

# High-Reliability Power Inductors ML512PJB



- 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.

**Core material** Ferrite

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

**Weight** 395 – 544 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.

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** 350/7" reel

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

3.68 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
ML512PJB682MLZ	6.8	0.075	39	55	2.6	2.7	2.8	1.0	1.5
ML512PJB822MLZ	8.2	0.095	34	48	2.5	2.6	2.7	1.0	1.5
ML512PJB103MLZ	10.0	0.100	26	37	2.3	2.4	2.5	1.0	1.4
ML512PJB123MLZ	12.0	0.110	20	29	1.9	2.2	2.3	1.0	1.4
ML512PJB153MLZ	15.0	0.125	18	25	1.9	2.0	2.0	0.97	1.4
ML512PJB183MLZ	18.0	0.140	17	24	1.7	1.8	1.9	0.96	1.3
ML512PJB223MLZ	22.0	0.145	17	24	1.6	1.7	1.7	0.88	1.3
ML512PJB333MLZ	33.0	0.180	11	16	1.3	1.4	1.5	0.80	1.0
ML512PJB473MLZ	47.0	0.245	9.0	13	1.1	1.2	1.2	0.64	0.92
ML512PJB563MLZ	56.0	0.280	8.4	12	1.0	1.0	1.1	0.60	0.86
ML512PJB683MLZ	68.0	0.345	7.6	10.8	0.90	0.94	0.96	0.58	0.80
ML512PJB823MLZ	82.0	0.315	7.0	10.0	0.46	0.52	0.55	0.58	0.76
ML512PJB104MLZ	100.0	0.375	6.3	9.0	0.46	0.52	0.54	0.56	0.72
ML512PJB124MLZ	120.0	0.435	5.8	8.3	0.44	0.48	0.51	0.48	0.64
ML512PJB154MLZ	150.0	0.535	5.1	7.3	0.37	0.43	0.45	0.42	0.58
ML512PJB224MLZ	220.0	0.720	4.0	5.6	0.31	0.36	0.37	0.36	0.51
ML512PJB334MLZ	330.0	1.02	3.0	4.4	0.26	0.29	0.30	0.32	0.44
ML512PJB474MLZ	470.0	1.58	2.5	3.6	0.22	0.25	0.26	0.29	0.40
ML512PJB564MLZ	560.0	1.75	2.2	3.1	0.20	0.22	0.23	0.26	0.37
ML512PJB684MLZ	680.0	1.97	2.0	2.8	0.17	0.19	0.21	0.22	0.32
ML512PJB824MLZ	820.0	2.70	1.8	2.5	0.16	0.18	0.19	0.21	0.26
ML512PJB105MLZ	1000.0	3.20	1.5	2.2	0.14	0.17	0.18	0.19	0.24
ML512PJB155MLZ	1500.0	4.60	1.3	1.9	0.12	0.13	0.14	0.15	0.21
ML512PJB185MLZ	1800.0	5.42	1.2	1.7	0.11	0.12	0.13	0.14	0.18
ML512PJB225MLZ	2200.0	6.40	1.0	1.5	0.090	0.11	0.11	0.13	0.18
ML512PJB335MLZ	3300.0	8.90	0.88	1.1	0.080	0.090	0.10	0.11	0.14
ML512PJB475MLZ	4700.0	14.0	0.66	0.94	0.070	0.077	0.084	0.095	0.12
ML512PJB565MLZ	5600.0	16.4	0.66	0.86	0.070	0.080	0.085	0.080	0.10
ML512PJB685MLZ	6800.0	21.4	0.56	0.80	0.070	0.075	0.080	0.070	0.095
ML512PJB825MLZ	8200.0	24.0	0.49	0.70	0.062	0.070	0.078	0.065	0.090
ML512PJB106MLZ	10000.0	29.0	0.43	0.61	0.059	0.067	0.074	0.060	0.075

1. Specify **termination** and **screening** codes:

ML512PJB106MLZ

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

R = Matte tin over nickel over silver

**Screening:** Z = Unscreened

Y = Unscreened (SLDC Option A)

W = Unscreened (SLDC Option B)

H = Group A screening per Coilcraft CP-SA-10001

G = Coilcraft CP-SA-10001 Group A (SLDC Option A)

D = Coilcraft CP-SA-10001 Group A (SLDC Option B)

• Screening performed to the document's latest revision.

• 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.

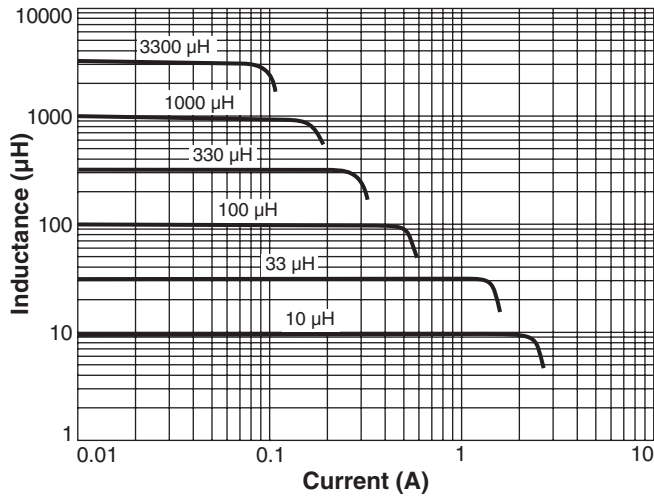
6. Current that causes the specified temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.

7. Electrical specifications at 25°C.

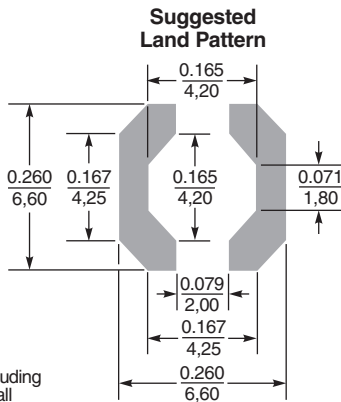
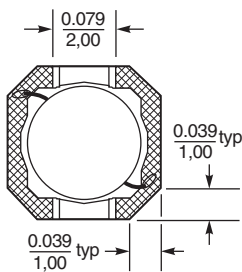
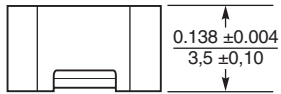
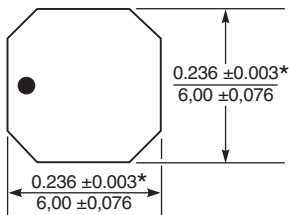
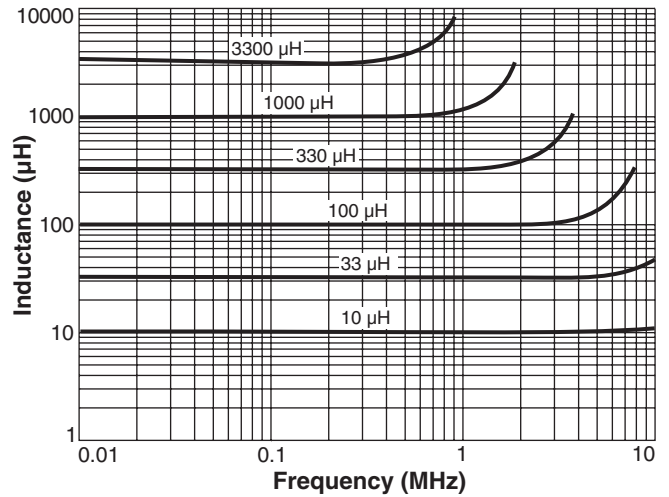
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

# ML512PJB Series (6235)

## Typical L vs Current



## Typical L vs Frequency



\* Dimensions are of the case not including the termination. For maximum overall dimensions including the termination, add 0.005 inches / 0.13 mm.

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

