

Outgassing Compliant Power Inductors AE558PTA



- High temperature materials allow operation in ambient temperatures up to 155°C.
- Passes NASA low outgassing specifications
- 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 ¹	Inductance ² ±20% (µH)	DCR max ³ (mOhm)	SRF (MHz) ⁴		Isat (A) ⁵			Irms (A) ⁶	
			min	typ	10% drop	20% drop	30% drop	20°C rise	40°C rise
AE558PTA331MSZ	0.33	4.0	119	170	29.5	30.0	30.5	12.5	16.3
AE558PTA801MSZ	0.80	4.0	70.0	100	24.9	25.2	25.6	12.5	16.3
AE558PTA102MSZ	1.0	4.0	66.5	95.0	16.5	17.0	17.5	12.5	16.3
AE558PTA122MSZ	1.2	6.0	63.7	91.0	20.5	21.0	21.3	11.0	15.0
AE558PTA132MSZ	1.3	4.0	56.7	81.0	12.9	16.8	17.2	12.5	16.3
AE558PTA152MSZ	1.5	4.0	52.5	75.0	13.5	14.0	14.5	11.0	15.0
AE558PTA182MSZ	1.8	6.0	49.0	70.0	13.3	13.8	14.3	11.0	15.0
AE558PTA202MSZ	2.0	9.0	45.5	65.0	15.3	15.8	16.2	8.5	11.5
AE558PTA222MSZ	2.2	4.0	40.6	58.0	8.9	9.6	10.0	12.5	16.3
AE558PTA252MSZ	2.5	7.5	38.5	55.0	11.4	11.8	12.1	9.0	12.0
AE558PTA322MSZ	3.2	6.0	37.1	53.0	7.3	7.8	8.5	11.0	15.0
AE558PTA402MSZ	4.0	9.0	32.9	47.0	8.3	8.5	8.8	8.5	11.5
AE558PTA432MSZ	4.3	7.5	30.8	44.0	6.4	6.8	7.0	9.0	12.0
AE558PTA572MSZ	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:

AE558PTA103MSZ

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.

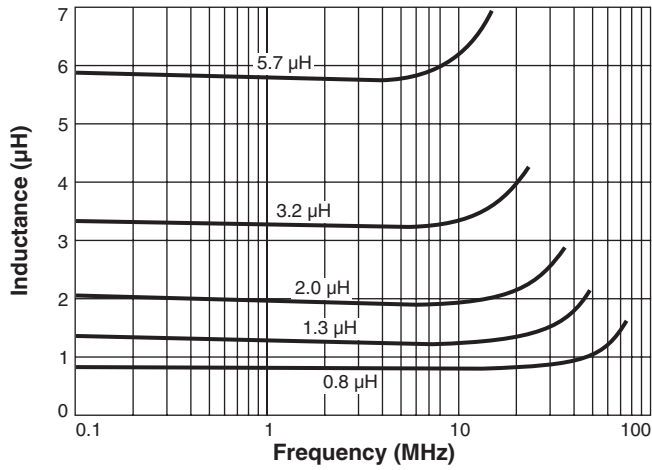
6. Current that causes the specified temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.

7. Electrical specifications at 25°C.

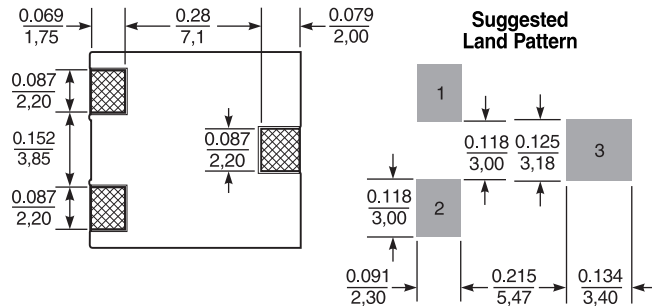
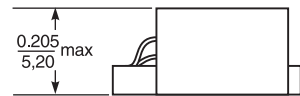
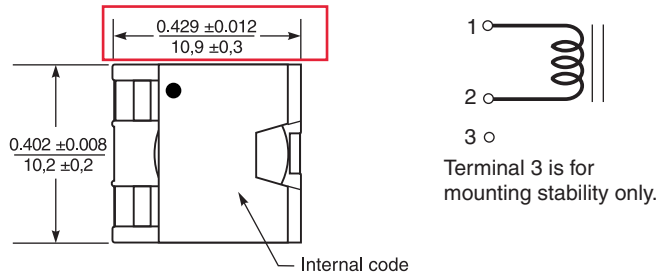
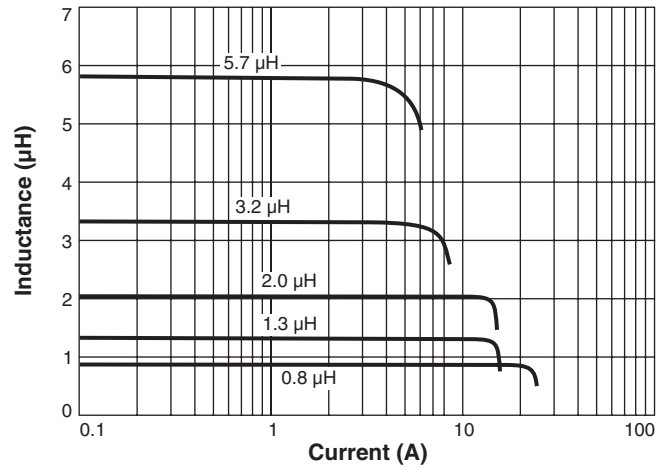
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

AE558PTA Series

Typical L vs Frequency



Typical L vs Current



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