

# High-Reliability Power Inductors ML425PJB



- High temperature material allows operation in ambient temperature up to 155°C
- Special construction allows it to pass vibration testing to 80 G and shock testing to 1000 G.

**Core material** Ferrite

**Terminations** Silver-palladium-platinum-glass frit.

**Weight** 95 – 116 mg

**Ambient temperature** –55°C to +85°C with Irms current

**Maximum part temperature** +155°C (ambient + temp rise)

**Storage temperature** Component: –55°C to +155°C.

Tape and reel 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> (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
ML425PJB351MLZ	0.35 ±20%	0.040	252	360	5.9	6.1	6.3	2.2	3.1
ML425PJB561MLZ	0.56 ±20%	0.030	175	250	4.8	5.2	5.3	1.9	2.8
ML425PJB102NLZ	1.0 ±30%	0.040	126	180	2.8	3.0	3.1	1.8	2.7
ML425PJB222MLZ	2.2 ±20%	0.070	63	90	2.7	2.8	2.9	1.6	2.3
ML425PJB262MLZ	2.6 ±20%	0.080	59	85	2.6	2.7	2.8	1.5	2.0
ML425PJB332MLZ	3.3 ±20%	0.080	52	75	2.1	2.3	2.4	1.4	2.0
ML425PJB472MLZ	4.7 ±20%	0.125	45	65	1.8	1.9	1.9	1.3	1.8
ML425PJB682MLZ	6.8 ±20%	0.150	35	50	1.2	1.3	1.3	1.0	1.5
ML425PJB103MLZ	10 ±20%	0.200	28	40	1.1	1.2	1.3	0.90	1.25
ML425PJB153MLZ	15 ±20%	0.260	22	32	0.86	0.91	0.94	0.80	1.12
ML425PJB183MLZ	18 ±20%	0.270	18	27	0.78	0.83	0.85	0.70	1.00
ML425PJB223MLZ	22 ±20%	0.360	18	26	0.74	0.80	0.83	0.65	0.90
ML425PJB333MLZ	33 ±20%	0.420	14	20	0.58	0.64	0.68	0.55	0.80
ML425PJB473MLZ	47 ±20%	0.650	11	16	0.51	0.55	0.56	0.45	0.68
ML425PJB683MLZ	68 ±20%	0.950	9.0	13	0.41	0.45	0.46	0.40	0.56
ML425PJB104MLZ	100 ±20%	1.40	7.0	10	0.34	0.36	0.37	0.35	0.50
ML425PJB124MLZ	120 ±20%	1.60	6.0	9.0	0.31	0.33	0.34	0.30	0.45
ML425PJB154MLZ	150 ±20%	2.00	5.6	8.0	0.27	0.29	0.30	0.28	0.40
ML425PJB184MLZ	180 ±20%	2.50	5.2	7.5	0.24	0.26	0.27	0.26	0.36
ML425PJB224MLZ	220 ±20%	3.70	4.5	6.5	0.21	0.225	0.235	0.20	0.30
ML425PJB334MLZ	330 ±20%	5.90	3.8	5.5	0.18	0.19	0.20	0.17	0.23
ML425PJB474MLZ	470 ±20%	7.80	3.0	4.5	0.14	0.16	0.17	0.15	0.20
ML425PJB564MLZ	560 ±20%	10.0	2.8	4.0	0.13	0.14	0.15	0.14	0.18
ML425PJB684MLZ	680 ±20%	11.5	2.4	3.5	0.12	0.13	0.14	0.12	0.16
ML425PJB824MLZ	820 ±20%	14.0	2.0	2.9	0.11	0.12	0.13	0.10	0.14
ML425PJB105MLZ	1000 ±20%	18.0	1.9	2.8	0.10	0.11	0.11	0.098	0.125
ML425PJB155MLZ	1500 ±20%	25.0	1.6	2.4	0.095	0.10	0.105	0.080	0.110
ML425PJB185MLZ	1800 ±20%	31.5	1.6	2.3	0.090	0.095	0.100	0.070	0.095
ML425PJB225MLZ	2200 ±20%	32.5	1.4	2.1	0.088	0.099	0.100	0.070	0.090
ML425PJB335MLZ	3300 ±20%	48.0	1.1	1.6	0.082	0.092	0.094	0.055	0.075

1. Please specify **termination** and **testing** codes:

**ML425PJB105MLZ**

**Termination:** L = Silver-palladium-platinum-glass frit

R = Matte tin over nickel over silver

Z = Unscreened

**Testing:**

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 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.

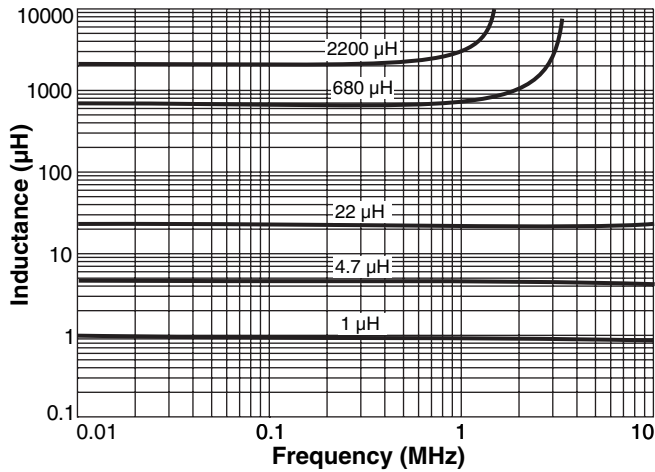
7. Electrical specifications at 25°C.

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

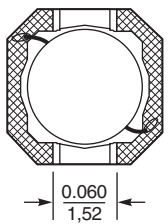
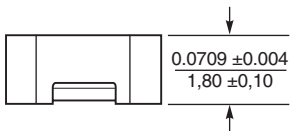
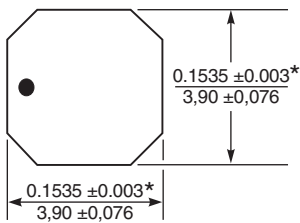
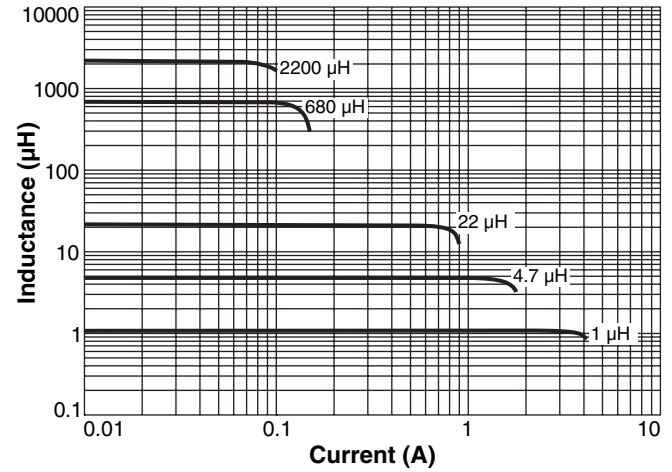
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# ML425PJB Series (4018)

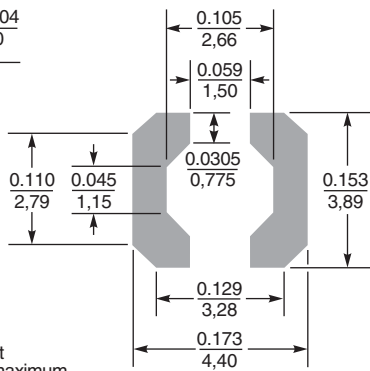
## Typical L vs Frequency



## Typical L vs Current



### Suggested Land Pattern



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

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



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