

Outgassing Compliant Power Inductors AE528PJB



- High temperature materials allow operation in ambient temperatures up to 155°C.
- Passes NASA low outgassing specifications
- Special construction allows it to pass vibration testing to 30 G and shock testing to 100 G
- Tin-lead (Sn-Pb) termination for the best possible board adhesion

Core material Ferrite

Terminations Tin Lead (63/37) over tin over nickel

Weight 0.82 – 1.25 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 350/7" reel

Plastic tape: 12 mm wide, 0.3 mm thick, 8 mm pocket spacing, 3.68 mm pocket depth

Recommended pick and place nozzle OD: 6.2 mm; ID: ≤ 3.1 mm

| Part number ¹ | Inductance ² ± 20% (µH) | DCR (Ohms) | | SRF (MHz) | | Isat (A) ³ | | | Irms (A) ⁴ | |
|--------------------------|---------------------------------------|------------|-------|-----------|-----|-----------------------|----------|----------|-----------------------|-----------|
| | | typ | max | typ | min | 10% drop | 20% drop | 30% drop | 20°C rise | 40°C rise |
| AE528PJB682MS_ | 6.8 | 0.059 | 0.075 | 63 | 53 | 3.6 | 3.9 | 4.0 | 1.80 | 2.40 |
| AE528PJB103MS_ | 10 | 0.073 | 0.090 | 49 | 41 | 2.8 | 3.2 | 3.3 | 1.55 | 2.15 |
| AE528PJB153MS_ | 15 | 0.092 | 0.110 | 23 | 27 | 2.5 | 2.7 | 2.7 | 1.35 | 1.85 |
| AE528PJB223MS_ | 22 | 0.102 | 0.130 | 21 | 17 | 2.0 | 2.3 | 2.4 | 1.25 | 1.75 |
| AE528PJB333MS_ | 33 | 0.121 | 0.145 | 12 | 10 | 1.8 | 2.0 | 2.1 | 1.20 | 1.60 |
| AE528PJB473MS_ | 47 | 0.153 | 0.179 | 10 | 8.5 | 1.6 | 1.7 | 1.8 | 1.10 | 1.50 |
| AE528PJB683MS_ | 68 | 0.193 | 0.223 | 8.7 | 7.4 | 1.2 | 1.3 | 1.4 | 0.95 | 1.35 |
| AE528PJB104MS_ | 100 | 0.297 | 0.342 | 6.5 | 5.5 | 1.0 | 1.1 | 1.1 | 0.78 | 1.10 |
| AE528PJB154MS_ | 150 | 0.379 | 0.442 | 5.0 | 4.2 | 0.88 | 0.93 | 0.95 | 0.70 | 0.95 |
| AE528PJB224MS_ | 220 | 0.564 | 0.662 | 4.3 | 3.6 | 0.70 | 0.74 | 0.77 | 0.60 | 0.82 |
| AE528PJB334MS_ | 330 | 0.834 | 0.950 | 3.0 | 2.5 | 0.52 | 0.58 | 0.61 | 0.48 | 0.65 |
| AE528PJB474MS_ | 470 | 1.28 | 1.45 | 2.5 | 2.1 | 0.43 | 0.48 | 0.50 | 0.39 | 0.53 |
| AE528PJB684MS_ | 680 | 1.88 | 2.23 | 2.2 | 1.8 | 0.33 | 0.39 | 0.43 | 0.32 | 0.44 |
| AE528PJB105MS_ | 1000 | 2.92 | 3.22 | 1.3 | 1.1 | 0.31 | 0.34 | 0.36 | 0.23 | 0.32 |

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

AE528PJB105MSZ

Screening: Z = Unscreened

Y = Unscreened (SLDC Option A)

W = Unscreened (SLDC Option B)

H = Coilcraft CP-SA-10001 Group A

G = Coilcraft CP-SA-10001 Group A (SLDC Option A)

D = Coilcraft CP-SA-10001 Group A (SLDC Option B)

1/2/3 = EEE-INST-002 (Family 1) Level 1/2/3

4/5 = MIL-STD-981 (Family 04) Class B=4, Class S=5

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 options G or F.

2. Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc.

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

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

5. Electrical specifications at 25°C.

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

Coilcraft CPS

CRITICAL PRODUCTS & SERVICES

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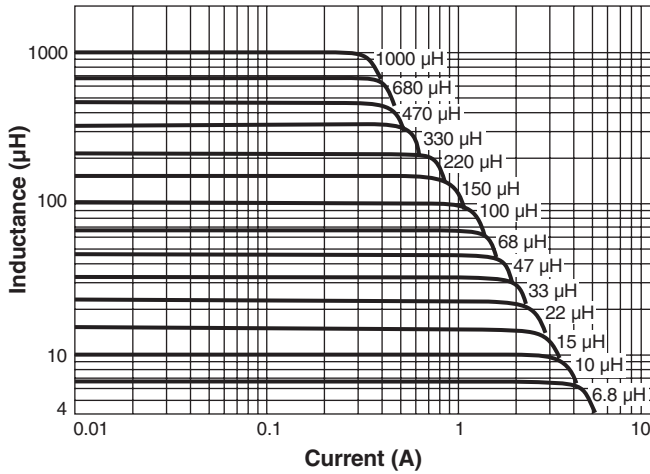
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Document AE968-1 Revised 04/12/23

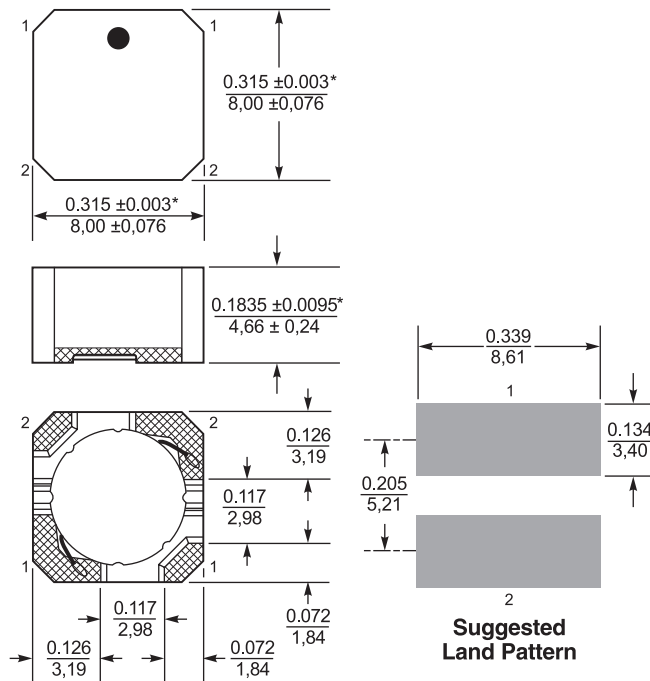
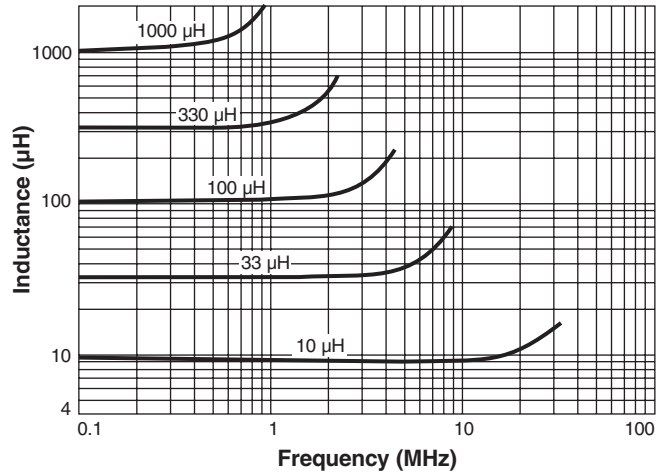
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AE528PJB Series (8045)

L vs Current



Typical L vs Frequency



* Dimensions are of the case not including the termination. For maximum overall dimensions including the termination, add 0.026 in / 0.66 mm for length and width, and 0.005 in / 0.13 mm for height.

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

