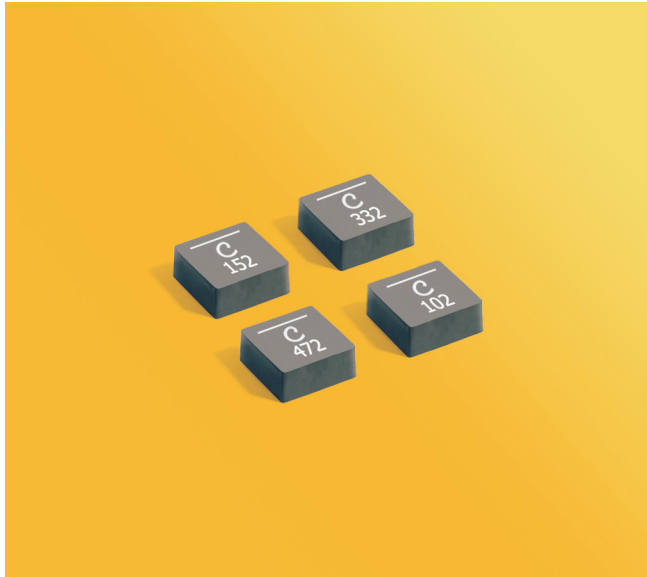


High Reliability Power Inductors MS433PZA



- High temperature materials allow operation in ambient temperatures up to 155°C
- Tin-lead (Sn-Pb) termination for the best possible board adhesion
- Exceptionally low DCR – 10.8 mOhm
- Excellent current handling capability

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

Core material Composite

Weight 162 – 169 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.
T&R 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 1000/7" reel; 3500/13" reel Plastic tape: 12 mm wide, 0.23 mm thick, 8 mm pocket spacing, 2.3 mm pocket depth

Part number ¹	Inductance ² ±20% (µH)	DCR (mOhms) ³		SRF (MHz) ⁴		Isat (A) ⁵			Irms (A) ⁶	
		typ	max	min	typ	10% drop	20% drop	30% drop	20°C rise	40°C rise
MS433PZA102MSZ	1.0	10.80	11.90	51	64	4.5	5.1	5.4	6.0	8.3
MS433PZA152MSZ	1.5	14.40	15.80	47	59	4.1	4.4	4.6	5.0	6.8
MS433PZA222MSZ	2.2	21.35	23.50	30	38	3.1	3.5	3.7	4.5	6.0
MS433PZA332MSZ	3.3	34.80	38.30	26	33	2.7	2.8	2.9	2.9	3.9
MS433PZA472MSZ	4.7	52.20	57.40	21	26	2.0	2.5	2.7	2.7	3.6

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

MS433PZA472MSZ

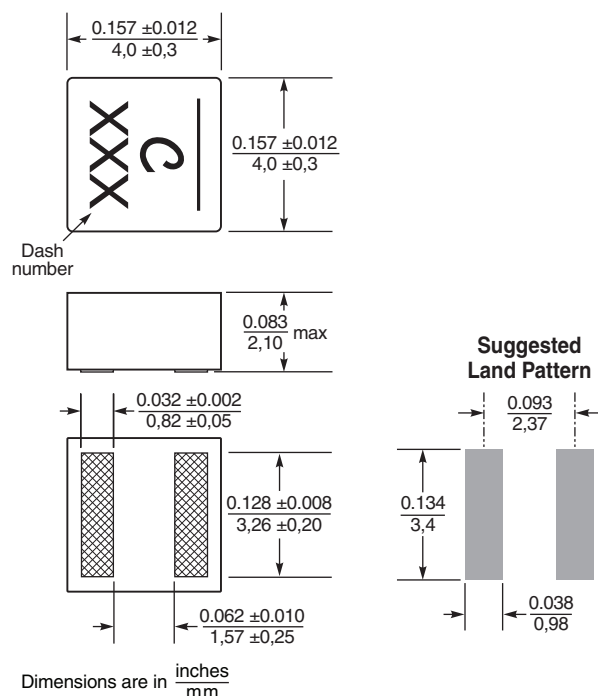
Testing: Z = COTS
H = Screening per Coilcraft CP-SA-10001
N = Screening per Coilcraft CP-SA-10004
C = Custom screening (please specify when ordering)

- Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc.
 - DCR measured on a micro-ohmmeter.
 - SRF measured using an Agilent/HP 4395A or equivalent.
 - Typical dc current at which the inductance drops the specified amount from its value without current.
 - Typical 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.

Irms Testing

Irms testing was performed on a 0.060" thick pcb with 4 oz. copper traces optimized to minimize additional temperature rise.

Temperature rise is highly dependent on many factors including pcb land pattern, trace size, and proximity to other components. Therefore temperature rise should be verified in application conditions.



1102 Silver Lake Road
Cary, IL 60013
Phone 800-981-0363

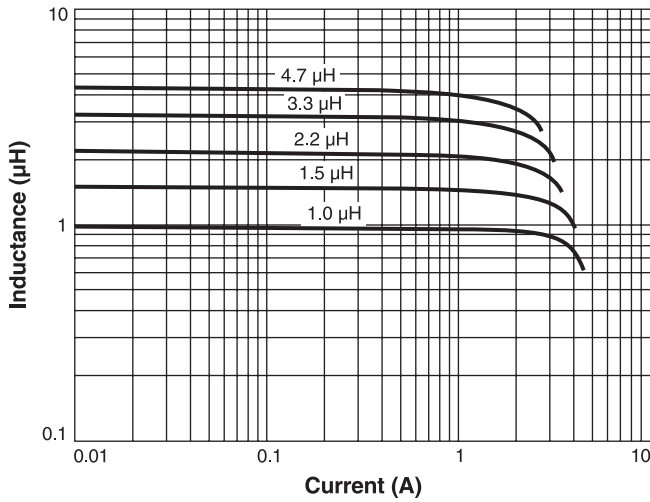
Fax 847-639-1508
Email cps@coilcraft.com
www.coilcraft-cps.com

Document MS745-1 Revised 08/16/12

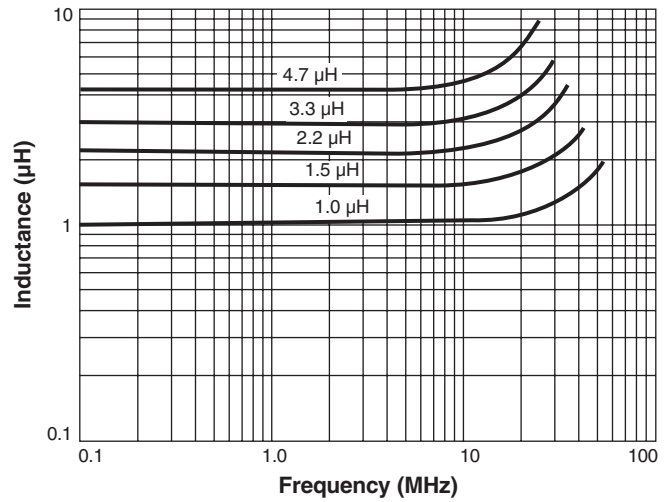
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MS433PZA Series

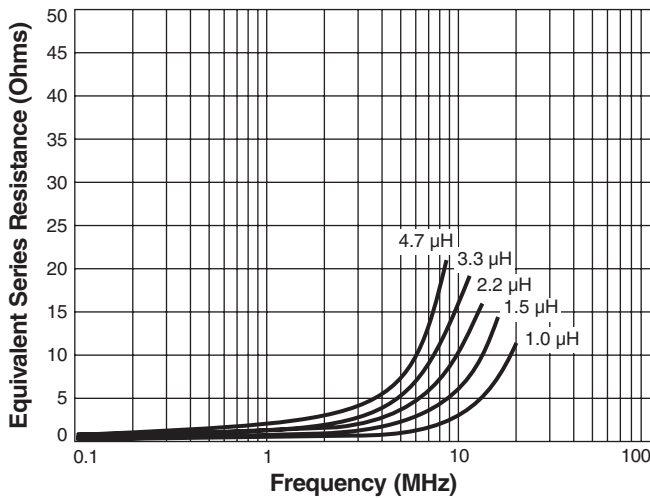
L vs Current



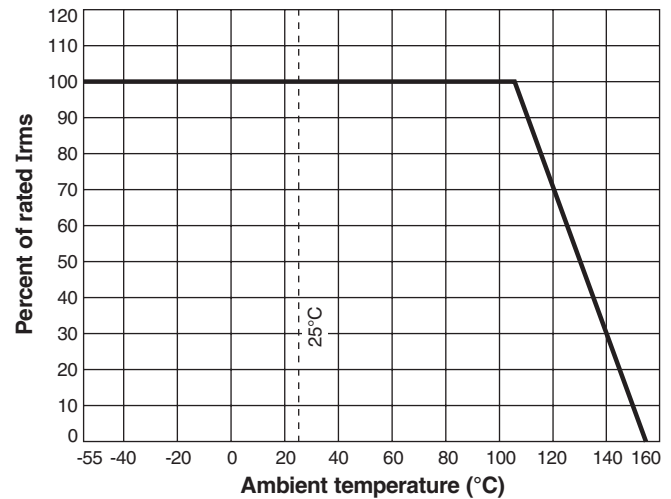
L vs Frequency



ESR vs Frequency



I_{rms} Derating



CRITICAL PRODUCTS & SERVICES

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Document MS745-2 Revised 08/16/12

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