

High-Reliability Power Inductors MS598PTA



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

Core material Ferrite

Terminations Tin-lead (63/37) over tin over nickel over phos bronze.

Weight 2.6 – 2.8 g

Ambient temperature –55°C to +105°C with I_{rms} current, +105°C to +155°C with derated current

Storage temperature Component: –55°C to +155°C.
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 500 per 13" reel;
Plastic tape: 24 mm wide, 0.4 mm thick, 16 mm pocket spacing, 6.6 mm pocket depth

Part number ¹	Inductance ² ±10% (µH)	DCR (mOhm) ³		SRF (MHz) ⁴		Isat (A) ⁵			I _{rms} (A) ⁶	
		typ	max	min	typ	10% drop	20% drop	30% drop	20°C rise	40°C rise
MS598PTA331KSZ	0.33	0.77	0.85	140	200	36	41	43	13.0	16.9
MS598PTA651KSZ	0.65	0.77	0.85	112	160	23	27	28	13.0	16.9
MS598PTA102KSZ	1.0	2.36	2.60	52.5	75.0	32	33	33.5	9.5	13.0
MS598PTA182KSZ	1.8	2.36	2.60	35.0	50.0	17	19	20	9.5	13.0
MS598PTA272KSZ	2.7	2.36	2.60	29.4	42.0	12	13	14	9.5	13.0
MS598PTA402KSZ	4.0	5.50	6.05	23.8	34.0	11	12	13	7.1	9.4
MS598PTA472KSZ	4.7	5.50	6.05	22.4	32.0	9.5	11	12	7.1	9.4
MS598PTA602KSZ	6.0	5.50	6.05	19.6	28.0	8.0	9.0	9.5	7.1	9.4
MS598PTA802KSZ	8.0	9.83	10.81	18.2	26.0	7.5	8.5	9.0	5.5	7.6
MS598PTA103KSZ	10	9.83	10.81	16.8	24.0	6.2	7.0	7.5	4.4	7.2

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

MS598PTA103KSZ

Testing: Z = COTS

H = Screening per Coilcraft CP-SA-10001

N = Screening per Coilcraft CP-SA-10004

C = Custom screening (please specify when ordering)

2. Inductance measured at 100 kHz, 0.1 V_{rms}, 0 A_{dc} 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. Typical DC current at which the inductance drops 10% (typ) from its value without current.

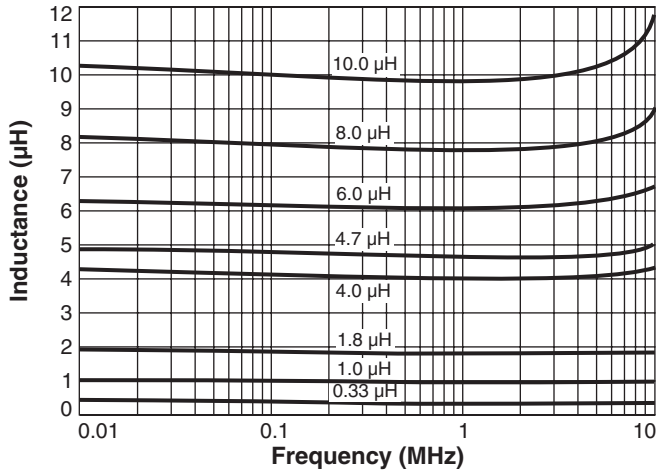
6. Typical current that causes a 40°C temperature rise from 25°C ambient.

7. Electrical specifications at 25°C.

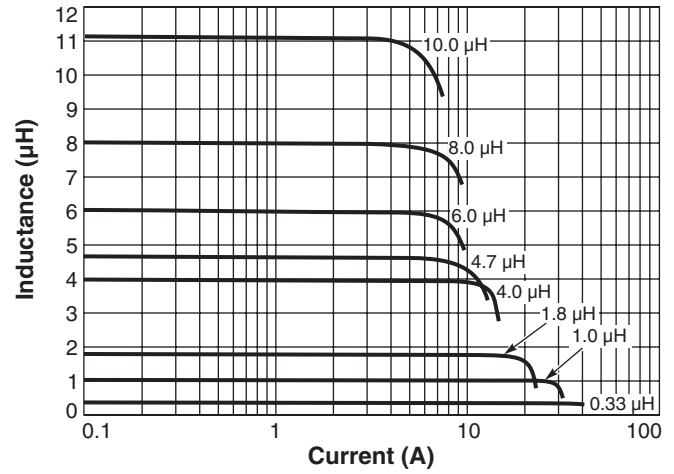
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

MS598PTA Series

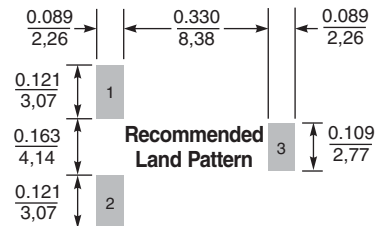
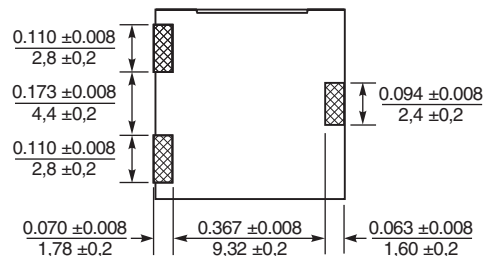
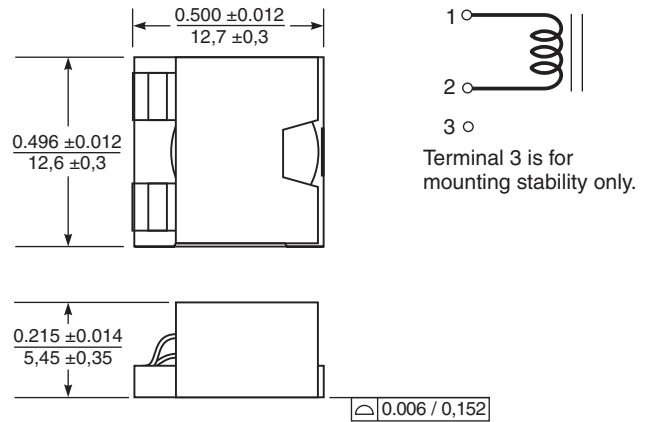
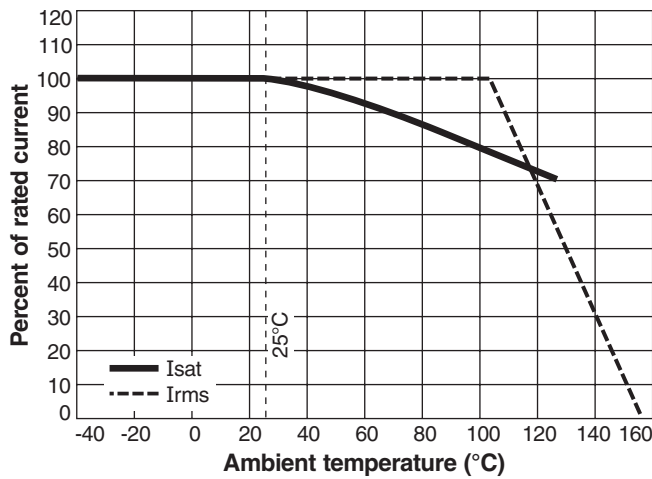
Typical L vs Frequency



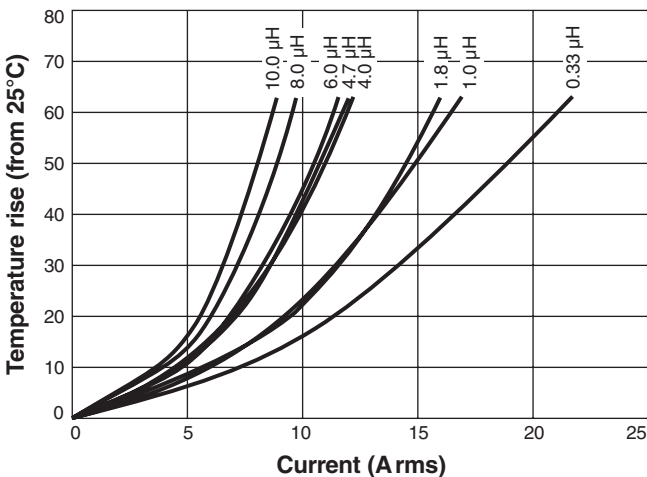
Typical L vs Current



Current Derating



Temperature Rise vs Current



Dimensions are in inches
mm