

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 ¹ | Inductance ² ±20% (µH) | DCR ³ max (Ohms) | SRF (MHz) ⁴ | | Isat (A) ⁵ | | | Irms (A) ⁶ | |
|--------------------------|--------------------------------------|-----------------------------------|---------------------------|------|-----------------------|-------------|-------------|-----------------------|--------------|
| | | | 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 screening code:

MS486PJB106MSZ

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 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.

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.

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Coilcraft CPS

CRITICAL PRODUCTS & SERVICES

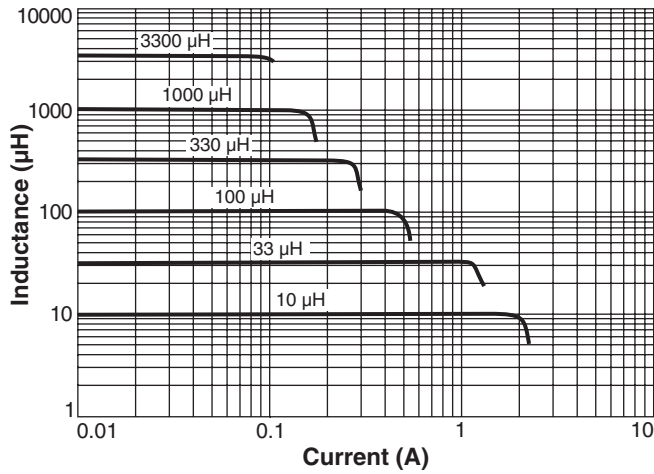
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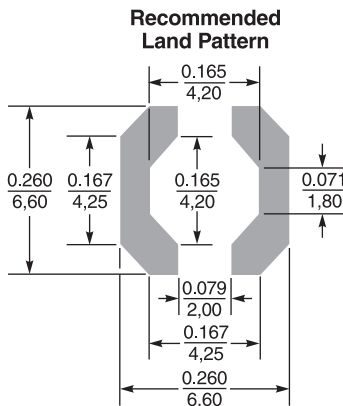
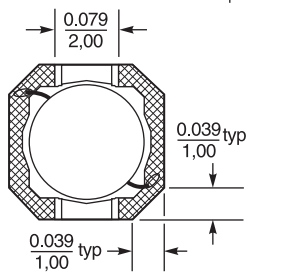
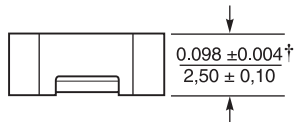
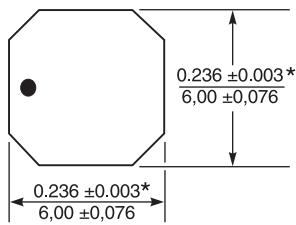
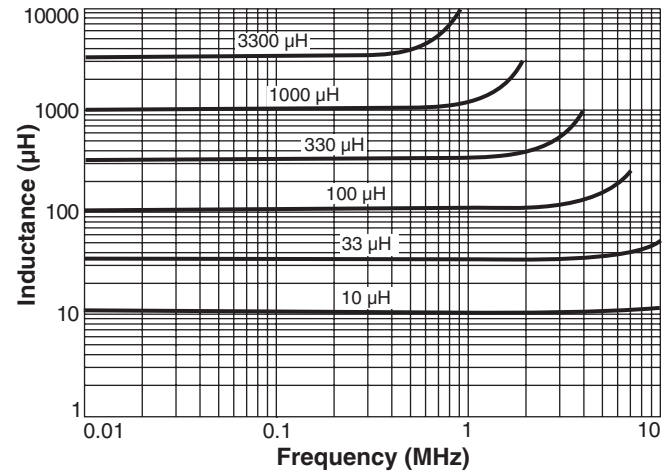
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MS486PJB Series (6225)

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 inches / mm



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