

# High-Reliability Power Inductors MS432PJB



- 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** 102 – 107 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, 0.3 mm thick, 8 mm pocket spacing, 1.57 mm pocket depth

**Recommended pick and place nozzle** OD: 5 mm; ID: ≤ 2.5 mm

Part number <sup>1</sup>	Inductance <sup>2</sup> ±20% (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
MS432PJB102MSZ	1.0	0.050	128	183	3.6	3.8	3.9	1.5	2.1
MS432PJB132MSZ	1.3	0.065	105	150	2.5	2.6	2.8	1.4	1.9
MS432PJB182MSZ	1.8	0.075	89	128	2.6	2.8	2.9	1.2	1.7
MS432PJB222MSZ	2.2	0.090	81	116	2.4	2.6	2.7	1.1	1.6
MS432PJB332MSZ	3.3	0.125	61	88	1.9	2.0	2.0	1.0	1.4
MS432PJB472MSZ	4.7	0.150	51	73	1.6	1.7	1.8	1.0	1.3
MS432PJB562MSZ	5.6	0.175	46	67	1.6	1.6	1.6	0.88	1.2
MS432PJB682MSZ	6.8	0.225	40	57	1.3	1.4	1.5	0.72	1.0
MS432PJB822MSZ	8.2	0.280	34	49	1.3	1.3	1.4	0.68	0.84
MS432PJB103MSZ	10	0.300	31	44	1.2	1.3	1.3	0.64	0.76
MS432PJB123MSZ	12	0.350	28	40	1.0	1.1	1.2	0.60	0.67
MS432PJB153MSZ	15	0.360	27	38	0.80	0.84	0.86	0.58	0.67
MS432PJB183MSZ	18	0.550	24	35	0.75	0.77	0.80	0.56	0.66
MS432PJB223MSZ	22	0.675	22	31	0.70	0.73	0.75	0.48	0.66
MS432PJB333MSZ	33	0.750	17.0	24	0.55	0.59	0.60	0.40	0.56
MS432PJB473MSZ	47	1.00	12.6	18	0.46	0.48	0.49	0.36	0.46
MS432PJB563MSZ	56	1.13	12.0	17	0.40	0.43	0.45	0.32	0.42
MS432PJB683MSZ	68	1.45	10.5	15	0.33	0.38	0.39	0.28	0.38
MS432PJB104MSZ	100	1.95	8.4	12	0.30	0.33	0.34	0.24	0.34
MS432PJB124MSZ	120	2.50	7.0	10	0.25	0.28	0.30	0.22	0.30
MS432PJB154MSZ	150	3.40	6.5	9.3	0.23	0.25	0.26	0.20	0.26
MS432PJB224MSZ	220	4.50	5.1	7.3	0.20	0.21	0.22	0.18	0.23
MS432PJB334MSZ	330	7.40	4.0	5.7	0.15	0.17	0.18	0.14	0.18
MS432PJB474MSZ	470	7.50	3.4	4.9	0.12	0.12	0.13	0.13	0.17
MS432PJB564MSZ	560	8.50	3.0	4.3	0.10	0.11	0.12	0.11	0.15
MS432PJB684MSZ	680	10.6	2.8	4.0	0.10	0.11	0.11	0.10	0.14
MS432PJB105MSZ	1000	15.0	2.2	3.2	0.080	0.090	0.093	0.080	0.12
MS432PJB155MSZ	1500	25.0	1.7	2.5	0.080	0.086	0.088	0.070	0.11
MS432PJB185MSZ	1800	28.0	1.5	2.2	0.078	0.083	0.086	0.070	0.10
MS432PJB225MSZ	2200	36.0	1.5	2.1	0.072	0.078	0.080	0.050	0.070
MS432PJB335MSZ	3300	55.0	1.2	1.7	0.064	0.072	0.076	0.045	0.060
MS432PJB475MSZ	4700	80.0	1.0	1.4	0.062	0.069	0.072	0.035	0.050

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

MS432PJB475MSZ

**Screening:**

**Z** = Unscreened

**Y** = Unscreened (SLDC Option A)

**W** = Unscreened (SLDC Option B)

**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)

**1/2/3** = EEE-INST-002 (Family 1) Level 1/2/3

**4/5** = MIL-STD-981 (Family 04) Class B=4, Class S=5

**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 neces-

sary. 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.

3. DCR measured on a micro-ohmmeter.

4. SRF measured using an 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.



CRITICAL PRODUCTS & SERVICES

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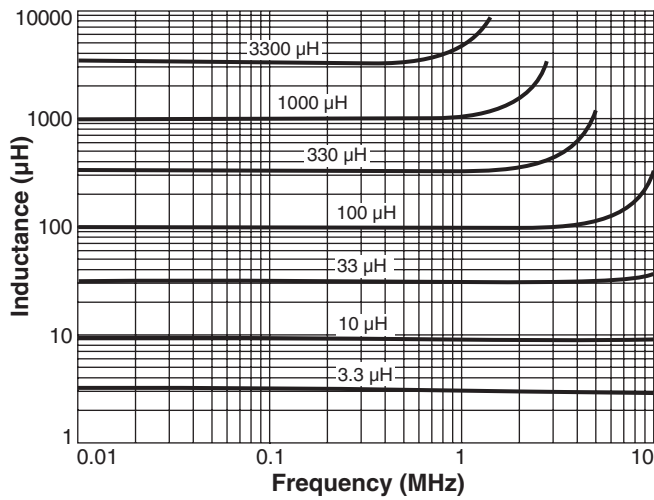
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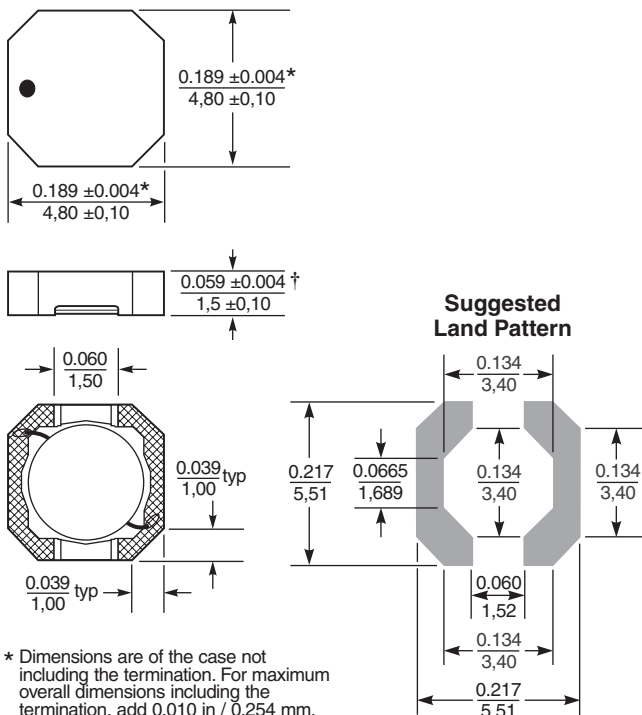
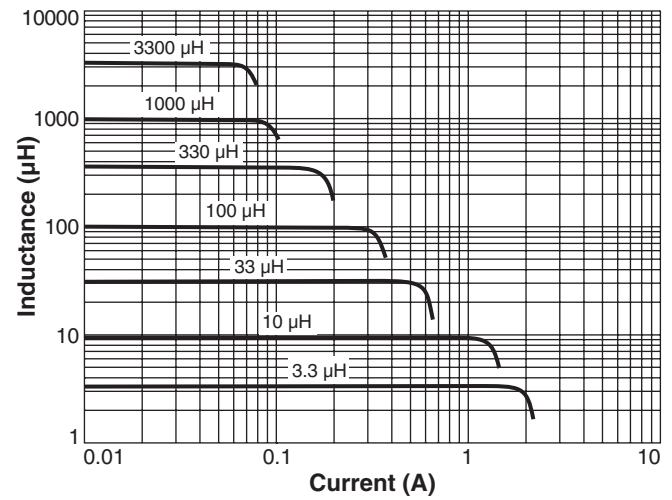
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# MS432PJB Series (5015)

## 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 0.010 in / 0,254 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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