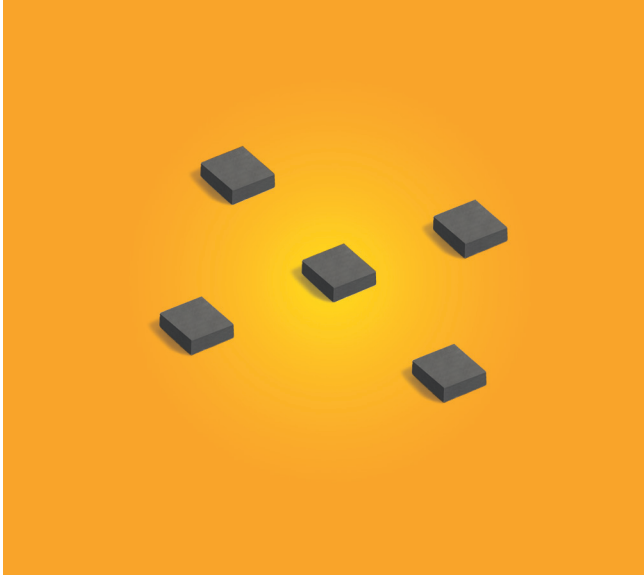


High-Reliability Power Inductors MS319PZA



- High temperature material allows operation in ambient temperatures up to 155°C
- Tin-lead (Sn-Pb) termination for the best possible board adhesion
- Lowest profile, ultra-miniature, magnetically shielded power inductor; only 0.5 mm high, 2 mm × 2 mm footprint
- 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.

Core material Composite

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

Weight 8.4 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

Plastic tape: 8 mm wide, 0.28 mm thick, 4 mm pocket spacing, 0.76 mm pocket depth

Part number ¹	Inductance ² ±20% (µH)	DCR (Ohms) ³		SRF typ ⁴ (MHz)	Isat (A) ⁵			Irms (A) ⁶	
		nom	max		10% drop	20% drop	30% drop	20°C rise	40°C rise
MS319PZA151MSZ	0.15	0.085	0.098	590	1.05	1.55	1.90	1.25	1.60
MS319PZA221MSZ	0.22	0.111	0.128	480	0.72	1.20	1.50	1.13	1.48
MS319PZA331MSZ	0.33	0.144	0.166	380	0.65	1.05	1.30	1.00	1.30
MS319PZA471MSZ	0.47	0.177	0.204	275	0.60	0.97	1.20	0.95	1.25
MS319PZA681MSZ	0.68	0.215	0.247	220	0.50	0.75	0.95	0.80	1.05

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

MS319PZA681MSZ

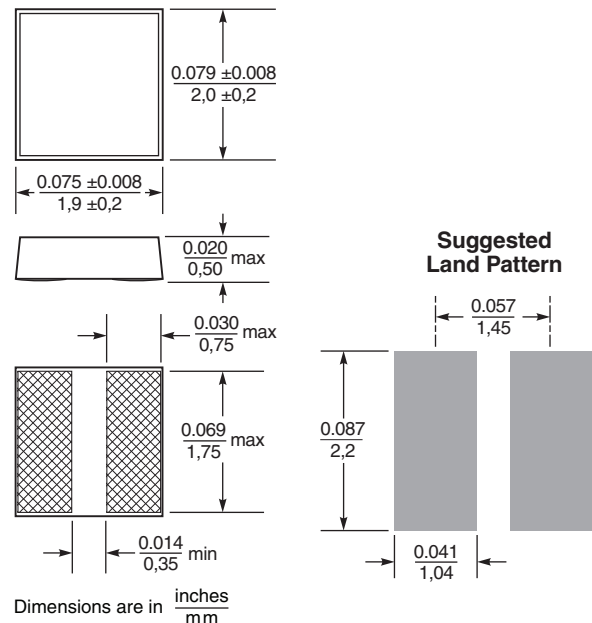
Testing: Z = COTS

H = Screening per Coilcraft CP-SA-10001

N = Screening per Coilcraft CP-SA-10004

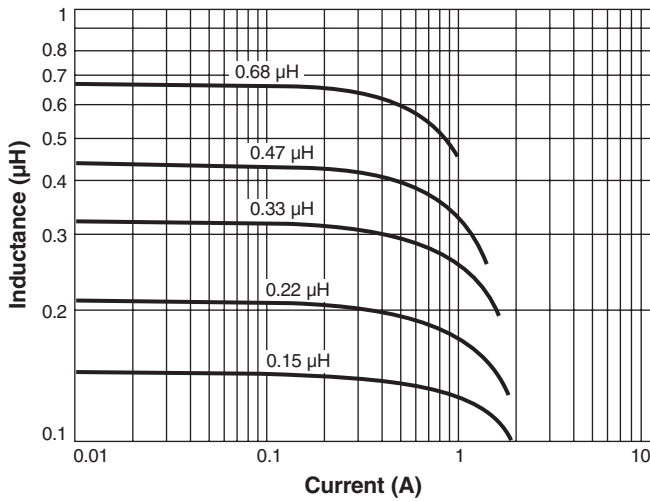
- Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc.
- DCR measured on a micro-ohmmeter.
- SRF measured using Agilent/HP 4395A or equivalent.
- DC current at which the inductance drops the specified amount from its value without current.
- Current that causes the specified temperature rise from 25°C ambient.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

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

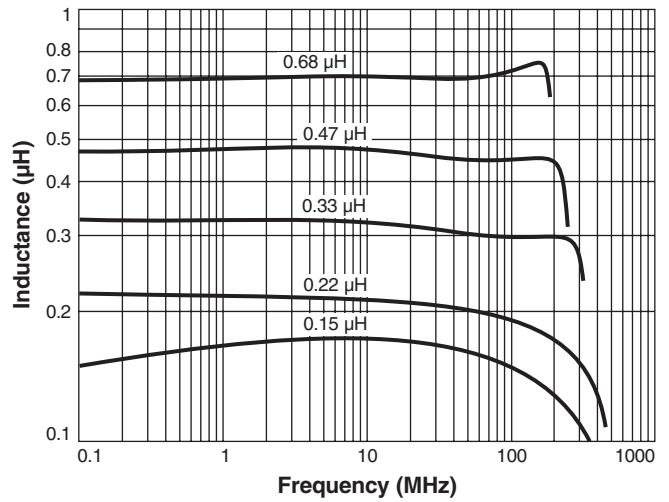


MS319PZA Series (2005)

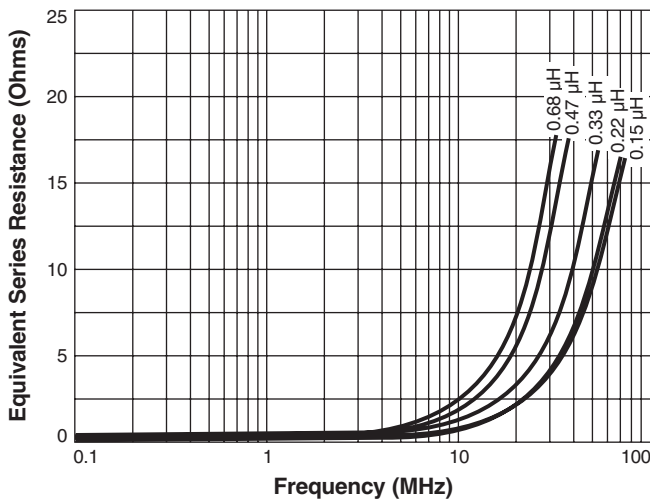
L vs Current



L vs Frequency



ESR vs Frequency



Irms Derating

