

NEW!

High Temp Power Inductors MSS1278H



- Designed for high ambient temperatures
- Magnetic shielding, very low DCR, excellent current handling
- AEC-Q200 Grade 1 qualified (-40°C to +125°C ambient)

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: 3.8 g – 4.6 g

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)

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

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

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)		SRF typ ⁴ (MHz)	Isat (A) ⁵			Irms (A) ⁶	
		typ	max		10% drop	20% drop	30% drop	20°C rise	40°C rise
MSS1278H-821M_D	0.82 ±20%	3.7	4.5	107	26.5	29.0	31.0	7.50	10.50
MSS1278H-142M_D	1.4 ±20%	4.6	5.6	77	21.0	23.0	24.5	7.50	10.50
MSS1278H-202M_D	2.0 ±20%	5.1	6.2	60	17.6	21.2	24.0	7.00	10.00
MSS1278H-272M_D	2.7 ±20%	5.7	7.0	49	14.9	16.7	18.0	6.20	8.80
MSS1278H-392M_D	3.9 ±20%	7.0	8.6	41	12.9	14.4	15.5	6.20	8.60
MSS1278H-472M_D	4.7 ±20%	7.8	9.4	33	11.4	12.7	13.7	5.30	7.40
MSS1278H-602M_D	6.0 ±20%	10.0	12.0	27	10.0	11.3	12.2	5.00	7.20
MSS1278H-722M_D	7.2 ±20%	10.6	12.8	24	9.2	10.3	11.1	4.40	6.00
MSS1278H-872M_D	8.7 ±20%	13.5	16.3	22	8.3	9.3	10.0	4.30	5.80
MSS1278H-103M_D	10 ±20%	15.0	18.0	20	7.6	8.4	9.2	4.20	5.60
MSS1278H-123M_D	12 ±20%	16.0	19.2	18	7.0	7.9	8.5	3.80	5.40
MSS1278H-153M_D	15 ±20%	17.0	20.4	17	6.5	7.3	7.9	3.60	5.10
MSS1278H-183M_D	18 ±20%	22.0	26.5	14	5.7	6.5	7.0	3.40	4.80
MSS1278H-223M_D	22 ±20%	25.0	30.0	12	5.1	5.8	6.2	3.00	4.30
MSS1278H-273M_D	27 ±20%	34.0	41.0	10	4.6	5.2	5.6	2.80	3.90
MSS1278H-333M_D	33 ±20%	38.0	45.0	9.5	4.2	4.7	5.1	2.70	3.80
MSS1278H-393M_D	39 ±20%	44.0	53.0	8.5	3.8	4.3	4.7	2.60	3.70
MSS1278H-473K_D	47 ±10%	48.0	57.0	7.5	3.6	4.0	4.4	2.30	3.20
MSS1278H-563K_D	56 ±10%	61.0	73.0	7.0	3.3	3.7	4.0	2.20	3.10
MSS1278H-683K_D	68 ±10%	68.0	83.0	6.5	3.0	3.3	3.6	2.00	2.70
MSS1278H-823K_D	82 ±10%	89.0	108	5.5	2.7	3.1	3.3	1.80	2.40
MSS1278H-104K_D	100 ±10%	101	121	5.0	2.4	2.8	3.0	1.70	2.30
MSS1278H-124K_D	120 ±10%	113	132	4.5	2.2	2.5	2.7	1.60	2.20
MSS1278H-154K_D	150 ±10%	155	181	3.9	2.0	2.2	2.4	1.30	1.80
MSS1278H-184K_D	180 ±10%	174	208	3.6	1.8	2.0	2.2	1.20	1.70
MSS1278H-224K_D	220 ±10%	225	270	3.5	1.6	1.9	2.0	1.05	1.45
MSS1278H-274K_D	270 ±10%	257	305	3.3	1.5	1.7	1.8	1.00	1.40
MSS1278H-334K_D	330 ±10%	291	350	2.9	1.3	1.5	1.6	0.92	1.30
MSS1278H-394K_D	390 ±10%	379	450	2.4	1.2	1.4	1.5	0.85	1.15
MSS1278H-474K_D	470 ±10%	430	500	2.3	1.1	1.3	1.4	0.80	1.10
MSS1278H-564K_D	560 ±10%	562	660	1.9	1.0	1.2	1.3	0.66	0.90
MSS1278H-684K_D	680 ±10%	633	760	1.7	0.92	1.0	1.1	0.63	0.85
MSS1278H-824K_D	820 ±10%	721	840	1.7	0.84	0.97	1.0	0.60	0.80
MSS1278H-105K_D	1000 ±10%	970	1150	1.4	0.76	0.87	0.94	0.54	0.74

1. Please specify termination codes:

MSS1278H-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 (500 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

- Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc using 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.



www.coilcraft.com

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 1511-1 Revised 09/26/19

© Coilcraft Inc. 2019

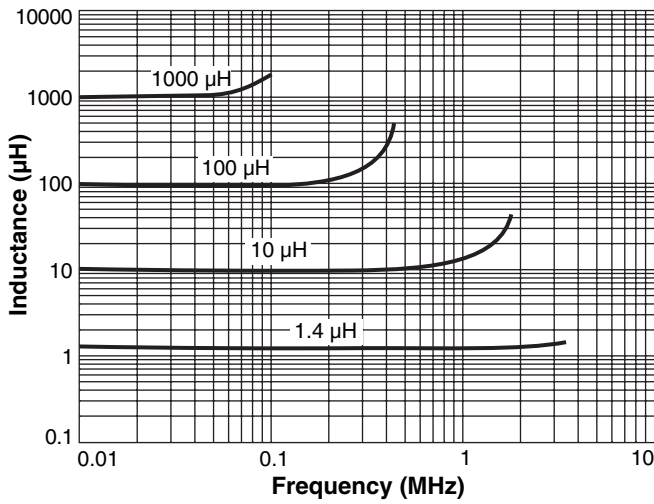
This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.

NEW!

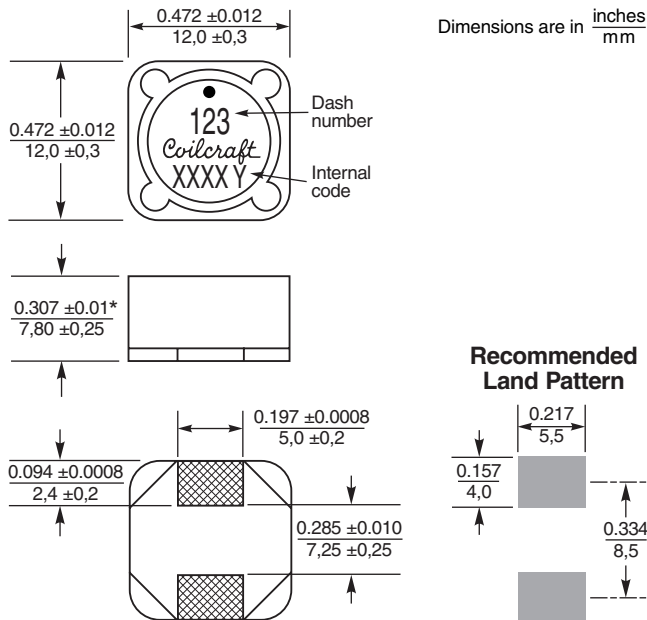
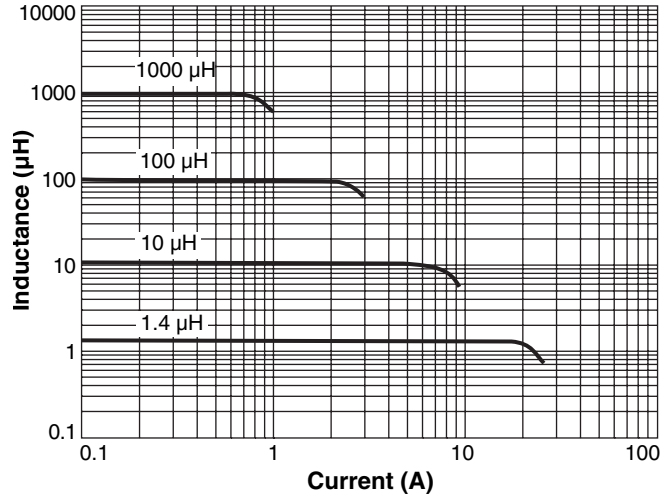
SMT Power Inductors – MSS1278H Series



Typical L vs Frequency



Typical L vs Current



Dimensions are in inches/mm

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).

Packaging 500/13" reel; Plastic tape: 24 mm wide, 0.5 mm thick, 16 mm pocket spacing, 8.7 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 1511-2 Revised 09/26/19
 © Coilcraft Inc. 2019
 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.