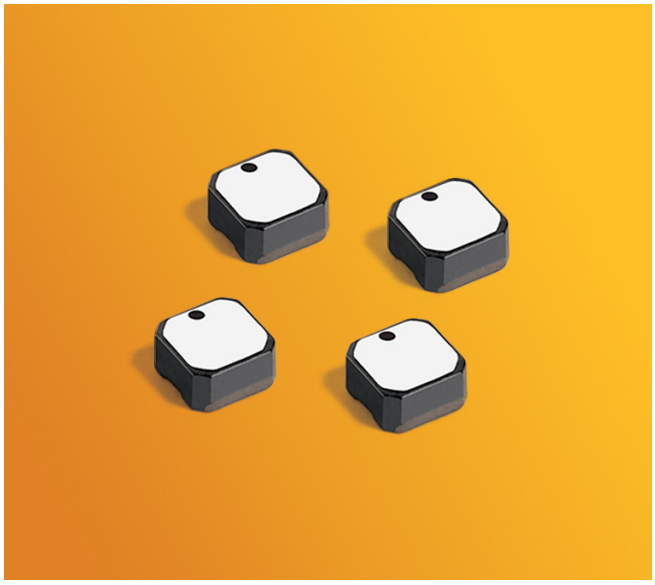
High-Reliability Power Inductors MS412PJB



- 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 50 – 62 mg

Ambient temperature –55°C to +105°C with (40°C) 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, 0.26 mm thick, 8 mm pocket spacing, 1.65 mm pocket depth

Recommended pick and place nozzle OD: 3 mm; ID: ≤1.5 mm

Part number[1]	Inductance[2] ±20% (µH)	DCR max[3] (Ohms)	SRF (MHz)[4] min	SRF (MHz)[4] typ	Isat (A)[5] 10% drop	Isat (A)[5] 20% drop	Isat (A)[5] 30% drop	Irms (A)[6] 20°C rise	Irms (A)[6] 40°C rise
MS412PJB102MSZ	1.0	0.075	133	190	1.8	2.0	2.1	1.1	1.6
MS412PJB152MSZ	1.5	0.100	98.0	140	1.8	2.1	2.2	1.0	1.4
MS412PJB182MSZ	1.8	0.100	94.5	135	1.5	1.7	2.1	0.88	1.1
MS412PJB222MSZ	2.2	0.110	77.0	110	2.0	2.0	2.1	0.88	1.1
MS412PJB332MSZ	3.3	0.130	63.0	90	1.4	1.5	1.5	0.80	1.1
MS412PJB472MSZ	4.7	0.200	55.3	79	1.1	1.2	1.2	0.72	1.0
MS412PJB682MSZ	6.8	0.300	40.6	58	0.83	0.86	0.89	0.54	0.72
MS412PJB103MSZ	10	0.440	33.6	48	0.60	0.69	0.73	0.44	0.60
MS412PJB153MSZ	15	0.700	24.5	35	0.58	0.61	0.62	0.35	0.47
MS412PJB183MSZ	18	0.750	23.1	33	0.56	0.58	0.59	0.34	0.46
MS412PJB223MSZ	22	0.825	21.0	30	0.48	0.49	0.50	0.34	0.46
MS412PJB333MSZ	33	1.30	16.1	23	0.39	0.41	0.42	0.28	0.38
MS412PJB473MSZ	47	1.55	11.9	17	0.36	0.38	0.39	0.24	0.32
MS412PJB683MSZ	68	2.25	9.80	14	0.30	0.31	0.32	0.20	0.26
MS412PJB104MSZ	100	3.40	7.70	11	0.24	0.25	0.26	0.15	0.21
MS412PJB124MSZ	120	4.60	6.30	9.0	0.21	0.22	0.23	0.14	0.18
MS412PJB154MSZ	150	6.10	5.60	8.0	0.19	0.20	0.20	0.12	0.16
MS412PJB184MSZ	180	8.60	5.25	7.5	0.16	0.17	0.17	0.10	0.14
MS412PJB224MSZ	220	9.50	4.20	6.0	0.15	0.16	0.16	0.090	0.12
MS412PJB334MSZ	330	23.0	3.50	5.0	0.10	0.11	0.11	0.060	0.080

1. When ordering, please specify **testing** code:
   MS412PJB333MSZ
   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. Inductance at 1 MHz is the same for parts with SRF ≥10 MHz.
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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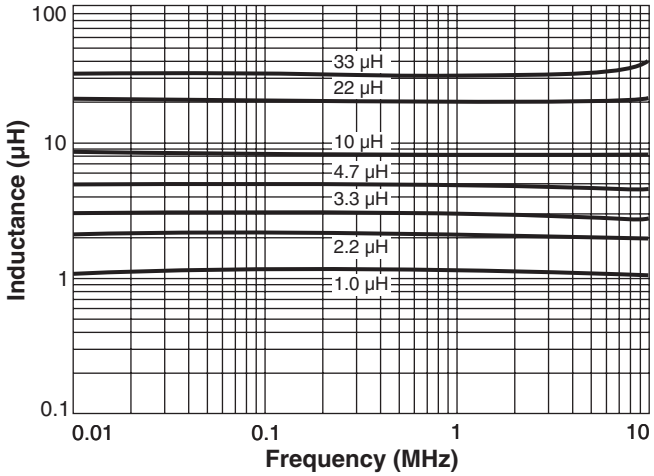
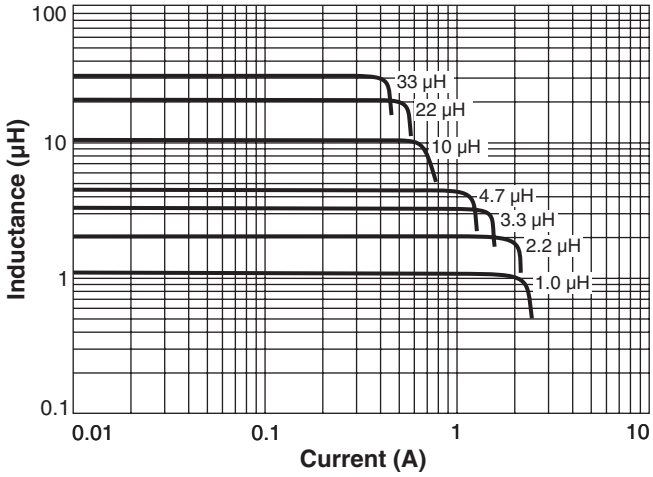
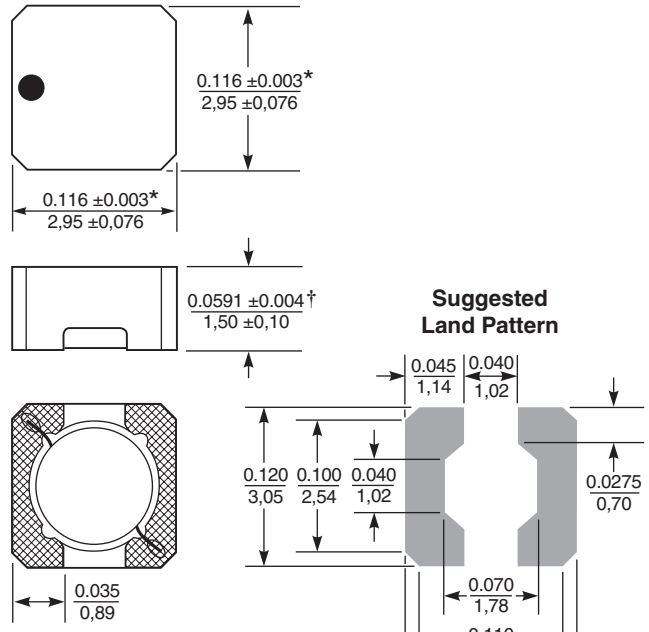
MS412PJB Series (3015)

Typical L vs Frequency



Typical L vs Current





* Dimensions are of the case not including the termination. For maximum overall dimensions including the termination and solder, 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 inches / mm

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