

# High-Reliability Power Inductors MS486PJB



- 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** 307 – 352 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** 750/7" reel

Plastic tape: 12 mm wide, 0.3 mm thick, 8 mm pocket spacing, 2.57 mm pocket depth

**Recommended pick and place nozzle** OD: 6.2 mm; ID: ≤ 3.1 mm

Part number <sup>1</sup>	Inductance <sup>2</sup> ±20% (µH)	DCR <sup>3</sup> max (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
MS486PJB122MSZ	1.2	0.040	125	178	5.3	5.4	5.4	0.88	1.3
MS486PJB222MSZ	2.2	0.045	70	100	3.9	4.0	4.1	0.80	1.1
MS486PJB332MSZ	3.3	0.055	48	68	3.5	3.5	3.6	0.80	1.0
MS486PJB472MSZ	4.7	0.070	37	53	3.0	3.1	3.2	0.72	1.0
MS486PJB682MSZ	6.8	0.095	28	40	2.6	2.7	2.8	0.72	1.0
MS486PJB103MSZ	10	0.105	25	35	2.1	2.1	2.2	0.72	1.0
MS486PJB153MSZ	15	0.135	16	23	2.1	2.2	2.2	0.68	0.96
MS486PJB223MSZ	22	0.225	12	17	1.4	1.5	1.6	0.64	0.88
MS486PJB333MSZ	33	0.260	9.8	14	1.1	1.2	1.2	0.52	0.72
MS486PJB473MSZ	47	0.360	7.0	10	0.98	1.0	1.0	0.48	0.64
MS486PJB683MSZ	68	0.420	6.7	9.6	0.58	0.61	0.62	0.46	0.59
MS486PJB104MSZ	100	0.610	5.4	7.7	0.48	0.51	0.52	0.38	0.51
MS486PJB124MSZ	120	0.750	5.2	7.4	0.42	0.45	0.46	0.34	0.46
MS486PJB154MSZ	150	0.920	4.5	6.4	0.39	0.41	0.42	0.32	0.43
MS486PJB224MSZ	220	1.30	3.5	5.0	0.32	0.34	0.35	0.30	0.40
MS486PJB334MSZ	330	2.00	2.7	3.8	0.26	0.27	0.28	0.22	0.31
MS486PJB474MSZ	470	2.60	2.2	3.2	0.22	0.23	0.24	0.19	0.30
MS486PJB684MSZ	680	4.00	2.0	2.8	0.18	0.19	0.20	0.14	0.21
MS486PJB105MSZ	1000	6.00	1.6	2.3	0.15	0.16	0.17	0.12	0.19
MS486PJB155MSZ	1500	9.00	1.3	1.8	0.12	0.13	0.13	0.10	0.16
MS486PJB185MSZ	1800	11.7	1.2	1.7	0.11	0.12	0.12	0.090	0.11
MS486PJB225MSZ	2200	13.5	0.9	1.3	0.10	0.10	0.11	0.090	0.10
MS486PJB335MSZ	3300	21.0	0.8	1.1	0.099	0.10	0.11	0.065	0.090
MS486PJB475MSZ	4700	30.0	0.6	0.90	0.086	0.096	0.10	0.060	0.070
MS486PJB565MSZ	5600	36.0	0.5	0.72	0.077	0.090	0.096	0.055	0.070
MS486PJB685MSZ	6800	43.0	0.5	0.70	0.080	0.086	0.089	0.050	0.060
MS486PJB825MSZ	8200	54.0	0.5	0.69	0.079	0.086	0.088	0.050	0.060
MS486PJB106MSZ	10000	70.0	0.5	0.68	0.050	0.050	0.060	0.045	0.050

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

**MS486PJB106MSZ**

**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

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.

**Coilcraft CPS**

CRITICAL PRODUCTS & SERVICES

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1102 Silver Lake Road  
Cary, IL 60013  
Phone 800-981-0363

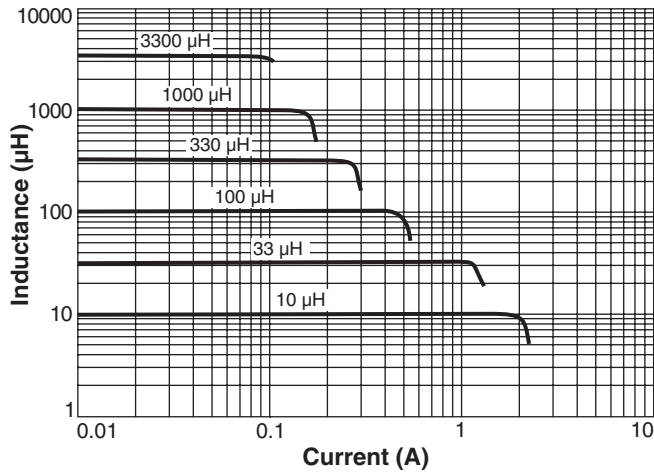
Fax 847-639-1508  
Email cps@coilcraft.com  
www.coilcraft-cps.com

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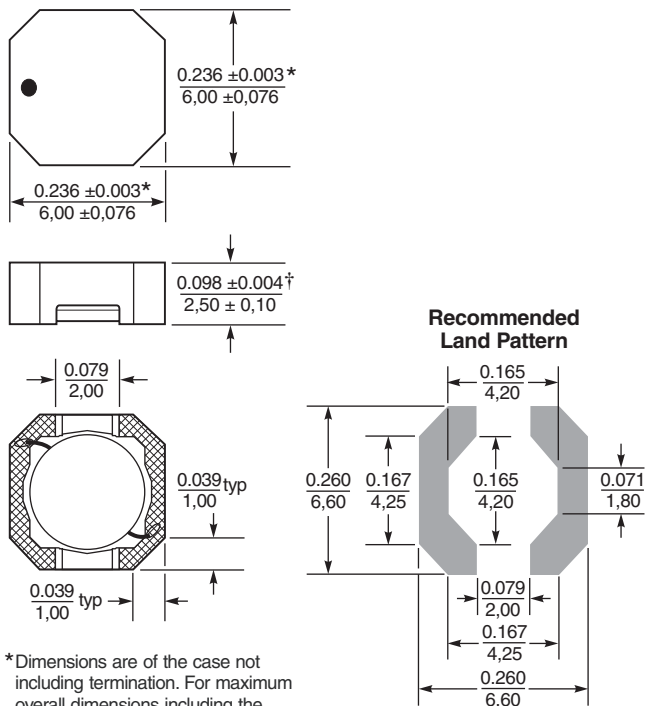
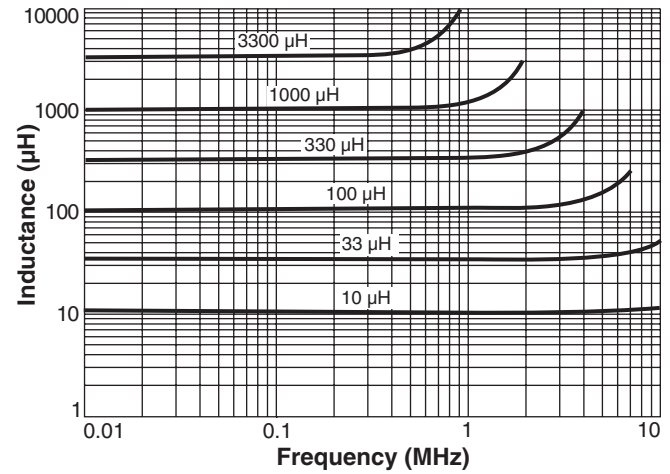
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# MS486PJB Series (6225)

## Typical L vs Current



## Typical L vs Frequency



\*Dimensions are of the case not including termination. For maximum overall dimensions including the termination, add 0.010 inches / 0,254 mm.

† Height dimension is after mounting. For maximum height dimension before mounting, add 0.006 in / 0,152 mm.

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



1102 Silver Lake Road  
Cary, IL 60013  
Phone 800-981-0363

Fax 847-639-1508  
Email cps@coilcraft.com  
www.coilcraft-cps.com

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