

High-Reliability Power Inductors MS425PJB



- High temperature materials allow operation in ambient temperatures up to 155°C
- 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

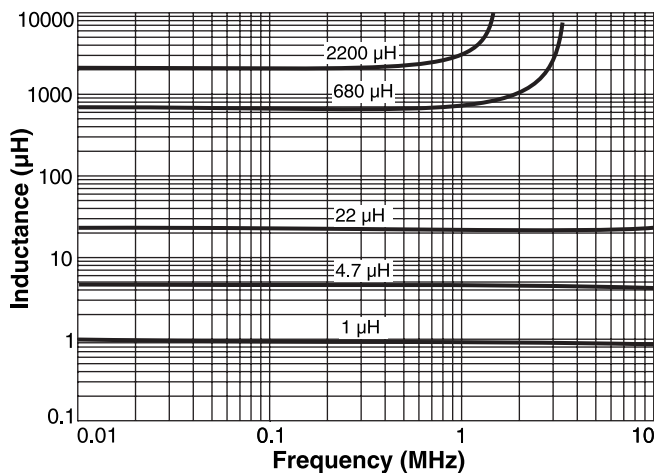
Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

Enhanced crush-resistant packaging 1000/7" reel

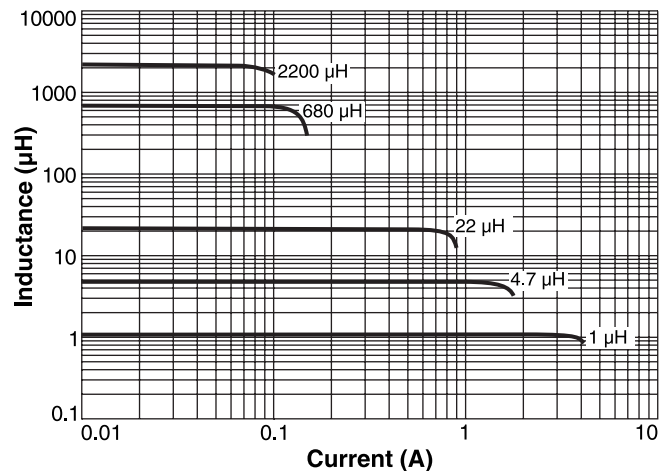
Plastic tape: 12 mm wide, 0.23 mm thick, 8 mm pocket spacing, 1.9 mm pocket depth

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

Typical L vs Frequency



Typical L vs Current



MS425PJB Series (4018)

Part number ¹	Inductance ² (μ H)	DCR max ³ (Ohms)	SRF (MHz) ⁴		Isat (A) ⁵			Irms (A) ⁶	
			min	typ	10% drop	20% drop	30% drop	20°C rise	40°C rise
MS425PJB351MSZ	0.35 \pm 20%	0.040	252	360	5.9	6.1	6.3	2.2	3.1
MS425PJB561MSZ	0.56 \pm 20%	0.030	175	250	4.8	5.2	5.3	1.9	2.8
MS425PJB102NSZ	1.0 \pm 30%	0.040	126	180	2.8	3.0	3.1	1.8	2.7
MS425PJB222MSZ	2.2 \pm 20%	0.070	63	90	2.7	2.8	2.9	1.6	2.3
MS425PJB262MSZ	2.6 \pm 20%	0.080	59	85	2.6	2.7	2.8	1.5	2.0
MS425PJB332MSZ	3.3 \pm 20%	0.080	52	75	2.1	2.3	2.4	1.4	2.0
MS425PJB472MSZ	4.7 \pm 20%	0.125	45	65	1.8	1.9	1.9	1.3	1.8
MS425PJB682MSZ	6.8 \pm 20%	0.150	35	50	1.2	1.3	1.3	1.0	1.5
MS425PJB103MSZ	10 \pm 20%	0.200	28	40	1.1	1.2	1.3	0.90	1.25
MS425PJB153MSZ	15 \pm 20%	0.260	22	32	0.86	0.91	0.94	0.80	1.12
MS425PJB183MSZ	18 \pm 20%	0.270	18	27	0.78	0.83	0.85	0.70	1.00
MS425PJB223MSZ	22 \pm 20%	0.360	18	26	0.74	0.80	0.83	0.65	0.90
MS425PJB333MSZ	33 \pm 20%	0.420	14	20	0.58	0.64	0.68	0.55	0.80
MS425PJB473MSZ	47 \pm 20%	0.650	11	16	0.51	0.55	0.56	0.45	0.68
MS425PJB683MSZ	68 \pm 20%	0.950	9.0	13	0.41	0.45	0.46	0.40	0.56
MS425PJB104MSZ	100 \pm 20%	1.40	7.0	10	0.34	0.36	0.37	0.35	0.50
MS425PJB124MSZ	120 \pm 20%	1.60	6.0	9.0	0.31	0.33	0.34	0.30	0.45
MS425PJB154MSZ	150 \pm 20%	2.00	5.6	8.0	0.27	0.29	0.30	0.28	0.40
MS425PJB184MSZ	180 \pm 20%	2.50	5.2	7.5	0.24	0.26	0.27	0.26	0.36
MS425PJB224MSZ	220 \pm 20%	3.70	4.5	6.5	0.21	0.225	0.235	0.20	0.30
MS425PJB334MSZ	330 \pm 20%	5.90	3.8	5.5	0.18	0.19	0.20	0.17	0.23
MS425PJB474MSZ	470 \pm 20%	7.80	3.0	4.5	0.14	0.16	0.17	0.15	0.20
MS425PJB564MSZ	560 \pm 20%	10.0	2.8	4.0	0.13	0.14	0.15	0.14	0.18
MS425PJB684MSZ	680 \pm 20%	11.5	2.4	3.5	0.12	0.13	0.14	0.12	0.16
MS425PJB824MSZ	820 \pm 20%	14.0	2.0	2.9	0.11	0.12	0.13	0.10	0.14
MS425PJB105MSZ	1000 \pm 20%	18.0	1.9	2.8	0.10	0.11	0.11	0.098	0.125
MS425PJB155MSZ	1500 \pm 20%	25.0	1.6	2.4	0.095	0.10	0.105	0.080	0.110
MS425PJB185MSZ	1800 \pm 20%	31.5	1.6	2.3	0.090	0.095	0.100	0.070	0.095
MS425PJB225MSZ	2200 \pm 20%	32.5	1.4	2.1	0.088	0.099	0.100	0.070	0.090
MS425PJB335MSZ	3300 \pm 20%	48.0	1.1	1.6	0.082	0.092	0.094	0.055	0.075

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

MS425PJB335MSZ

Screening: Z = Unscreened

H = Coilcraft CP-SA-10001 Group A

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

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 = ESSC3201 (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 \geq 10 MHz.

3. DCR measured on a micro-ohmmeter.

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

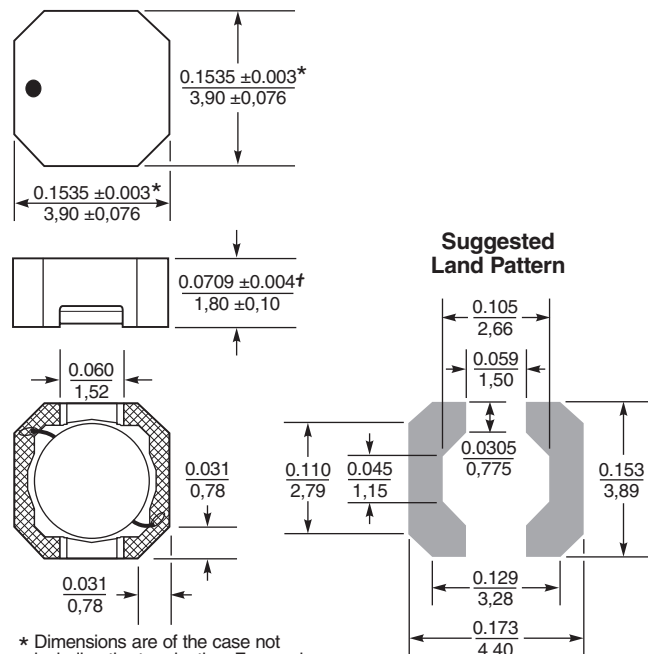
5. DC current at 25°C that causes the specified inductance drop from its value without current.

6. Current that causes the specified 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.



* 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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