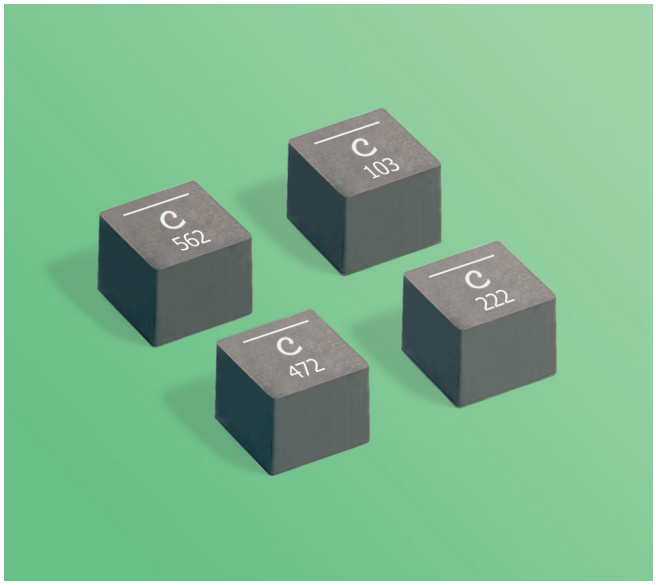
200°C Power Inductors AT524PYA



- High temperature materials allow operation in ambient temperatures up to 200°C.
- Passes vibration testing to 80 G and shock testing to 1000 G
- Exceptionally low DCR – 3.1 mOhm
- Soft saturation makes them ideal for VRM/VRD applications.

Terminations Tin-silver (96.5/3.5) over copper.

Core material Composite

Weight 1.2 – 1.3 g

Ambient temperature –55°C to +150°C with Irms current, +150°C to +200°C with derated current

Storage temperature Component: –55°C to +200°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 400/7″reel
Plastic tape: 16 mm wide, 0.3 mm thick, 12 mm pocket spacing, 3.12 mm pocket depth

Part number[1]	Inductance[2] ±20% (µH)	DCR (mOhms)[3] typ	DCR (mOhms)[3] max	SRF (MHz)[4] min	SRF (MHz)[4] typ	Isat (A)[5]	Irms (A)[6] 20°C rise	Irms (A)[6] 40°C rise
AT524PYA681MLZ	0.68	3.10	3.41	47	59	23	9.5	12.5
AT524PYA102MLZ	1.0	3.81	4.19	37	47	21	8.7	11.5
AT524PYA182MLZ	1.8	5.30	5.83	28	36	18.1	7.0	9.0
AT524PYA222MLZ	2.2	6.00	6.60	24	31	16.4	6.5	8.5
AT524PYA302MLZ	3.0	7.45	8.19	20	26	14.6	6.0	8.0
AT524PYA472MLZ	4.7	14.90	16.40	16	21	10.5	3.5	5.0
AT524PYA562MLZ	5.6	16.22	17.84	16	20	9.9	3.5	5.0
AT524PYA682MLZ	6.8	18.90	20.80	14	18	9.2	3.5	4.5
AT524PYA822MLZ	8.2	24.00	26.40	12	16	8.4	3.0	4.0
AT524PYA103MLZ	10	27.00	29.82	11	14	7.6	2.5	3.5
AT524PYA153MLZ	15	39.77	43.75	8.8	11	5.8	2.3	3.0
AT524PYA223MLZ	22	55.12	60.63	7.2	9	5.6	1.8	2.5

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

   AT524PYA332MLZ

   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 an Agilent/HP 4395A or equivalent.
5. Typical dc current at which the inductance drops 30% 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.

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.

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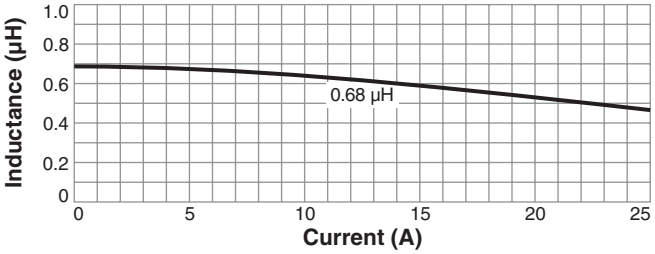
Document AT799-1 Revised 08/07/12

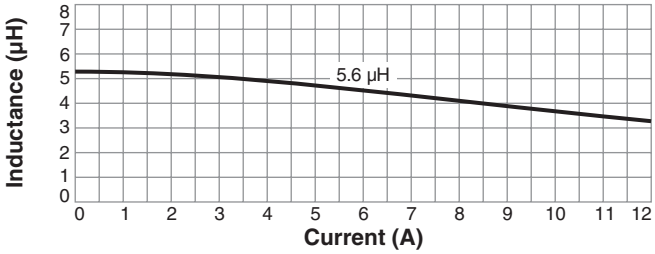
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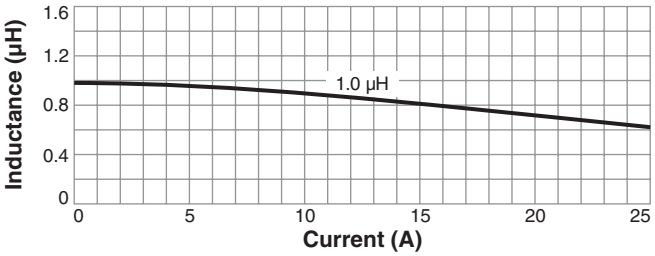
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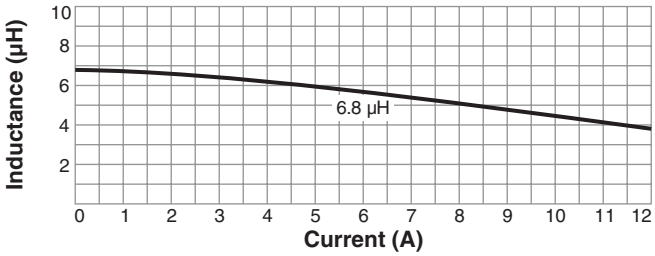
AT524PYA Series

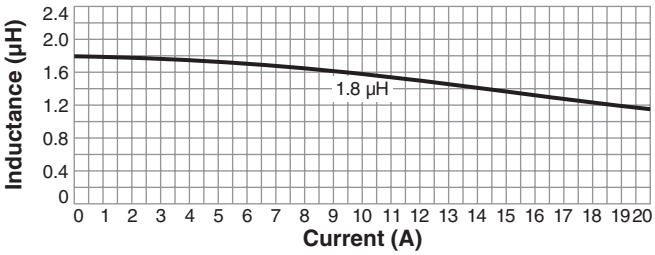
L vs Current

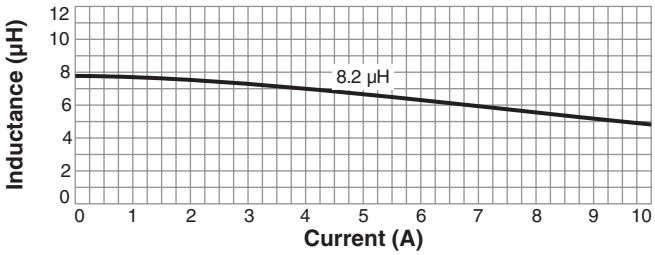


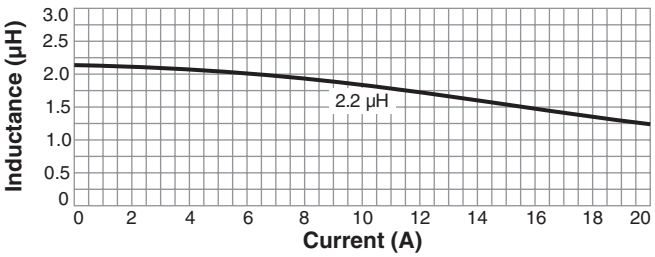


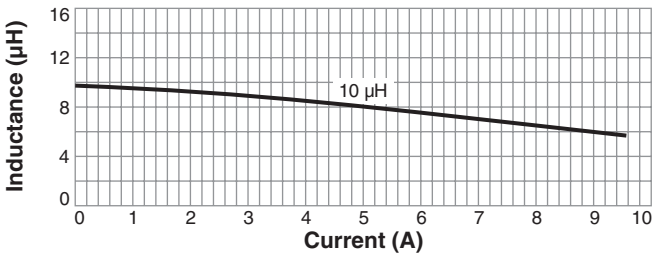


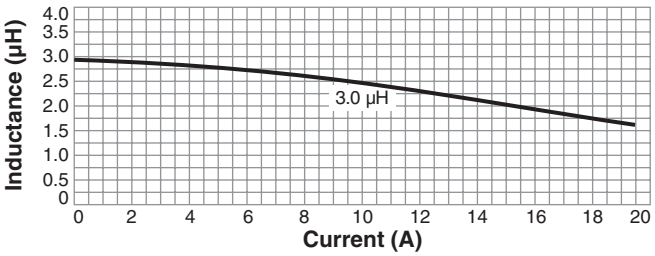


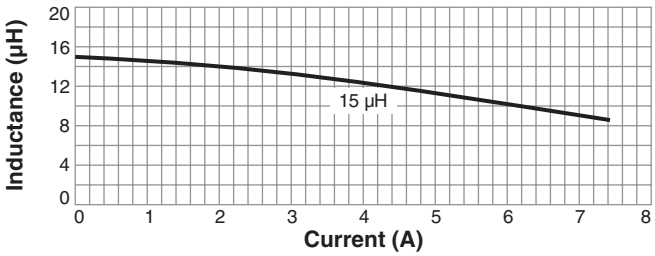


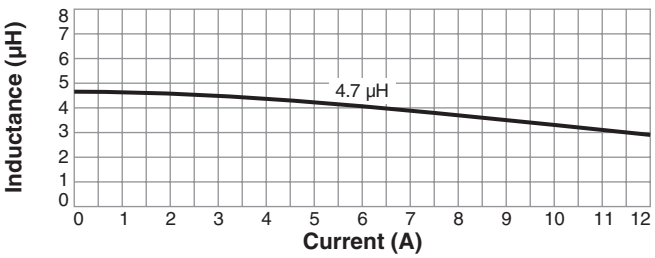


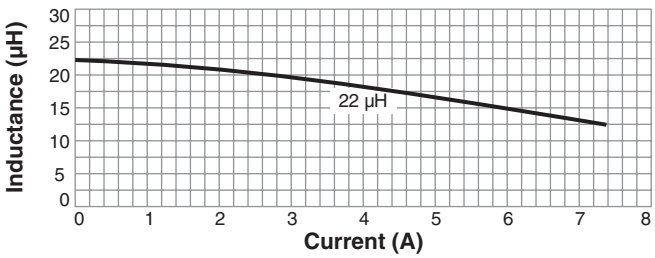












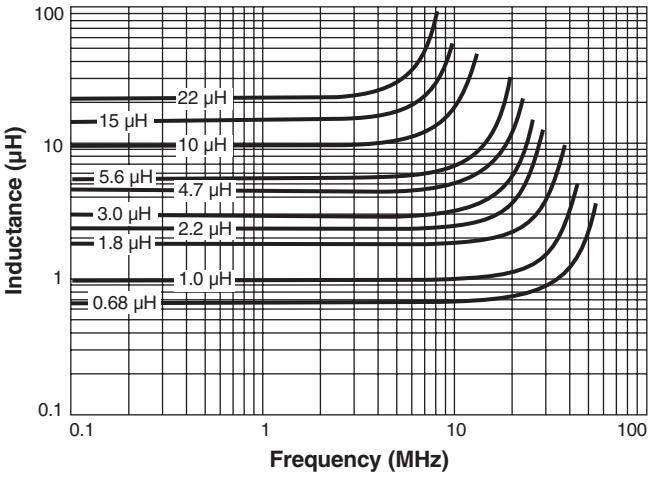
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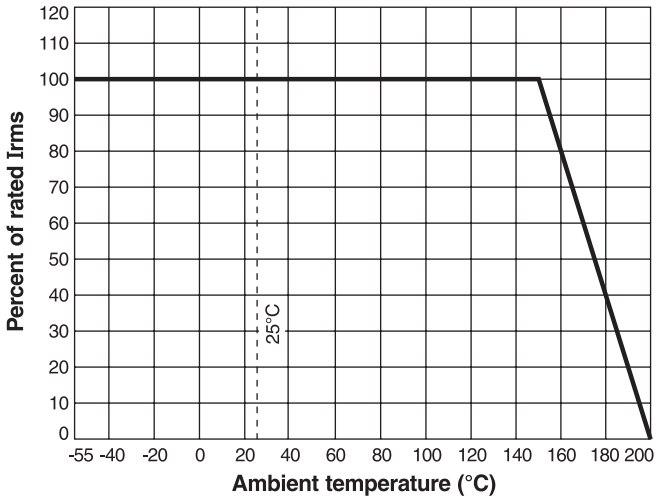
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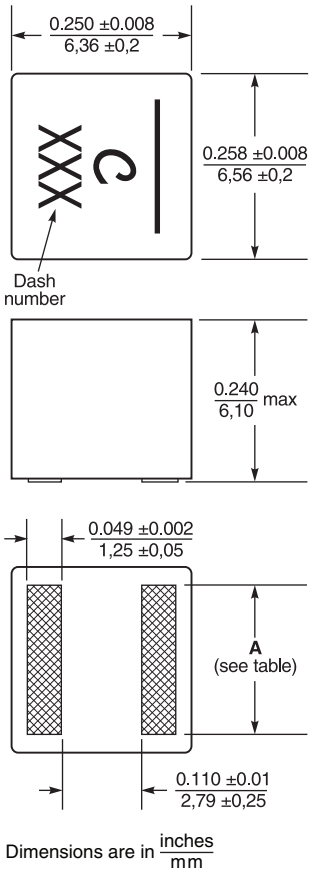
AT524PYA Series

L vs Frequency



Irms Derating

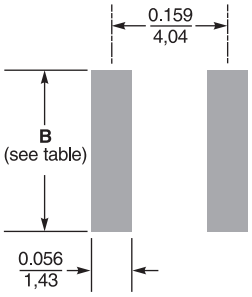




Dimensions are in inches / mm

Dash number	A ±0.008 in ±0,20 mm (in / mm)	B (in / mm)
-681	0.213 / 5.42	0.224 / 5.69
-102	0.213 / 5.42	0.224 / 5.69
-182	0.213 / 5.42	0.224 / 5.69
-222	0.213 / 5.42	0.224 / 5.69
-302	0.204 / 5.18	0.210 / 5.33
-472	0.204 / 5.18	0.210 / 5.33
-562	0.204 / 5.18	0.210 / 5.33
-682	0.204 / 5.18	0.210 / 5.33
-822	0.201 / 5.12	0.206 / 5.24
-103	0.201 / 5.12	0.206 / 5.24
-153	0.200 / 5.08	0.204 / 5.18
-223	0.200 / 5.08	0.204 / 5.18

Suggested Land Pattern



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