# 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[1] | Inductance[2] (µH) | DCR max[3] (Ohms) | SRF (MHz)[4] min | SRF (MHz)[4] typ | Isat (A)[5] 10% drop | Isat (A)[5] 20% drop | Isat (A)[5] 30% drop | Irms (A)[6] 20°C rise | Irms (A)[6] 40°C 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** (Z = Testing)
**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.

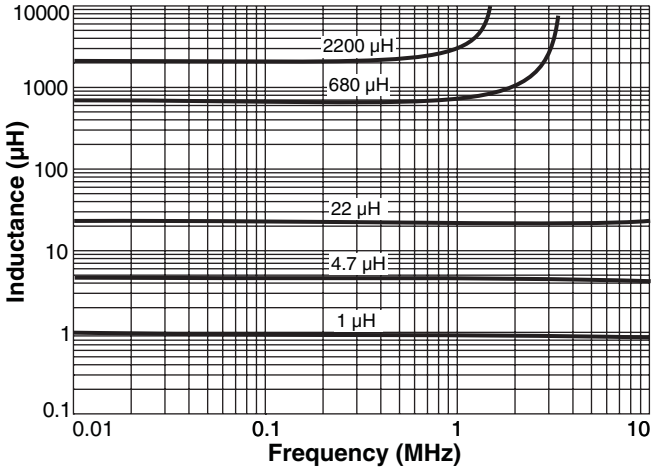
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

Coilcraft CPS
CRITICAL PRODUCTS & SERVICES
1102 Silver Lake Road
Cary, IL 60013
Phone 800-981-0363
Fax 847-639-1508
Email cps@coilcraft.com
www.coilcraft-cps.com

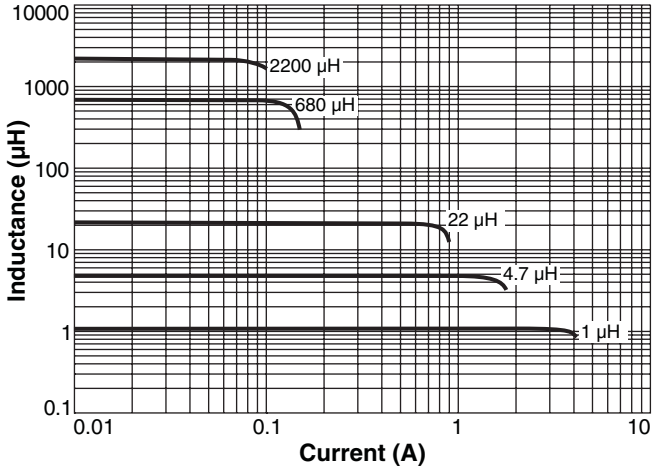
Document AE435-1 Revised 05/22/17

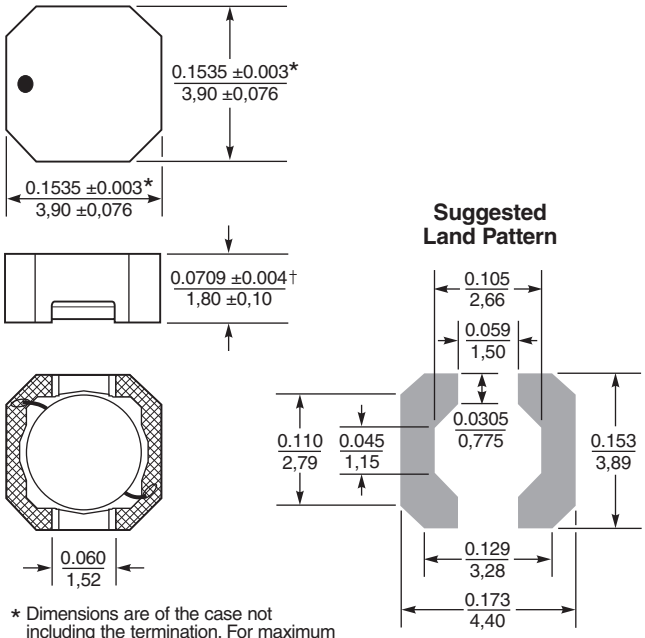
# AE425PJB Series (4018)

## 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 inches / mm

Coilcraft CPS
CRITICAL PRODUCTS & SERVICES

1102 Silver Lake Road
Cary, IL 60013
Phone 800-981-0363

Fax 847-639-1508
Email cps@coilcraft.com
www.coilcraft-cps.com



Document AE435-2 Revised 05/22/17