

# High-Reliability Power Inductors MS558PTA



- High temperature materials allow operation in ambient temperatures up to 155°C.
- Tin-lead (Sn-Pb) termination for the best possible board adhesion
- Excellent current handling; very low DCR

**Core material** Ferrite

**Terminations** Tin-lead over gold over nickel over phos bronze.

**Weight** 1.4 – 1.8 g

**Ambient temperature** –55°C to +105°C with Irms current

**Maximum part temperature** +155°C (ambient + temp rise).

**Storage temperature** Component: –55°C to +155°C.

Tape and reel packaging: –55°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)

**Enhanced crush-resistant packaging** 200/7" reel  
Plastic tape: 24 mm wide, 0.4 mm thick, 16 mm pocket spacing, 5.45 mm pocket depth

Part number <sup>1</sup>	Inductance <sup>2</sup> ±20% (µH)	DCR max <sup>3</sup> (mOhm)	SRF (MHz) <sup>4</sup>		Isat (A) <sup>5</sup>			Irms (A) <sup>6</sup>	
			min	typ	10% drop	20% drop	30% drop	20°C rise	40°C rise
MS558PTA331MSZ	0.33	4.0	119	170	29.5	30.0	30.5	12.5	16.3
MS558PTA801MSZ	0.80	4.0	70.0	100	24.9	25.2	25.6	12.5	16.3
MS558PTA102MSZ	1.0	4.0	66.5	95.0	16.5	17.0	17.5	12.5	16.3
MS558PTA122MSZ	1.2	6.0	63.7	91.0	20.5	21.0	21.3	11.0	15.0
MS558PTA132MSZ	1.3	4.0	56.7	81.0	12.9	16.8	17.2	12.5	16.3
MS558PTA152MSZ	1.5	4.0	52.5	75.0	13.5	14.0	14.5	11.0	15.0
MS558PTA182MSZ	1.8	6.0	49.0	70.0	13.3	13.8	14.3	11.0	15.0
MS558PTA202MSZ	2.0	9.0	45.5	65.0	15.3	15.8	16.2	8.5	11.5
MS558PTA222MSZ	2.2	4.0	40.6	58.0	8.9	9.6	10.0	12.5	16.3
MS558PTA252MSZ	2.5	7.5	38.5	55.0	11.4	11.8	12.1	9.0	12.0
MS558PTA322MSZ	3.2	6.0	37.1	53.0	7.3	7.8	8.5	11.0	15.0
MS558PTA402MSZ	4.0	9.0	32.9	47.0	8.3	8.5	8.8	8.5	11.5
MS558PTA432MSZ	4.3	7.5	30.8	44.0	6.4	6.8	7.0	9.0	12.0
MS558PTA572MSZ	5.7	9.0	24.5	35.0	5.4	5.8	6.0	8.5	11.5

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

**MS558PTA572MSZ**

**Screening: Z** = Unscreened

**H** = Coilcraft CP-SA-10001 Group A

**1** = EEE-INST-002 (Family 1) Level 1

**2** = EEE-INST-002 (Family 1) Level 2

**3** = EEE-INST-002 (Family 1) Level 3

**4** = MIL-STD-981 (Family 04) Class B

**5** = MIL-STD-981 (Family 04) Class S

**F** = ESCC3201 (F4 operational life performed at 105°C)

- Screening performed to the document's latest revision.
- Lot qualification (Group B) available.
- Testing T and U have been replaced with more detailed codes 4, 5, and 1, 2, 3, respectively. Codes T and U can still be used, if necessary. Custom testing also available.
- Country of origin restrictions available; prefix option G.

2. Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4284A or equivalent.

3. DCR measured on a micro-ohmmeter.

4. SRF measured using an Agilent/HP 8753D network analyzer.

5. DC current at 25°C that causes the specified inductance drop from its value without current.

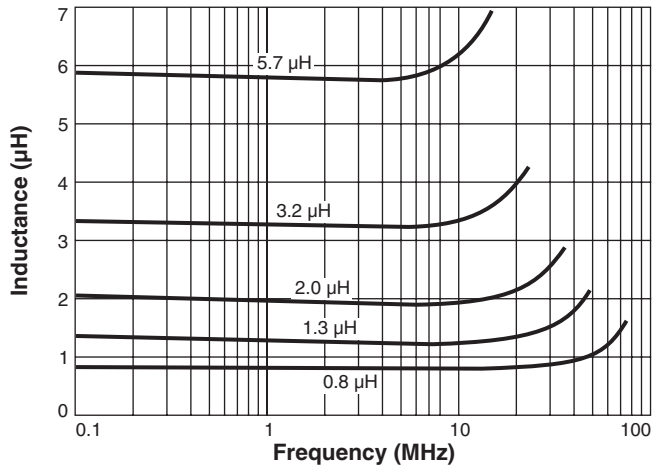
6. Current that causes the specified temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.

7. Electrical specifications at 25°C.

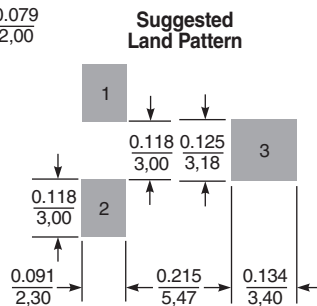
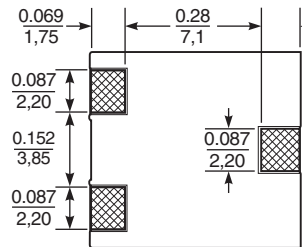
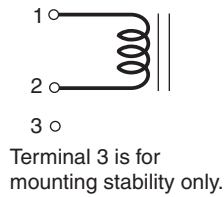
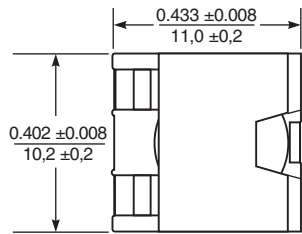
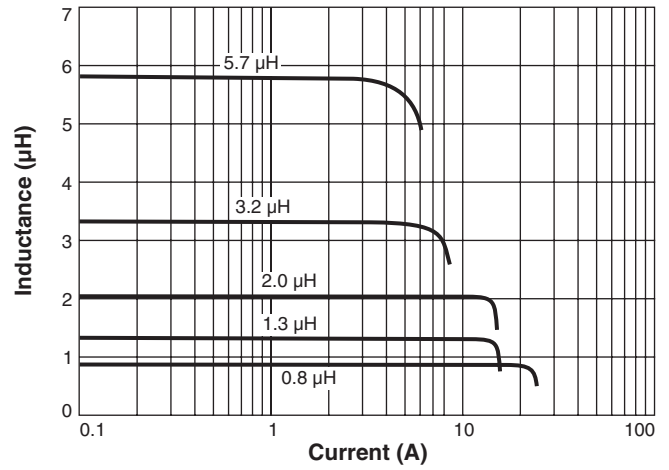
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

# MS558PTA Series

## Typical L vs Frequency



## Typical L vs Current



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



CRITICAL PRODUCTS & SERVICES

© Coilcraft, Inc. 2020

1102 Silver Lake Road  
Cary, IL 60013  
Phone 800-981-0363

Fax 847-639-1508  
Email cps@coilcraft.com  
www.coilcraft-cps.com

Document MS535-2 Revised 12/02/20

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