

# 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

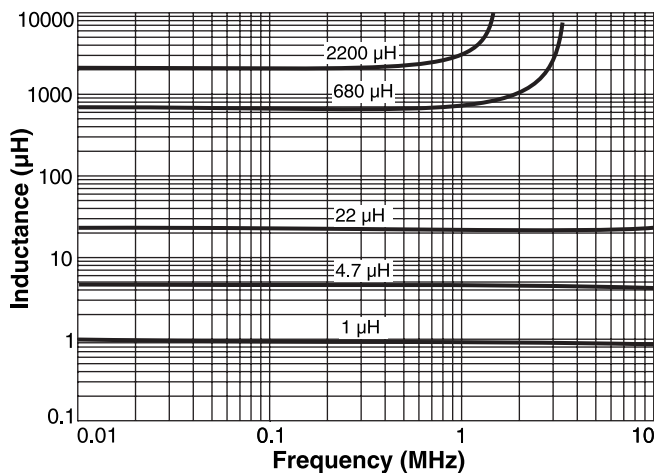
**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at <30°C / 85% relative humidity)

**Enhanced crush-resistant packaging** 1000/7" reel

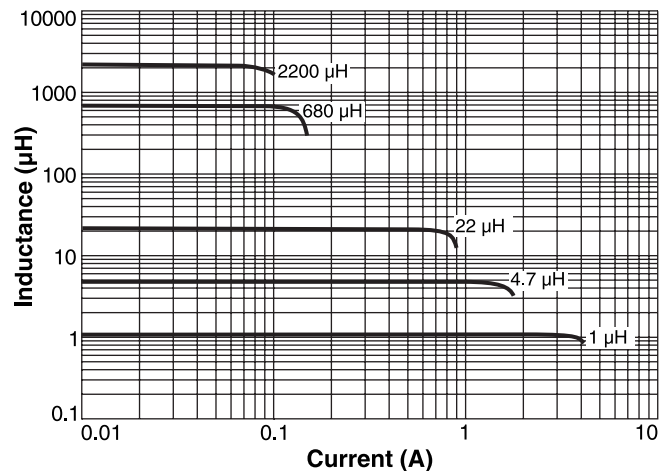
Plastic tape: 12 mm wide, 0.23 mm thick, 8 mm pocket spacing, 1.9 mm pocket depth

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

## Typical L vs Frequency



## Typical L vs Current



# AE425PJB Series (4018)

Part number <sup>1</sup>	Inductance <sup>2</sup> (µH)	DCR max <sup>3</sup> (Ohms)	SRF (MHz) <sup>4</sup>		Isat (A) <sup>5</sup>			Irms (A) <sup>6</sup>	
			min	typ	10% drop	20% drop	30% drop	20°C rise	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

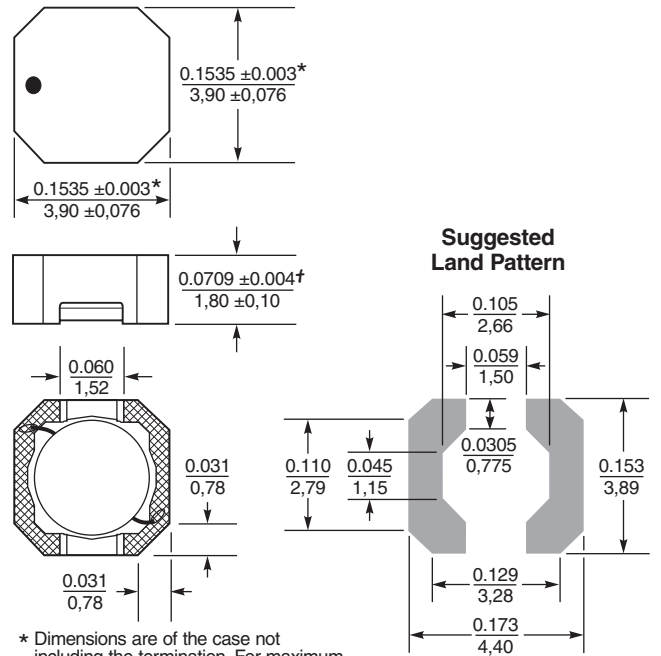
1. When ordering, please specify **screening** code:

**AE425PJB335MSZ**

**Screening:** Z = Unscreened

- 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 = 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 options G or F.

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.



\* 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  $\frac{\text{inches}}{\text{mm}}$



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 09/13/22

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.