

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

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 ¹	Inductance ² (µH)	DCR ³ (mOhms) max	SRF typ ⁴ (MHz)	Isat (A) ⁵ (typ)			Irms (A) ⁶	
				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).

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°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°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°C.

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



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Document 1675-1 Revised 07/06/22

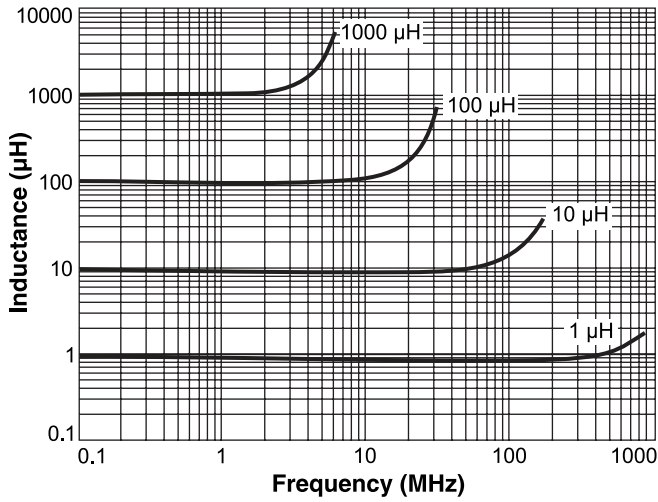
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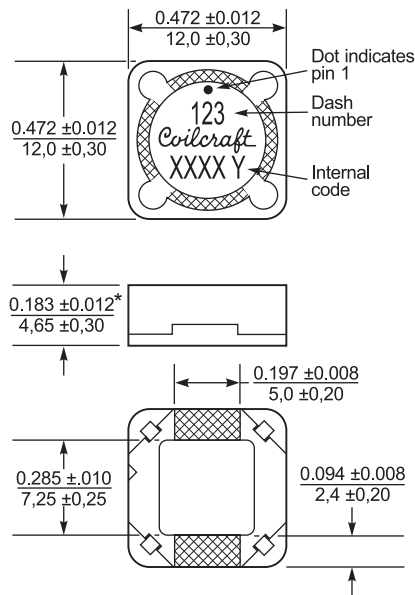
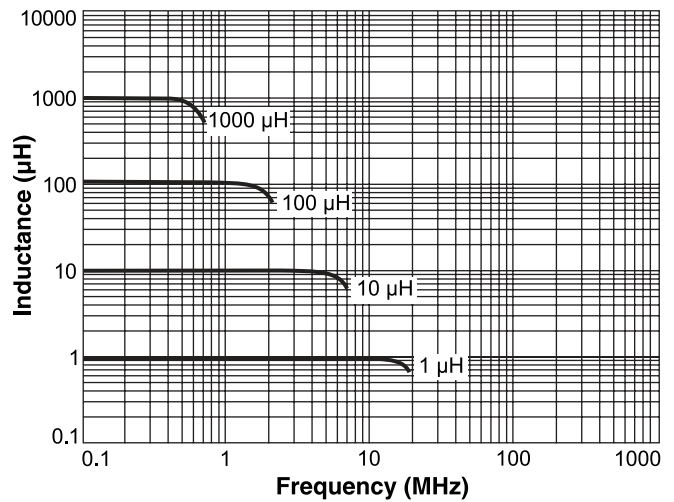


Shielded Power Inductors – MSS1246H

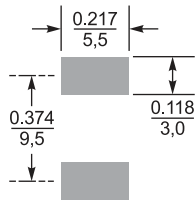
Typical L vs Frequency



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



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Document 1675-2 Revised 07/06/22

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