

**NEW!**

# Outgassing Compliant Power Inductors AE567PYA



- 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
- Special coating ensures DWV compliance with MIL-STD-981 screening
- Soft saturation makes them ideal for VRM/VRD applications.

**Core material** Composite

**Terminations** Tin-lead (63/37) over copper.

**Weight** 3.6 – 4.1 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)

**Packaging** 150/7" reel; 600/13" reel Plastic tape: 24 mm wide, 0.3 mm thick, 16 mm pocket spacing, 6.3 mm pocket depth

Part number <sup>1</sup>	Inductance <sup>2</sup> ±20% (µH)	DCR (mOhms) <sup>3</sup>		SRF min <sup>4</sup> (MHz)	Isat <sup>5</sup> (A)	Irms (A) <sup>6</sup>	
		typ	max			20°C rise	40°C rise
AE567PYA181MSZ	0.18	0.50	0.55	54	120	21.6	34.5
AE567PYA401MSZ	0.40	0.80	0.88	48	82	19.4	27.6
AE567PYA681MSZ	0.68	1.35	1.50	40	52	16.8	25.4
AE567PYA122MSZ	1.2	2.50	2.75	35	43	13.4	19.7
AE567PYA152MSZ	1.5	3.00	3.30	28	36	12.0	18.3
AE567PYA222MSZ	2.2	4.50	4.95	20	32	10.4	15.0
AE567PYA332MSZ	3.3	7.20	7.92	15	26.5	8.4	12.6
AE567PYA472MSZ	4.7	9.75	10.72	12	25	6.4	10.5

1. When ordering, please specify **termination** and **screening** codes:

AE567PYA472MSZ

**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 tested at 100 kHz, 0.1 Vrms, 0 Adc.

3. DCR measured on a micro-ohmmeter.

4. SRF measured using an Agilent/HP 4395A or equivalent.

5. DC current at 25°C that causes an inductance drop of 30% (typ) from its value without current..

6. Current that causes a 30°C 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.

## Irms Testing

Irms testing was performed on a 0.060" thick pcb with 4 oz. copper traces optimized to minimize additional temperature rise.

Temperature rise is highly dependent on many factors including pcb land pattern, trace size, and proximity to other components.

Therefore temperature rise should be verified in application conditions.

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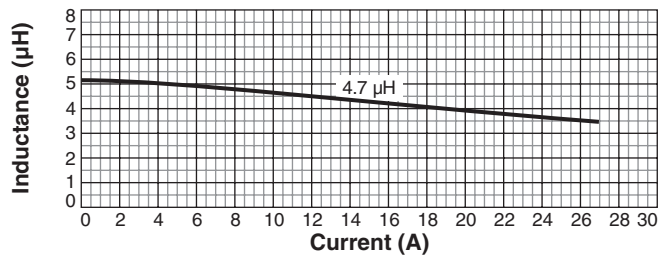
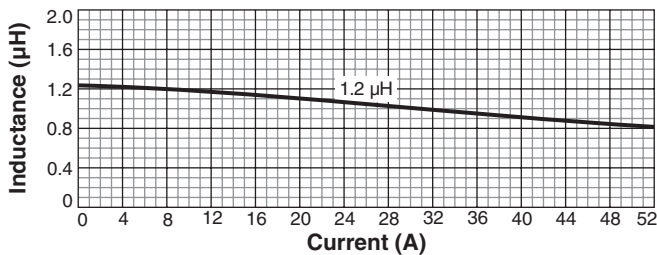
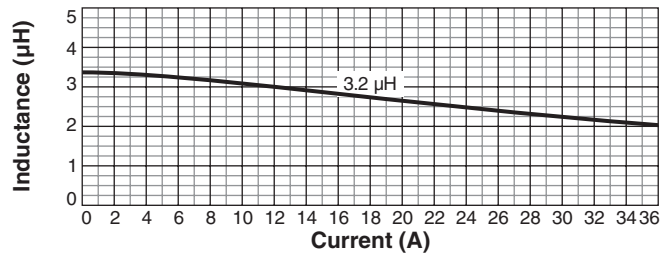
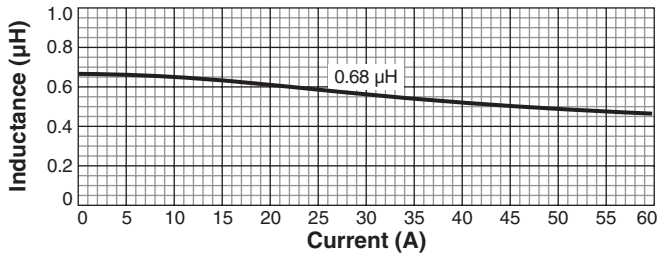
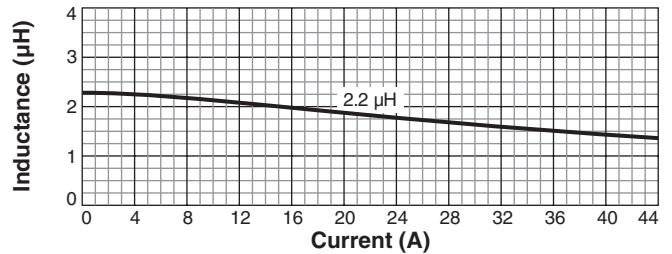
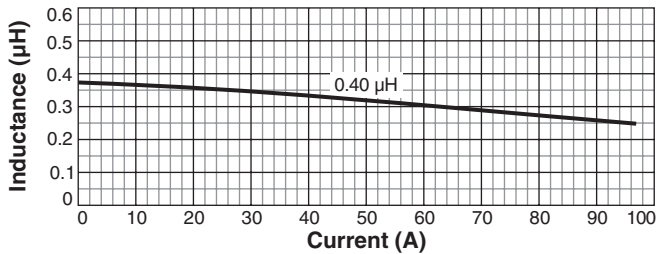
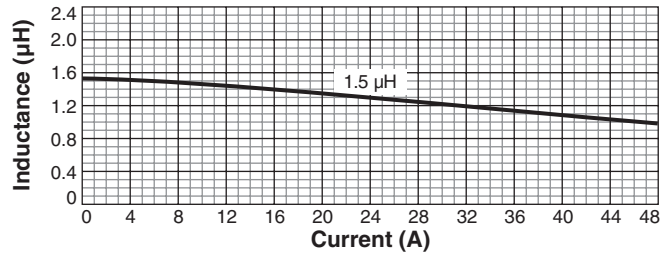
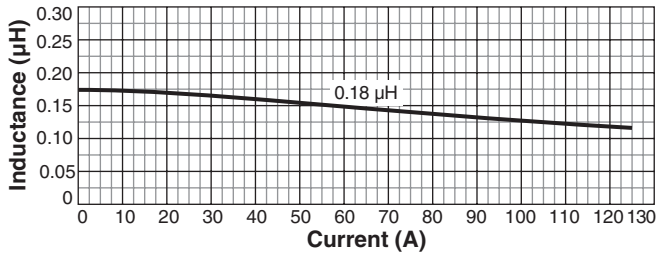
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This product may not be used in medical or high risk applications without prior Coilcraft approval. Specifications subject to change without notice. Please check our web site for latest information.

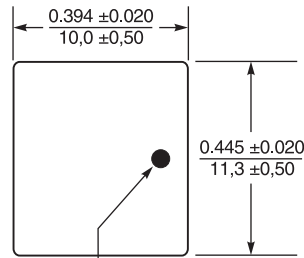
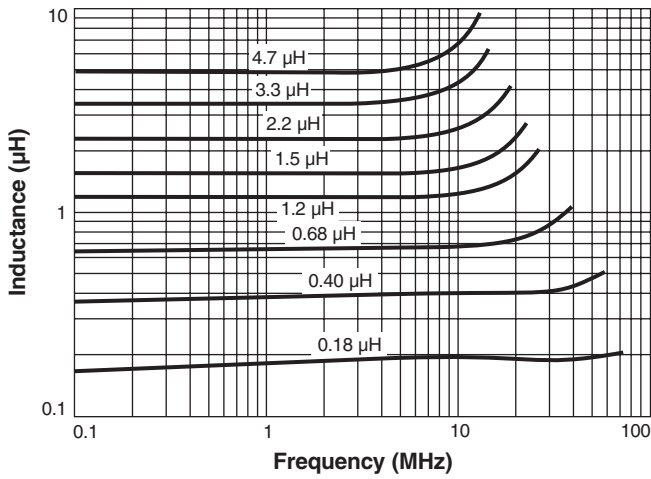
# AE567PYA Series (1060)

## Typical L vs Current



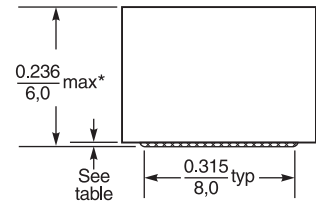
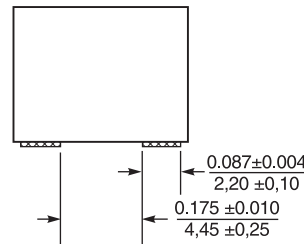
# AE567PYA Series (1060)

## L vs Frequency

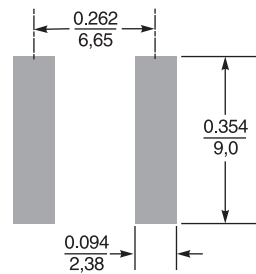


Value	Terminal height typ (in / mm)
-181	0.0394 / 1.0
-401	0.0315 / 0.80
-681	0.0236 / 0.60
-122	0.0157 / 0.40
-152	0.0157 / 0.40
-222	0.0118 / 0.30
-332	0.0079 / 0.20
-472	0.0079 / 0.20

Indicates direction of terminals and start (short) lead. Connect high dv/dt here for lowest EMI.



\* Height dimension shown is for the mounted part after reflow. Dimension before mounting can be an additional 0.008 inch / 0.2 mm.



**Suggested Land Pattern**

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