

# High-Reliability Power Inductors ML598PTA



- High temperature materials allow operation in ambient temperatures up to 155°C.
- Excellent current handling; very low DCR

**Core material** Ferrite

**Terminations** Matte tin over nickel over phos bronze

**Weight** 2.6 – 2.8 g

**Ambient temperature** –55°C to +105°C with I<sub>rms</sub> 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 <sup>1</sup>	Inductance <sup>2</sup> ±10% (µH)	DCR (mOhm) <sup>3</sup>		SRF (MHz) <sup>4</sup>		Isat (A) <sup>5</sup>			I <sub>rms</sub> (A) <sup>6</sup>	
		typ	max	min	typ	10% drop	20% drop	30% drop	20°C rise	40°C rise
ML598PTA331KLZ	0.33	0.77	0.85	140	200	36	41	43	13.0	16.9
ML598PTA651KLZ	0.65	0.77	0.85	112	160	23	27	28	13.0	16.9
ML598PTA102KLZ	1.0	2.36	2.60	52.5	75.0	32	33	33.5	9.5	13.0
ML598PTA182KLZ	1.8	2.36	2.60	35.0	50.0	17	19	20	9.5	13.0
ML598PTA272KLZ	2.7	2.36	2.60	29.4	42.0	12	13	14	9.5	13.0
ML598PTA402KLZ	4.0	5.50	6.05	23.8	34.0	11	12	13	7.1	9.4
ML598PTA472KLZ	4.7	5.50	6.05	22.4	32.0	9.5	11	12	7.1	9.4
ML598PTA602KLZ	6.0	5.50	6.05	19.6	28.0	8.0	9.0	9.5	7.1	9.4
ML598PTA802KLZ	8.0	9.83	10.81	18.2	26.0	7.5	8.5	9.0	5.5	7.6
ML598PTA103KLZ	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:

**ML598PTA103KLZ**

**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<sub>rms</sub>, 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. Typical DC current at which the inductance drops 10% (typ) from its value without current.

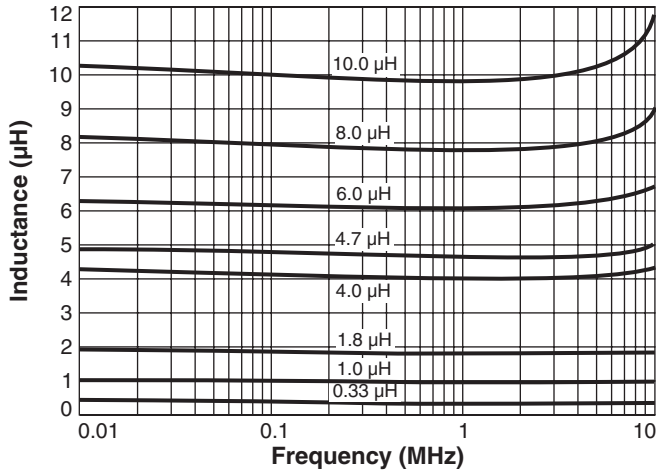
6. Typical current that causes a 40°C temperature rise from 25°C ambient.

7. Electrical specifications at 25°C.

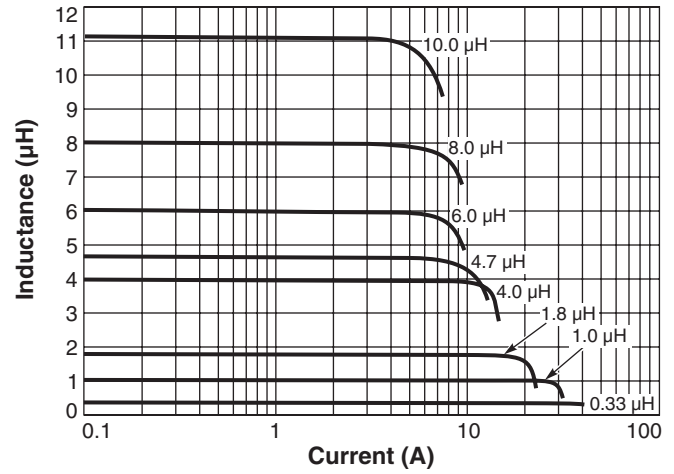
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

# ML598PTA Series

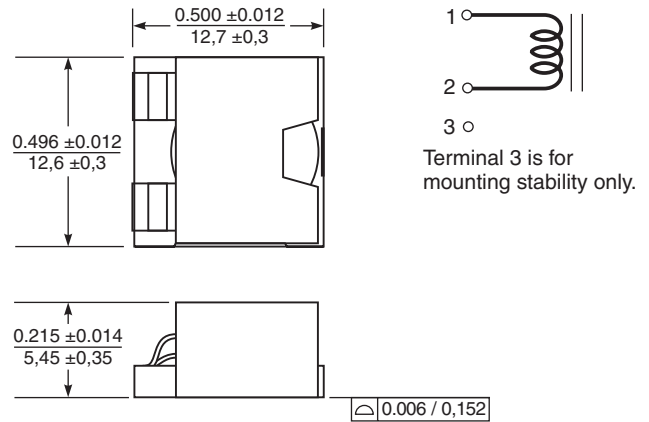
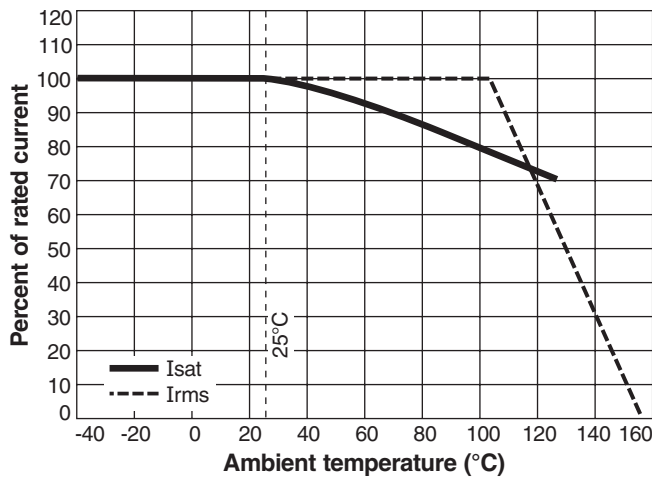
## Typical L vs Frequency



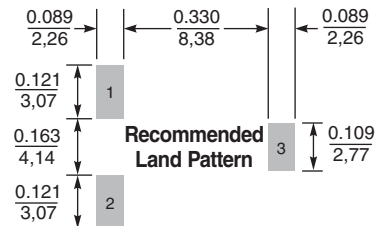
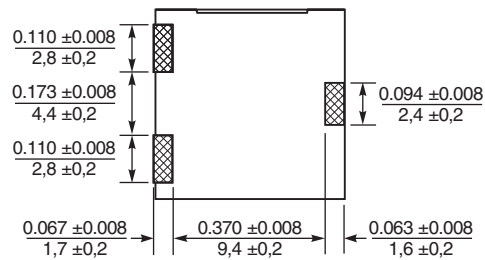
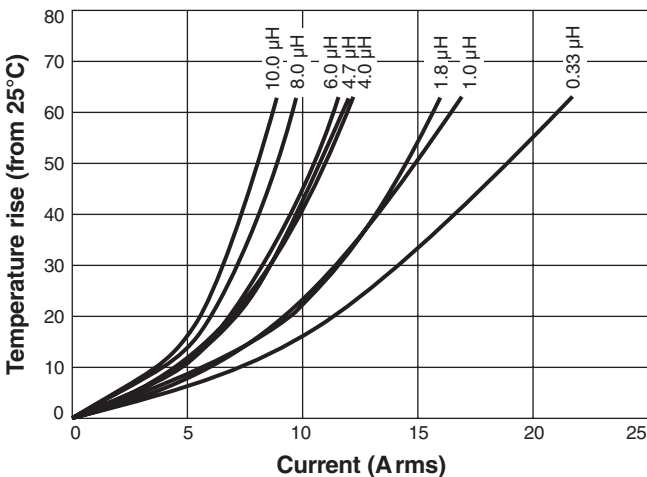
## Typical L vs Current



## Current Derating



## Temperature Rise vs Current



Dimensions are in inches / mm