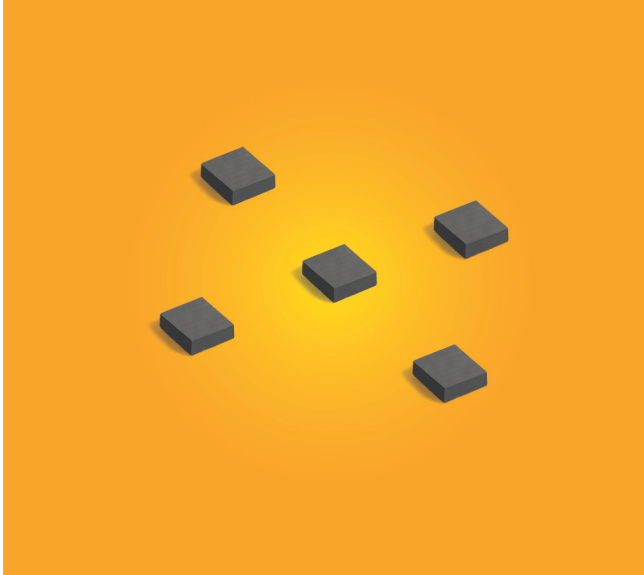


# High Reliability Power Inductors MS322PZA



- High temperature materials allow operation in ambient temperatures up to 155°C
- Tin-lead (Sn-Pb) termination for the best possible board adhesion
- Lowest profile, ultra-miniature, shielded power inductor
- Soft saturation makes them ideal for VRM/VRD applications.
- Special construction allows it to pass vibration testing to 80 G and shock testing to 1000 G.

**Terminations** Tin-lead (63/37) over copper.

**Core material** Composite

**Weight** 12 – 13 mg

**Ambient temperature** –55°C to +105°C with Irms current, +105°C to +155°C with derated current

**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** 2000/7" reel; 7500/13" reel  
Plastic tape: 8 mm wide, 0.28 mm thick, 4 mm pocket spacing, 0.76 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>	
		typ	max	min	typ	10% drop	20% drop	30% drop	20°C rise	40°C rise
MS322PZA102MSZ	1.0	0.153	0.169	136	170	0.71	1.0	1.2	0.910	1.22
MS322PZA222MSZ	2.2	0.278	0.306	88	110	0.49	0.69	0.78	0.710	0.950
MS322PZA332MSZ	3.3	0.460	0.506	70	88	0.42	0.56	0.66	0.550	0.720
MS322PZA472MSZ	4.7	0.665	0.732	54	68	0.31	0.44	0.52	0.500	0.660
MS322PZA562MSZ	5.6	0.75	0.825	49	61	0.30	0.43	0.50	0.460	0.600
MS322PZA682MSZ	6.8	0.92	1.02	45	57	0.26	0.35	0.41	0.400	0.520
MS322PZA822MSZ	8.2	1.08	1.19	41	51	0.24	0.33	0.39	0.370	0.490
MS322PZA103MSZ	10.0	1.27	1.40	36	45	0.24	0.31	0.37	0.345	0.440
MS322PZA153MSZ	15.0	2.02	2.22	29.6	37	0.19	0.25	0.29	0.265	0.350
MS322PZA223MSZ	22.0	2.78	3.06	24.4	30.5	0.150	0.205	0.240	0.235	0.305
MS322PZA333MSZ	33.0	4.45	4.90	19.2	24.0	0.110	0.150	0.180	0.160	0.205
MS322PZA473MSZ	47.0	5.60	6.16	15.6	19.5	0.090	0.130	0.155	0.155	0.205
MS322PZA563MSZ	56.0	6.65	7.32	13.2	16.5	0.085	0.120	0.145	0.145	0.195
MS322PZA683MSZ	68.0	8.50	9.35	12.8	16.0	0.080	0.115	0.135	0.115	0.155
MS322PZA823MSZ	82.0	9.25	10.18	10.8	13.5	0.065	0.090	0.115	0.125	0.165
MS322PZA104MSZ	100.0	11.10	12.25	10.4	13.0	0.065	0.090	0.115	0.100	0.135

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

**MS322PZA222MSZ**

**Testing:**

**Z** = COTS

**H** = Screening per Coilcraft CP-SA-10001

**N** = Screening per Coilcraft CP-SA-10004

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. Typical dc current at which the inductance drops the specified amount from its value without current.

6. Typical 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

Specifications subject to change without notice.

Please check our website for latest information.

Document MS763-1 Revised 01/07/11

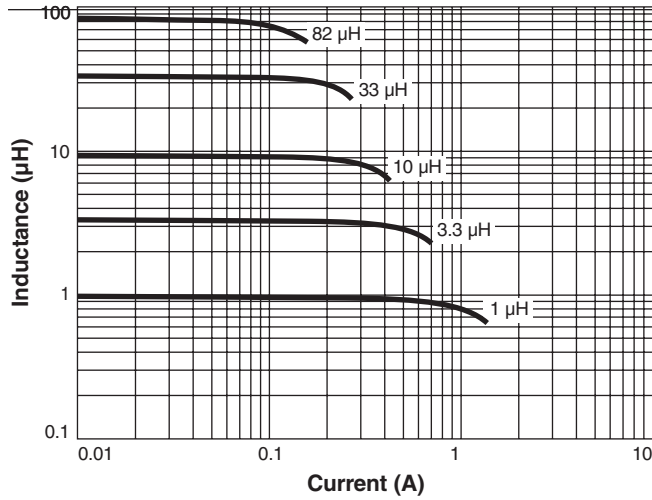
1102 Silver Lake Road  
Cary IL 60013

Phone 800-981-0363  
Fax 847-639-1508

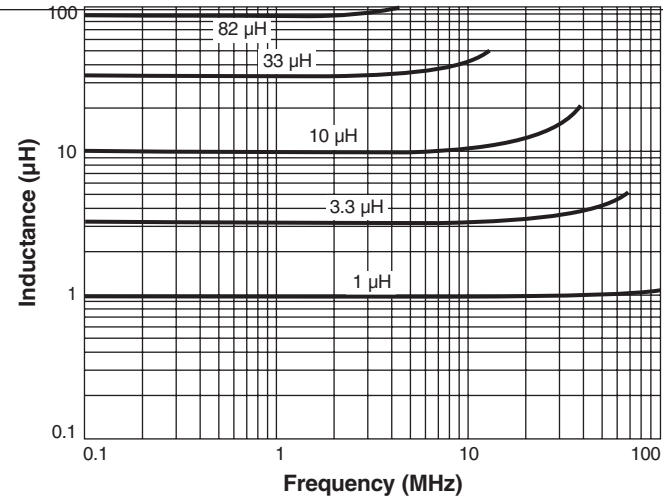
E-mail cps@coilcraft.com  
Web www.coilcraft-cps.com

# MS322PZA Series

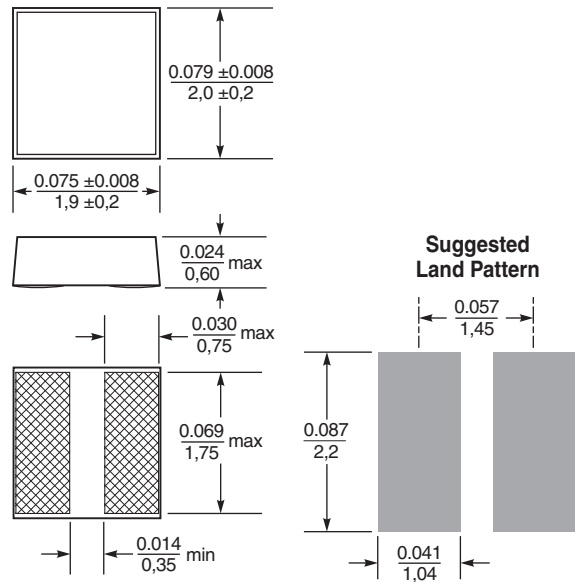
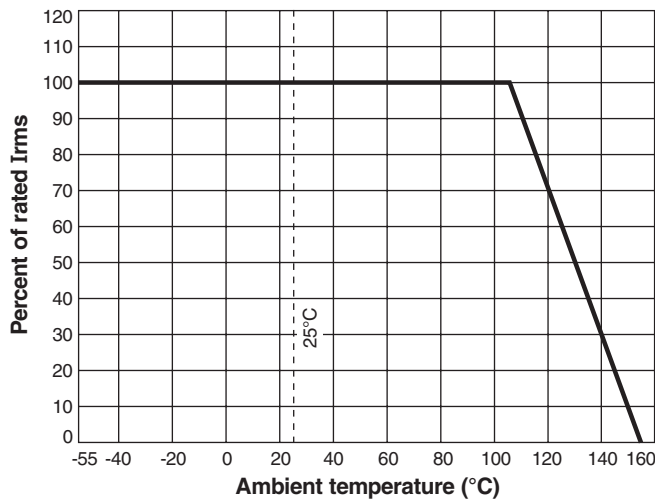
## Typical L vs Current



## Typical L vs Frequency



## Irms Derating



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