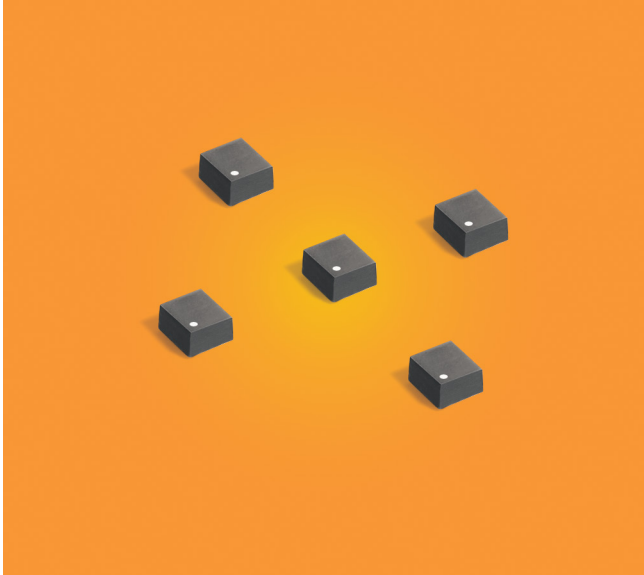


# High Reliability Power Inductors MS338PWA



- 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 <sup>1</sup>	Inductance <sup>2</sup> ±20% (µH)	DCR (Ohms) <sup>3</sup>		SRF (MHz) <sup>4</sup>		Isat (A) <sup>5</sup>			Irms (A) <sup>6</sup>	
		nom	max	min	typ	10% drop	20% drop	30% drop	20°C rise	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 **testing** code:

**MS338PWA224MSZ**

**Testing:**

**Z** = Unscreened

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

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.

**Coilcraft CPS**  
CRITICAL PRODUCTS & SERVICES

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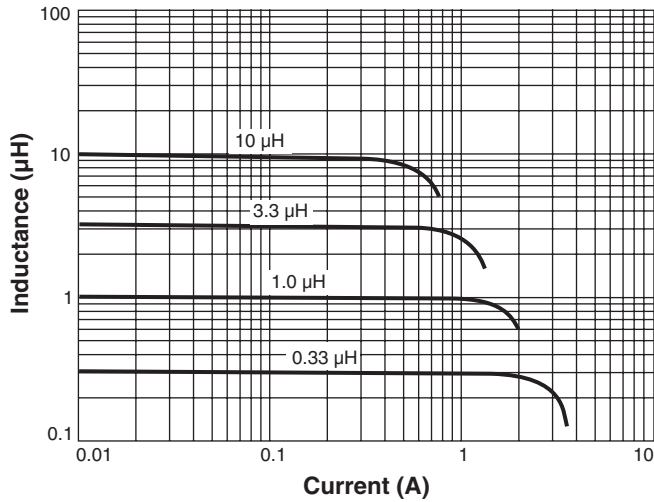
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Document MS646-1 Revised 05/22/17

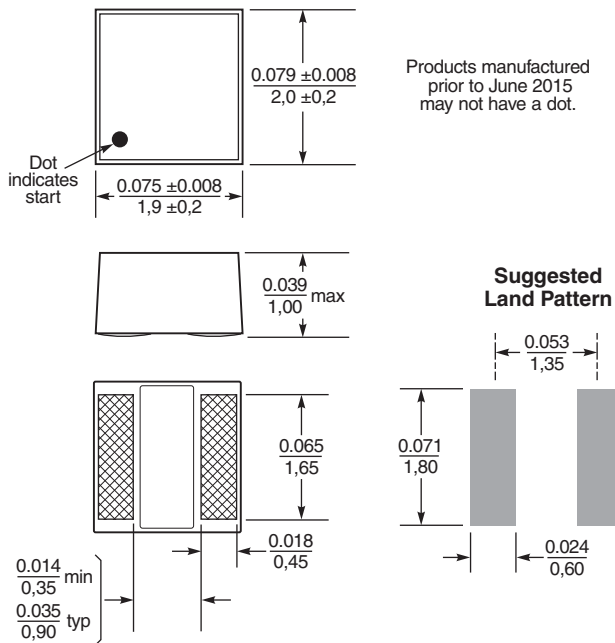
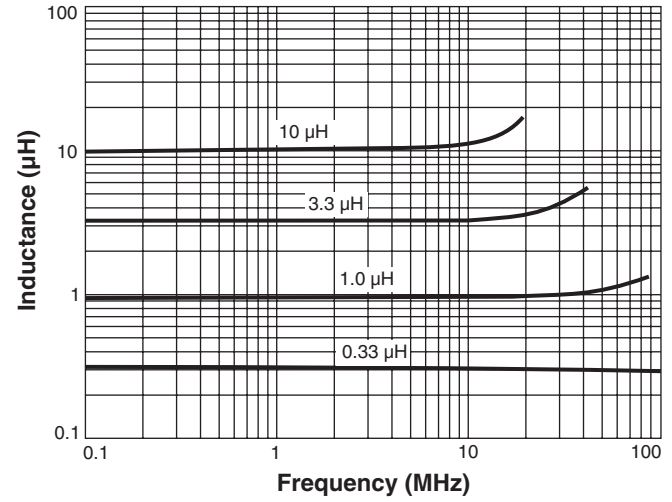
This product may not be used in medical or high risk applications without prior Coilcraft approval. Specifications subject to change without notice. Please check our web site for latest information.

# MS338PWA Series

## Typical L vs Current



## Typical L vs Frequency



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



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