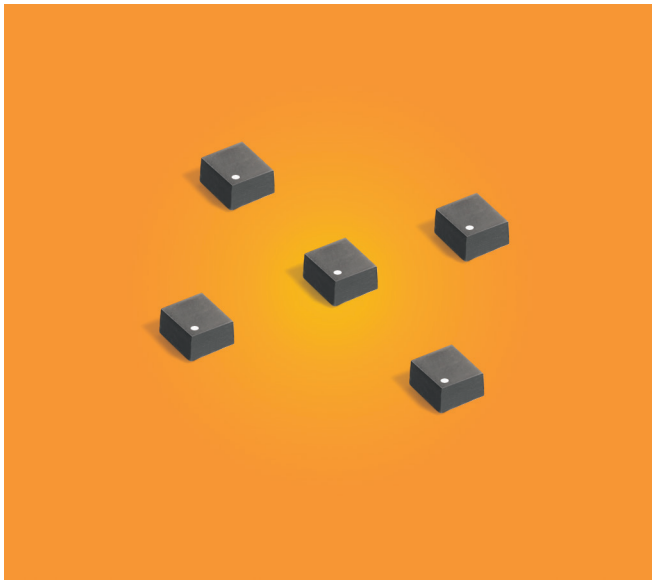
High Reliability Power Inductors MS338PWA



- High temperature materials allow operation in ambient temperatures up to 155°C
- Very low DCR and excellent current handling.
- Soft saturation makes them ideal for VRM/VRD applications.
- Tin-lead (Sn-Pb) termination for the best possible board adhesion
- Special construction allows it to pass vibration testing to 30 G and shock testing to 500 G.

Weight 22 mg

Terminations Tin-lead (63/37) over tin over nickel over silver.

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 2000/7″ reel
Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.19 mm pocket depth

Part number[1]	Inductance[2] ±20% (µH)	DCR (Ohms)[3] nom	DCR (Ohms)[3] max	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
MS338PWA201MSZ	0.20	0.024	0.027	286	408	2.80	3.45	3.75	2.2	2.8
MS338PWA331MSZ	0.33	0.031	0.035	216	309	1.90	2.75	3.05	1.9	2.6
MS338PWA501MSZ	0.50	0.040	0.045	153	218	1.80	2.35	2.64	1.7	2.3
MS338PWA681MSZ	0.68	0.057	0.063	106	152	1.55	1.95	2.19	1.5	2.1
MS338PWA821MSZ	0.82	0.068	0.075	93	132	1.25	1.65	1.90	1.3	1.7
MS338PWA102MSZ	1.0	0.081	0.089	82	117	1.20	1.60	1.80	1.1	1.6
MS338PWA152MSZ	1.5	0.105	0.116	56	80	0.950	1.30	1.50	1.0	1.4
MS338PWA222MSZ	2.2	0.156	0.173	53	75	0.940	1.20	1.35	0.96	1.3
MS338PWA332MSZ	3.3	0.207	0.228	39	55	0.700	0.925	1.05	0.79	1.1
MS338PWA472MSZ	4.7	0.336	0.370	28	40	0.580	0.750	0.845	0.74	1.0
MS338PWA682MSZ	6.8	0.421	0.463	23	33	0.450	0.620	0.725	0.64	0.87
MS338PWA822MSZ	8.2	0.457	0.503	21	30	0.440	0.600	0.670	0.55	0.75
MS338PWA103MSZ	10	0.555	0.611	20	28	0.390	0.525	0.610	0.49	0.66

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

MS338PWA103MSZ

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)
All screening performed to the document's latest revision

2. Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc.
3. DCR measured on a micro-ohmmeter.
4. SRF measured using Agilent/HP 4395A or equivalent.
5. DC current at which the inductance drops the specified amount from its value without current.
6. Current that causes the specified temperature rise from 25°C ambient.
7. Electrical specifications at 25°C.

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

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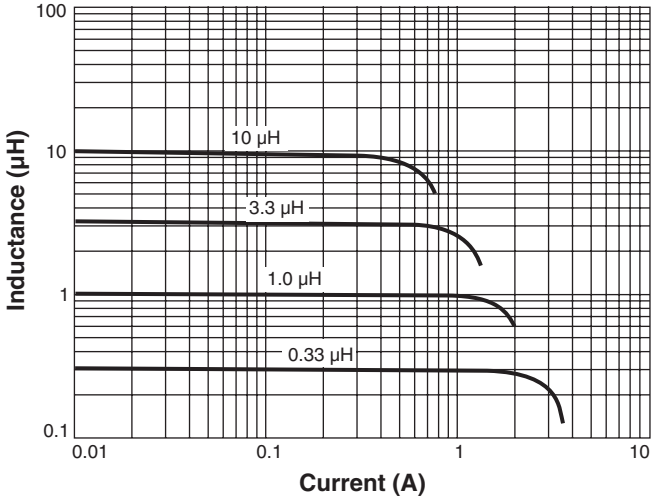
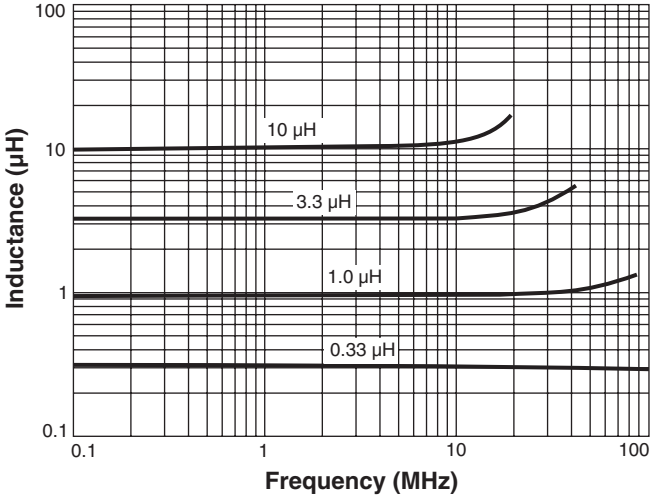
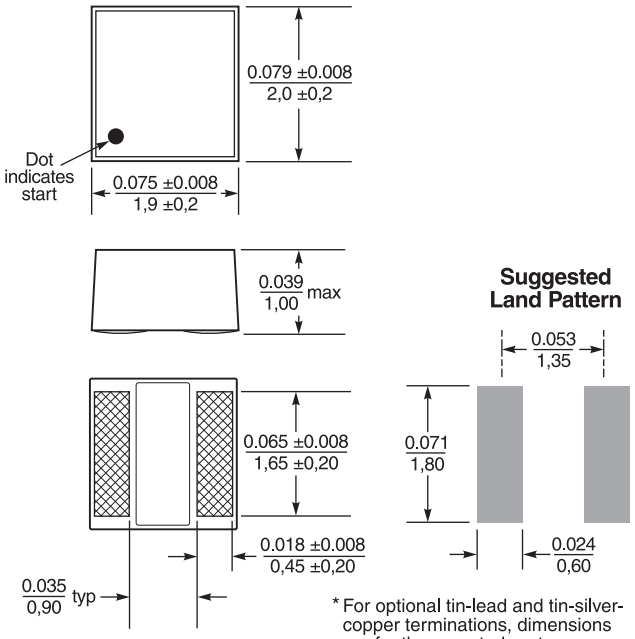
MS338PWA Series

Typical L vs Current



Typical L vs Frequency





* For optional tin-lead and tin-silver-copper terminations, dimensions are for the mounted part. Dimensions before mounting can be an additional 0.005 inch / 0.13 mm.

Dimensions are in inches / mm

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