

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

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

MS425PJB105MSZ

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

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 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.

Coilcraft CPS

CRITICAL PRODUCTS & SERVICES

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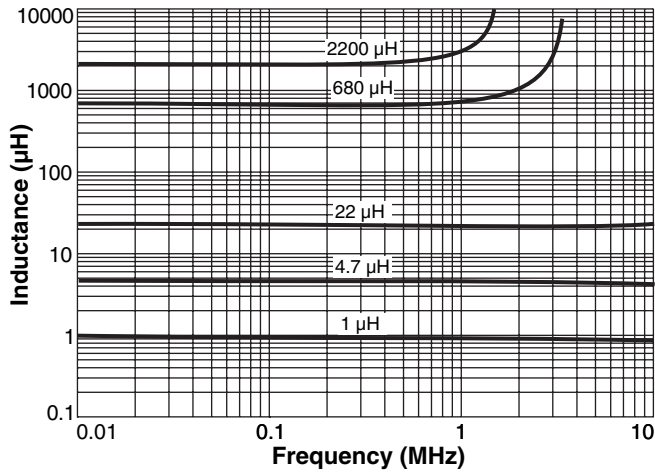
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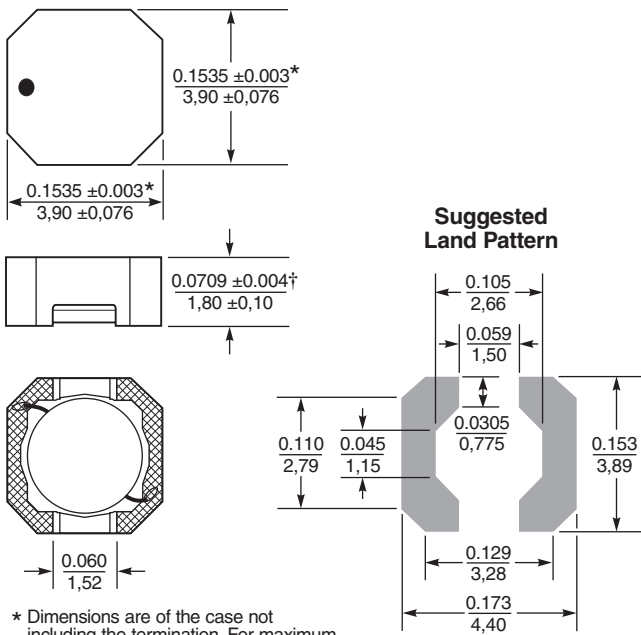
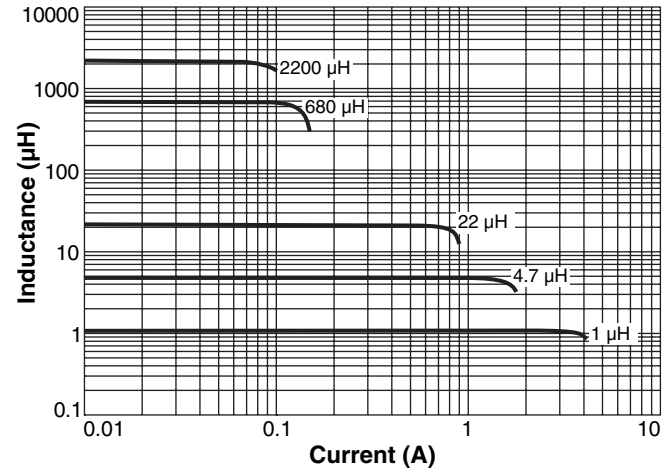
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MS425PJB Series (4018)

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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