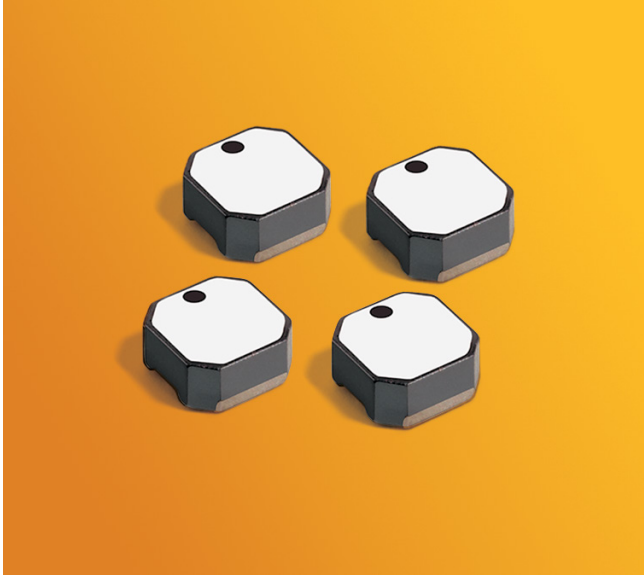


# Outgassing Compliant Power Inductors AE425PJB



- 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 80 G and shock testing to 1000 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** 104 – 120 mg

**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.

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** 1000/7" reel

Plastic tape: 12 mm wide, 0.23 mm thick, 8 mm pocket spacing, 1.9 mm pocket depth

**Recommended pick and place nozzle** OD: 4 mm; ID: ≤ 2 mm

| Part number <sup>1</sup> | Inductance <sup>2</sup><br>(µH) | DCR<br>max <sup>3</sup><br>(Ohms) | SRF (MHz) <sup>4</sup> |     | Isat (A) <sup>5</sup> |             |             | Irms (A) <sup>6</sup> |              |
|--------------------------|---------------------------------|-----------------------------------|------------------------|-----|-----------------------|-------------|-------------|-----------------------|--------------|
|                          |                                 |                                   | min                    | typ | 10%<br>drop           | 20%<br>drop | 30%<br>drop | 20°C<br>rise          | 40°C<br>rise |
| AE425PJB351MSZ           | 0.35 ±20%                       | 0.040                             | 252                    | 360 | 5.9                   | 6.1         | 6.3         | 2.2                   | 3.1          |
| AE425PJB561MSZ           | 0.56 ±20%                       | 0.030                             | 175                    | 250 | 4.8                   | 5.2         | 5.3         | 1.9                   | 2.8          |
| AE425PJB102NSZ           | 1.0 ±30%                        | 0.040                             | 126                    | 180 | 2.8                   | 3.0         | 3.1         | 1.8                   | 2.7          |
| AE425PJB222MSZ           | 2.2 ±20%                        | 0.070                             | 63                     | 90  | 2.7                   | 2.8         | 2.9         | 1.6                   | 2.3          |
| AE425PJB262MSZ           | 2.6 ±20%                        | 0.080                             | 59                     | 85  | 2.6                   | 2.7         | 2.8         | 1.5                   | 2.0          |
| AE425PJB332MSZ           | 3.3 ±20%                        | 0.080                             | 52                     | 75  | 2.1                   | 2.3         | 2.4         | 1.4                   | 2.0          |
| AE425PJB472MSZ           | 4.7 ±20%                        | 0.125                             | 45                     | 65  | 1.8                   | 1.9         | 1.9         | 1.3                   | 1.8          |
| AE425PJB682MSZ           | 6.8 ±20%                        | 0.150                             | 35                     | 50  | 1.2                   | 1.3         | 1.3         | 1.0                   | 1.5          |
| AE425PJB103MSZ           | 10 ±20%                         | 0.200                             | 28                     | 40  | 1.1                   | 1.2         | 1.3         | 0.90                  | 1.25         |
| AE425PJB153MSZ           | 15 ±20%                         | 0.260                             | 22                     | 32  | 0.86                  | 0.91        | 0.94        | 0.80                  | 1.12         |
| AE425PJB183MSZ           | 18 ±20%                         | 0.270                             | 18                     | 27  | 0.78                  | 0.83        | 0.85        | 0.70                  | 1.00         |
| AE425PJB223MSZ           | 22 ±20%                         | 0.360                             | 18                     | 26  | 0.74                  | 0.80        | 0.83        | 0.65                  | 0.90         |
| AE425PJB333MSZ           | 33 ±20%                         | 0.420                             | 14                     | 20  | 0.58                  | 0.64        | 0.68        | 0.55                  | 0.80         |
| AE425PJB473MSZ           | 47 ±20%                         | 0.650                             | 11                     | 16  | 0.51                  | 0.55        | 0.56        | 0.45                  | 0.68         |
| AE425PJB683MSZ           | 68 ±20%                         | 0.950                             | 9.0                    | 13  | 0.41                  | 0.45        | 0.46        | 0.40                  | 0.56         |
| AE425PJB104MSZ           | 100 ±20%                        | 1.40                              | 7.0                    | 10  | 0.34                  | 0.36        | 0.37        | 0.35                  | 0.50         |
| AE425PJB124MSZ           | 120 ±20%                        | 1.60                              | 6.0                    | 9.0 | 0.31                  | 0.33        | 0.34        | 0.30                  | 0.45         |
| AE425PJB154MSZ           | 150 ±20%                        | 2.00                              | 5.6                    | 8.0 | 0.27                  | 0.29        | 0.30        | 0.28                  | 0.40         |
| AE425PJB184MSZ           | 180 ±20%                        | 2.50                              | 5.2                    | 7.5 | 0.24                  | 0.26        | 0.27        | 0.26                  | 0.36         |
| AE425PJB224MSZ           | 220 ±20%                        | 3.70                              | 4.5                    | 6.5 | 0.21                  | 0.225       | 0.235       | 0.20                  | 0.30         |
| AE425PJB334MSZ           | 330 ±20%                        | 5.90                              | 3.8                    | 5.5 | 0.18                  | 0.19        | 0.20        | 0.17                  | 0.23         |
| AE425PJB474MSZ           | 470 ±20%                        | 7.80                              | 3.0                    | 4.5 | 0.14                  | 0.16        | 0.17        | 0.15                  | 0.20         |
| AE425PJB564MSZ           | 560 ±20%                        | 10.0                              | 2.8                    | 4.0 | 0.13                  | 0.14        | 0.15        | 0.14                  | 0.18         |
| AE425PJB684MSZ           | 680 ±20%                        | 11.5                              | 2.4                    | 3.5 | 0.12                  | 0.13        | 0.14        | 0.12                  | 0.16         |
| AE425PJB824MSZ           | 820 ±20%                        | 14.0                              | 2.0                    | 2.9 | 0.11                  | 0.12        | 0.13        | 0.10                  | 0.14         |
| AE425PJB105MSZ           | 1000 ±20%                       | 18.0                              | 1.9                    | 2.8 | 0.10                  | 0.11        | 0.11        | 0.098                 | 0.125        |
| AE425PJB155MSZ           | 1500 ±20%                       | 25.0                              | 1.6                    | 2.4 | 0.095                 | 0.10        | 0.105       | 0.080                 | 0.110        |
| AE425PJB185MSZ           | 1800 ±20%                       | 31.5                              | 1.6                    | 2.3 | 0.090                 | 0.095       | 0.100       | 0.070                 | 0.095        |
| AE425PJB225MSZ           | 2200 ±20%                       | 32.5                              | 1.4                    | 2.1 | 0.088                 | 0.099       | 0.100       | 0.070                 | 0.090        |
| AE425PJB335MSZ           | 3300 ±20%                       | 48.0                              | 1.1                    | 1.6 | 0.082                 | 0.092       | 0.094       | 0.055                 | 0.075        |

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

**AE425PJB105MSZ**

**Testing: Z** = Unscreened

**H** = Group A screening per Coilcraft CP-SA-10001

**T** = Screening per MIL-STD-981

**U** = Screening per EEE-INST-002

**F** = Screening per ESCC 3201

All screening performed to the document's latest revision

Custom screening also available

2. Inductance tested at 100 kHz, 0.1 Vrms using an Agilent/HP 4192A. Inductance at 1 MHz is the same for parts with SRF ≥10 MHz.

3. DCR measured on a micro-ohmmeter.

4. SRF measured using Agilent/HP 8753ES or equivalent.

5. DC current that causes the specified inductance drop from its value without current.

6. Current that causes the specified temperature rise from 25°C ambient.

7. Electrical specifications at 25°C.

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

**Coilcraft CPS**  
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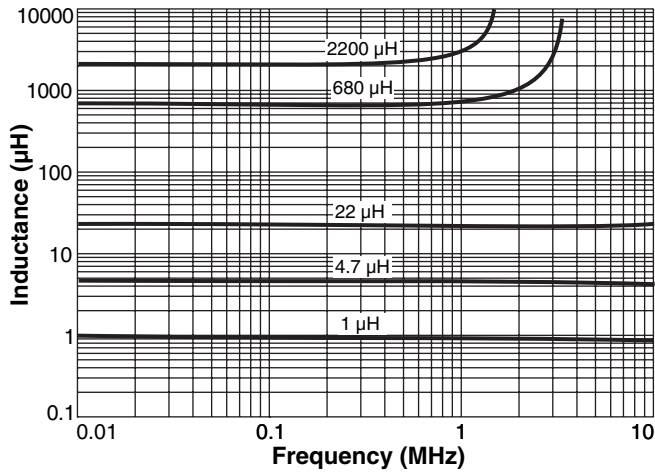
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Document AE435-1 Revised 05/22/17

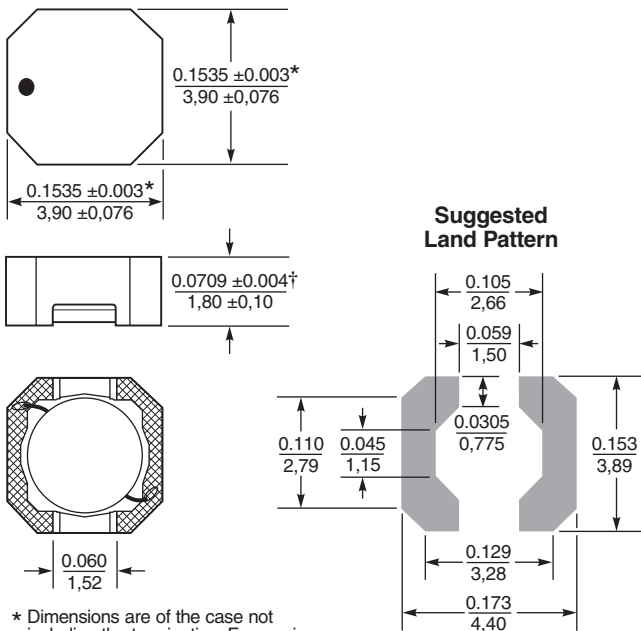
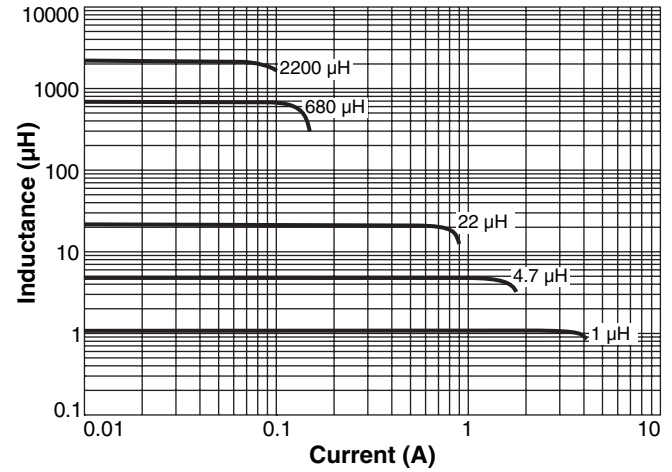
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# AE425PJB Series (4018)

## Typical L vs Frequency



## Typical L vs Current



\* Dimensions are of the case not including the termination. For maximum overall dimensions including the termination, add 0.011 in / 0,28 mm.

† Height dimension is after mounting. For maximum height dimension before mounting, add 0.006 in / 0,152 mm.

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



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