEC-Q200 Grade 1 (-40°C to +125°C)

**Designer's Kit C510** contains 3 of each value

**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:** 2.24 – 2.49 g

**Operating voltage** 400 V max

**Ambient temperature** -40°C to +125°C with (40°C rise) Irms current.

**Maximum part temperature** +165°C (ambient + temp rise). [Derating](#).

**Storage temperature** Component: -40°C to +165°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)

**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> (µH)	DCR <sup>3</sup> (mOhms) max	SRF typ <sup>4</sup> (MHz)	Isat (A) <sup>5</sup> (typ)			Irms (A) <sup>6</sup>	
				10% drop	20% drop	30% drop	20°C rise	40°C rise
MSS1246H-102MED	1.0 ±20%	6.0	120.0	16.50	18.20	19.60	6.80	9.70
MSS1246H-152MED	1.5 ±20%	6.6	85.0	12.30	14.20	15.50	6.20	9.00
MSS1246H-222MED	2.2 ±20%	8.6	68.0	10.10	11.80	13.00	5.50	7.80
MSS1246H-332MED	3.3 ±20%	12.0	55.0	8.30	9.80	10.70	4.70	6.60
MSS1246H-422MED	4.2 ±20%	13.5	46.0	7.80	8.80	9.50	4.30	6.20
MSS1246H-562MED	5.6 ±20%	17.5	45.0	6.80	7.60	8.30	3.80	5.40
MSS1246H-682MED	6.8 ±20%	19.5	38.0	6.00	6.90	7.50	3.70	5.20
MSS1246H-822MED	8.2 ±20%	25.5	33.0	5.20	6.10	6.60	3.20	4.50
MSS1246H-103MED	10 ±20%	28	30.0	4.80	5.70	6.10	3.00	4.30
MSS1246H-123MED	12 ±20%	30	28.0	4.30	5.20	5.70	2.91	4.10
MSS1246H-153MED	15 ±20%	46	22.0	3.90	4.50	4.80	2.38	3.35
MSS1246H-183MED	18 ±20%	49	21.0	3.60	4.20	4.50	2.28	3.24
MSS1246H-223MED	22 ±20%	60	20.0	3.20	3.80	4.10	2.05	2.83
MSS1246H-273MED	27 ±20%	67	18.0	3.00	3.40	3.70	1.91	2.70
MSS1246H-333MED	33 ±20%	78	15.0	2.60	3.00	3.30	1.73	2.46
MSS1246H-393MED	39 ±20%	96	13.0	2.40	2.80	3.00	1.58	2.18
MSS1246H-473KED	47 ±10%	105	12.5	2.20	2.60	2.80	1.51	2.12
MSS1246H-563KED	56 ±10%	135	11.0	2.00	2.30	2.60	1.28	1.84
MSS1246H-683KED	68 ±10%	150	10.0	1.80	2.10	2.30	1.21	1.73
MSS1246H-823KED	82 ±10%	178	9.0	1.60	1.90	2.10	1.12	1.59
MSS1246H-104KED	100 ±10%	225	8.0	1.50	1.80	1.90	1.01	1.43
MSS1246H-124KED	120 ±10%	259	7.5	1.40	1.60	1.80	0.96	1.35
MSS1246H-154KED	150 ±10%	310	6.8	1.20	1.40	1.60	0.88	1.23
MSS1246H-184KED	180 ±10%	392	6.0	1.10	1.30	1.40	0.76	1.07
MSS1246H-224KED	220 ±10%	450	5.3	1.00	1.20	1.30	0.72	1.02
MSS1246H-274KED	270 ±10%	520	4.8	0.92	1.10	1.20	0.68	0.95
MSS1246H-334KED	330 ±10%	670	4.3	0.84	0.97	1.10	0.58	0.82
MSS1246H-394KED	390 ±10%	770	4.0	0.78	0.89	0.97	0.55	0.77
MSS1246H-474KED	470 ±10%	970	3.8	0.70	0.81	0.88	0.48	0.67
MSS1246H-564KED	560 ±10%	1130	3.6	0.63	0.74	0.81	0.45	0.63
MSS1246H-684KED	680 ±10%	1310	3.2	0.58	0.68	0.73	0.42	0.59
MSS1246H-824KED	820 ±10%	1640	2.6	0.52	0.61	0.67	0.37	0.52
MSS1246H-105KED	1000 ±10%	1900	2.3	0.48	0.56	0.60	0.35	0.49

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

**MSS1246H-105KED**

**Termination:** E=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).

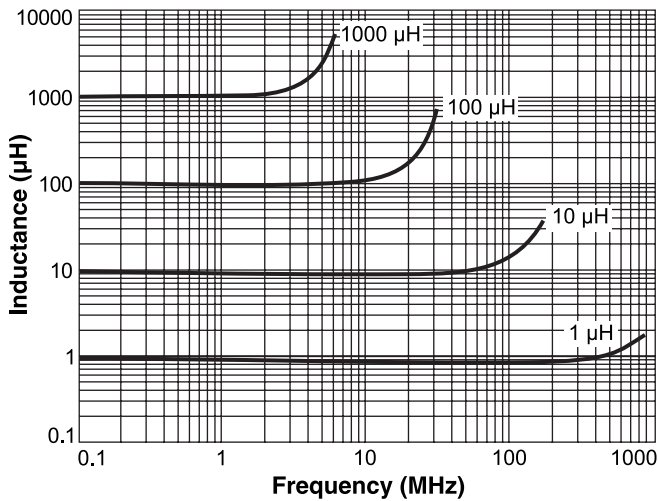
**Packaging:** D=13" machine-ready reel. EIA-481 embossed plastic tape (800 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

- 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.
- DCR measured on a micro-ohmmeter and a Coilcraft CCF858 test fixture.
- SRF measured using an Agilent/HP 8753D network analyzer and a Coilcraft SMD-D test fixture.
- 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.

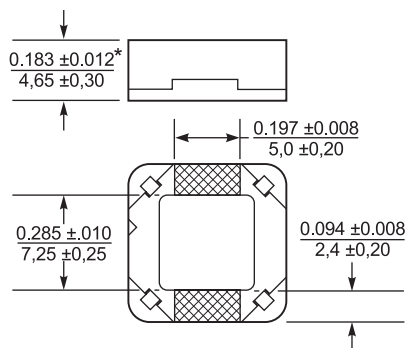
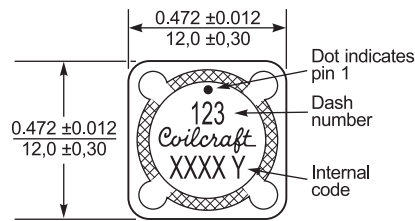
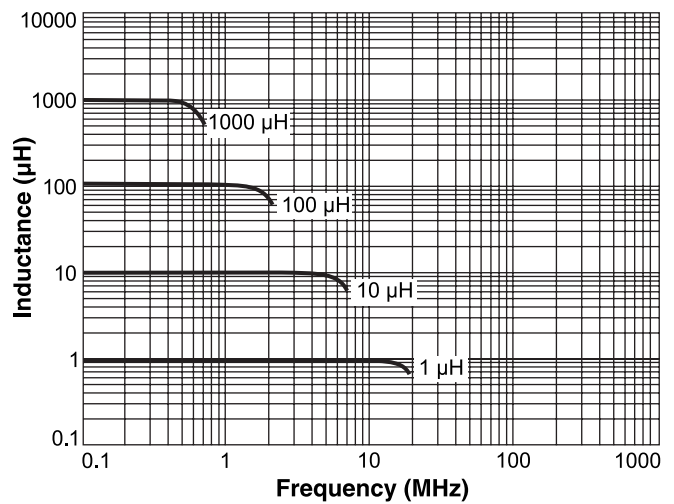


# Shielded Power Inductors – MSS1246H

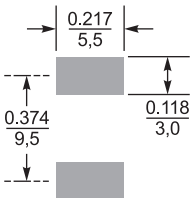
## Typical L vs Frequency



## Typical L vs Current



### Recommended Land Pattern



\* For optional tin-lead and tin-silver-copper terminations, dimensions are for the mounted part. Dimensions before mounting can be an additional 0.012 inch (0.3 mm).

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

**Packaging** 800/13" reel; Plastic tape: 24 mm wide, 0.35 mm thick, 16 mm pocket spacing, 5.3 mm pocket depth



**US** +1-847-639-6400 sales@coilcraft.com  
**UK** +44-1236-730595 sales@coilcraft-europe.com  
**Taiwan** +886-2-2264 3646 sales@coilcraft.com.tw  
**China** +86-21-6218 8074 sales@coilcraft.com.cn  
**Singapore** + 65-6484 8412 sales@coilcraft.com.sg

Document 1675-2 Revised 07/06/22

© Coilcraft Inc. 2023

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.