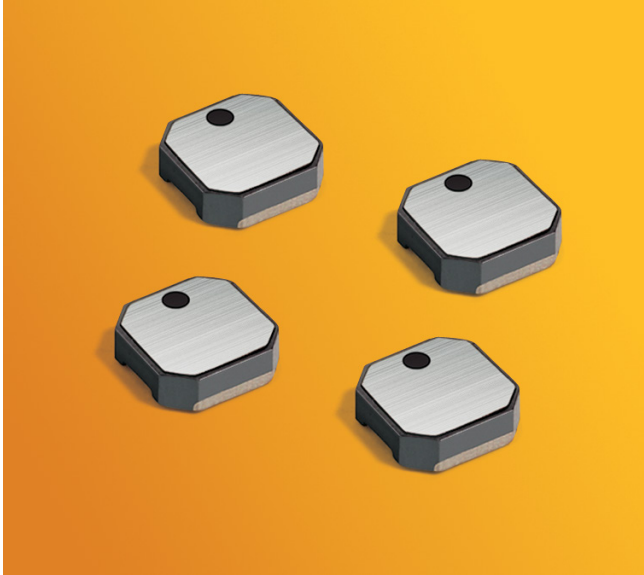


# High-Reliability Power Inductors MS427PJB



- High temperature materials allow operation in ambient temperatures up to 155°C.
- Special construction allows it to pass vibration testing to 80 G and shock testing to 1000 G.
- Tin-lead (Sn-Pb) termination for the best possible board adhesion

**Core material** Ferrite

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

**Weight** 82.3 – 89.8 mg

**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.

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** 1000/7" reel  
Plastic tape: 12 mm wide, 0.3 mm thick, 8 mm pocket spacing, 1.52 mm pocket depth

Part number <sup>1</sup>	Inductance <sup>2</sup> ±20% (µH)	DCR max <sup>3</sup> (Ohms)	SRF (MHz) <sup>4</sup>		Isat (A) <sup>5</sup>			Irms (A) <sup>6</sup>	
			min	typ	10% drop	20% drop	30% drop	20°C rise	40°C rise
MS427PJB301MSZ	0.30	0.040	329	470	5.6	5.7	5.8	1.9	2.6
MS427PJB501MSZ	0.50	0.050	231	330	4.3	4.4	4.5	1.7	2.2
MS427PJB801MSZ	0.80	0.055	157	225	3.7	3.75	3.8	1.5	2.0
MS427PJB102MSZ	1.0	0.060	133	190	3.0	3.1	3.2	1.4	1.8
MS427PJB152MSZ	1.5	0.078	105	150	2.9	3.1	3.2	1.2	1.6
MS427PJB182MSZ	1.8	0.087	91.0	130	2.7	2.8	2.9	1.2	1.5
MS427PJB222MSZ	2.2	0.110	80.0	115	2.2	2.3	2.35	1.0	1.3
MS427PJB332MSZ	3.3	0.165	59.0	85.0	1.8	1.9	1.95	0.92	1.2
MS427PJB472MSZ	4.7	0.215	47.0	68.0	1.4	1.5	1.55	0.72	1.0
MS427PJB562MSZ	5.6	0.260	40.0	58.0	1.4	1.4	1.5	0.60	0.88
MS427PJB682MSZ	6.8	0.270	37.0	54.0	1.2	1.3	1.4	0.56	0.80
MS427PJB822MSZ	8.2	0.350	35.0	50.0	1.1	1.3	1.3	0.56	0.78
MS427PJB103MSZ	10	0.380	30.0	43.0	1.1	1.2	1.3	0.56	0.76
MS427PJB123MSZ	12	0.380	26.0	38.0	0.94	0.97	1.0	0.53	0.70
MS427PJB153MSZ	15	0.440	25.0	36.0	0.85	0.89	0.92	0.50	0.66
MS427PJB183MSZ	18	0.530	21.0	31.0	0.76	0.80	0.82	0.45	0.60
MS427PJB223MSZ	22	0.590	19.0	27.0	0.69	0.72	0.74	0.42	0.54
MS427PJB333MSZ	33	0.715	16.0	23.0	0.47	0.49	0.51	0.39	0.52
MS427PJB473MSZ	47	0.935	12.0	18.0	0.39	0.42	0.43	0.35	0.46
MS427PJB563MSZ	56	1.15	11.0	16.0	0.37	0.39	0.40	0.34	0.43
MS427PJB683MSZ	68	1.35	10.2	14.6	0.32	0.33	0.34	0.29	0.38
MS427PJB104MSZ	100	1.90	7.7	11.0	0.26	0.28	0.285	0.25	0.32
MS427PJB124MSZ	120	2.60	7.0	10.0	0.23	0.24	0.25	0.22	0.27
MS427PJB154MSZ	150	3.10	6.3	9.0	0.22	0.23	0.24	0.19	0.26
MS427PJB224MSZ	220	4.10	4.7	6.7	0.18	0.20	0.20	0.18	0.23
MS427PJB334MSZ	330	6.00	3.9	5.6	0.14	0.16	0.165	0.14	0.18
MS427PJB474MSZ	470	9.50	3.0	4.3	0.13	0.14	0.145	0.11	0.18
MS427PJB564MSZ	560	10.7	2.8	4.0	0.12	0.13	0.14	0.10	0.14
MS427PJB684MSZ	680	11.7	2.4	3.5	0.10	0.11	0.12	0.10	0.14
MS427PJB824MSZ	820	15.1	2.1	3.0	0.10	0.105	0.11	0.090	0.11
MS427PJB105MSZ	1000	16.3	1.8	2.6	0.10	0.102	0.106	0.080	0.10
MS427PJB155MSZ	1500	26.4	1.5	2.2	0.096	0.099	0.100	0.070	0.090
MS427PJB185MSZ	1800	35.0	1.3	1.9	0.089	0.094	0.097	0.060	0.080
MS427PJB225MSZ	2200	42.5	1.3	1.9	0.082	0.089	0.092	0.050	0.070
MS427PJB335MSZ	3300	56.0	0.90	1.3	0.072	0.078	0.083	0.040	0.060

1. When ordering, please specify testing code:

**MS427PJB335MSZ**

**Testing:** Z = Unscreened

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

T = Screening per MIL-STD-981

U = Screening per EEE-INST-002

F = Screening per ESCC 3201

All screening performed to the document's latest revision

Custom screening also available

2. Inductance tested at 100 kHz, 0.1 Vrms using an Agilent/HP 4192A.

3. DCR measured on a micro-ohmmeter.

4. SRF measured using an Agilent/HP 8753ES or equivalent.

5. DC current at 25°C that causes the specified inductance drop from its value without current.

6. Current that causes the specified temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.

7. Electrical specifications at 25°C.

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

**Coilcraft CPS**  
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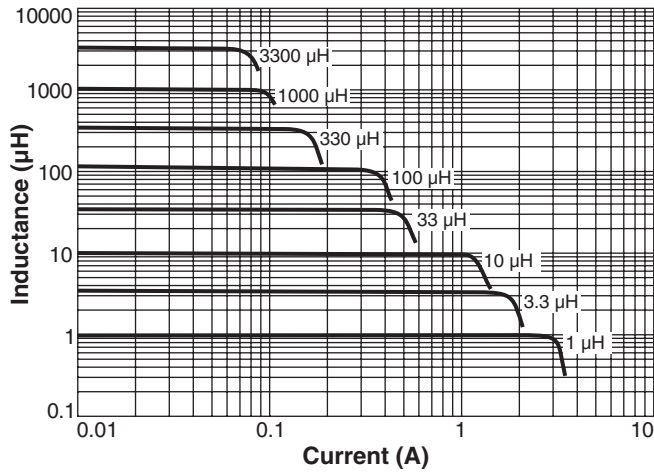
Fax 847-639-1508  
Email cps@coilcraft.com  
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Document MS548-1 Revised 05/23/17

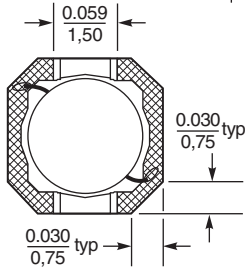
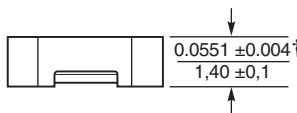
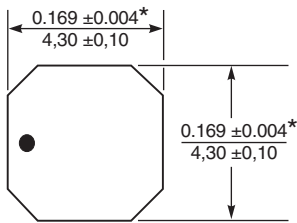
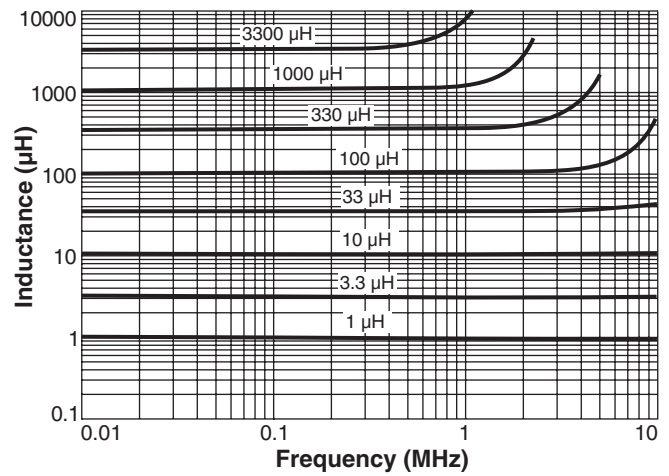
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# MS427PJB Series (4414)

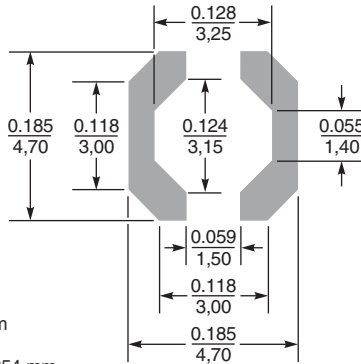
## Typical L vs Current



## Typical L vs Frequency



### Suggested Land Pattern



\*Dimensions are of the case not including termination. For maximum overall dimensions including the termination, add 0.010 inches / 0,254 mm.

† Height dimension is after mounting. For maximum height dimension before mounting, add 0.006 in / 0,152 mm.

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



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