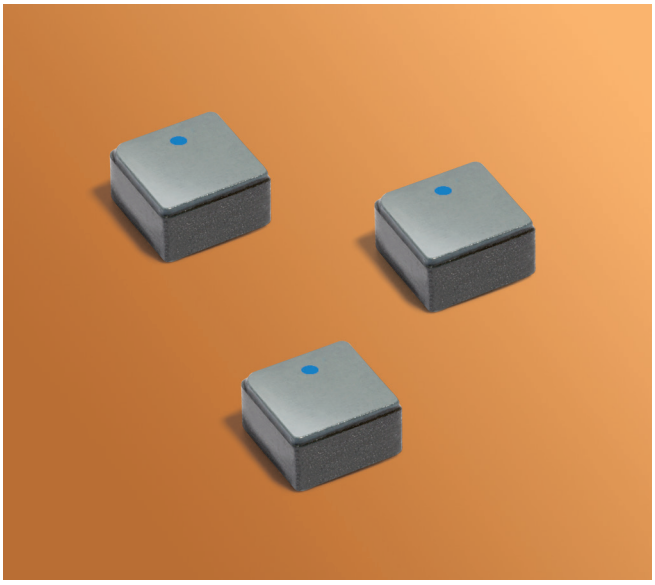
NEW!

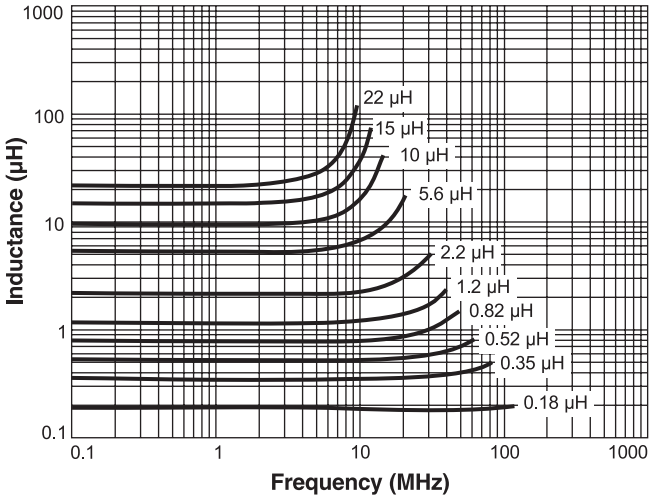
Outgassing Compliant Power Inductors AE486PGA

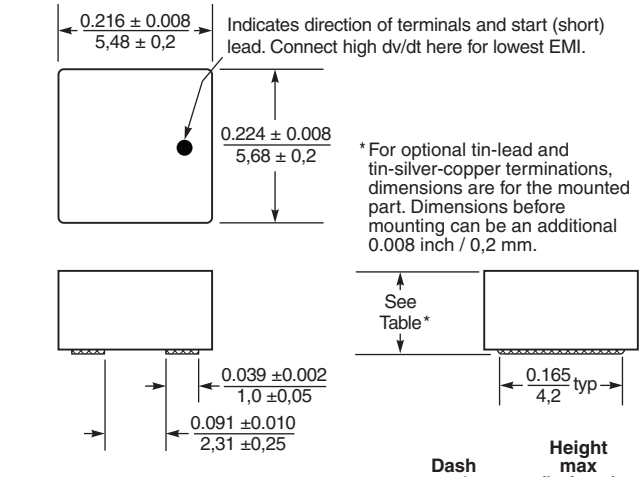


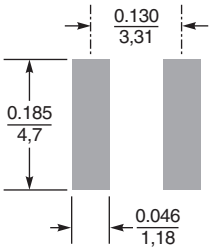
- High temperature materials allow operation in ambient temperatures up to 155°C
- Passes NASA low outgassing specifications
- Tin-lead (Sn-Pb) termination for the best possible board adhesion
- Exceptionally low DCR; soft saturation
- Passes vibration testing to 80 G and shock testing to 1000 G

Core material Composite
Terminations Tin-lead (63/37) over copper. Other terminations available at additional cost.
Weight: 0.53 – 0.85 g
Operating voltage: 0 – 80 V
Ambient temperature –55°C to +105°C with (40°C rise) Irms current.
Maximum part temperature +155°C (ambient + temp rise). Derating.
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)
PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

Typical L vs Frequency







Suggested Land Pattern

Dimensions are in inches / mm

Dash number	Height max (in / mm)
-181	0.126 / 3.2
-351	0.126 / 3.2
-401	0.126 / 3.2
-521	0.126 / 3.2
-601	0.126 / 3.2
-651	0.126 / 3.2
-821	0.126 / 3.2
-901	0.122 / 3.1
-102	0.122 / 3.1
-122	0.122 / 3.1
-152	0.122 / 3.1
-182	0.122 / 3.1
-222	0.122 / 3.1
-332	0.122 / 3.1
-472	0.122 / 3.1
-562	0.122 / 3.1
-682	0.122 / 3.1
-822	0.122 / 3.1
-103	0.122 / 3.1
-123	0.122 / 3.1
-153	0.122 / 3.1
-183	0.122 / 3.1
-223	0.122 / 3.1

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AE486PGA Shielded Power Inductors

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] 10% drop	Isat (A)[5] 20% drop	Isat (A)[5] 30% drop	Irms (A)[6] 20°C rise	Irms (A)[6] 40°C rise
AE486PGA181MSZ	0.18	1.3	1.6	128	160	13.6	22.0	30.0	18.3	23.8
AE486PGA351MSZ	0.35	1.8	2.2	80	100	11.0	17.8	24.5	17.1	22.9
AE486PGA401MSZ	0.40	2.2	2.7	70	88	10.0	16.6	23.0	14.4	18.8
AE486PGA521MSZ	0.52	2.5	3.0	64	80	8.9	14.5	20.5	14.1	18.7
AE486PGA601MSZ	0.60	2.6	3.2	60	75	8.4	13.5	18.7	13.2	17.2
AE486PGA651MSZ	0.65	3.3	4.0	54	68	8.1	12.9	17.9	11.7	15.9
AE486PGA821MSZ	0.82	3.8	4.6	44	56	7.3	11.9	16.7	11.4	15.8
AE486PGA901MSZ	0.90	4.3	5.2	43	54	6.5	10.6	14.5	10.8	14.7
AE486PGA102MSZ	1.0	4.8	5.8	41	52	5.9	10.2	14.0	9.6	13.3
AE486PGA122MSZ	1.2	5.0	6.0	37	47	5.9	9.4	13.0	9.2	12.6
AE486PGA152MSZ	1.5	6.8	7.9	34	43	5.3	8.7	12.2	8.7	11.5
AE486PGA182MSZ	1.8	7.5	8.7	29	37	4.8	7.8	10.6	7.7	10.5
AE486PGA222MSZ	2.2	9.2	10.6	27	34	4.2	6.8	9.4	7.2	9.6
AE486PGA332MSZ	3.3	13.3	14.9	22	28	3.6	6.0	8.4	5.4	7.5
AE486PGA472MSZ	4.7	21.9	24.5	18	23	3.1	4.8	6.7	4.7	6.3
AE486PGA562MSZ	5.6	24.1	27.0	16	21	2.8	4.3	6.0	4.4	5.9
AE486PGA682MSZ	6.8	28.6	32.1	14	18	2.5	3.9	5.5	4.0	5.4
AE486PGA822MSZ	8.2	36.5	41.0	13	17	2.3	3.6	5.0	3.6	4.8
AE486PGA103MSZ	10	43.0	48.4	12	15	2.1	3.3	4.5	3.2	4.2
AE486PGA123MSZ	12	50.0	56.5	11	14	1.9	3.0	4.0	3.0	4.0
AE486PGA153MSZ	15	68.8	77.1	9	12	1.7	2.7	3.6	2.5	3.3
AE486PGA183MSZ	18	87.2	97.7	8	11	1.6	2.4	3.3	2.1	3.0
AE486PGA223MSZ	22	106.0	118.8	8	10	1.4	2.2	3.0	1.9	2.7

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

AE486PGA223MSZ

Screening:
- **Z** = Unscreened
- **Y** = Unscreened (SLDC Option A)
- **W** = Unscreened (SLDC Option B)
- **H** = Coilcraft CP-SA-10001 Group A
- **G** = Coilcraft CP-SA-10001 Group A (SLDC Option A)
- **D** = Coilcraft CP-SA-10001 Group A (SLDC Option B)
- **1** = EEE-INST-002 (Family 1) Level 1
- **2** = EEE-INST-002 (Family 1) Level 2
- **3** = EEE-INST-002 (Family 1) Level 3
- **4** = MIL-STD-981 (Family 04) Class B
- **5** = MIL-STD-981 (Family 04) Class S
- **F** = ESCC3201 (F4 operational life performed at 105°C)
- Screening performed to the document's latest revision.
- Lot qualification (Group B) available.
- Custom testing also available.

2. Inductance tested at 1 MHz, 0.1 Vrms, 0 Adc.
3. DCR measured on a micro-ohmmeter.
4. SRF measured using Agilent/HP 4395A or equivalent.
5. DC current at 25°C that causes the specified inductance drop from its value without current.
   Click for temperature derating information.
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. Click for temperature derating information.
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" inch thick pcb with 4 oz copper traces optimized to minimize additional termperature 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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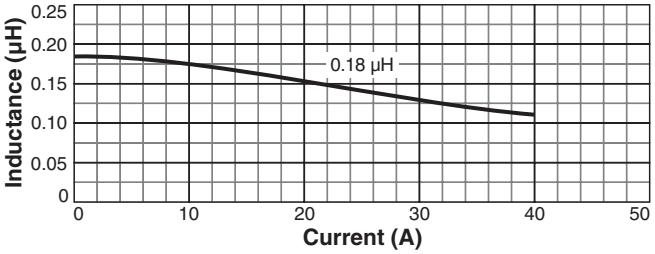
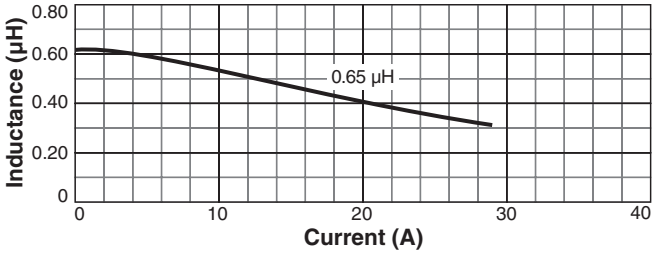
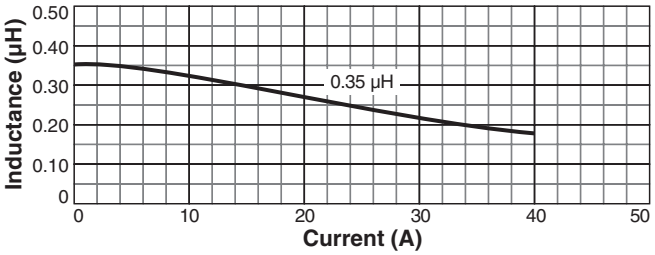
Document AE1576-2 Revised 05/03/24

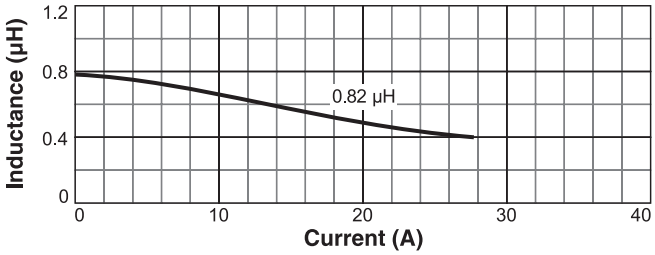
AE486PGA Shielded Power Inductors

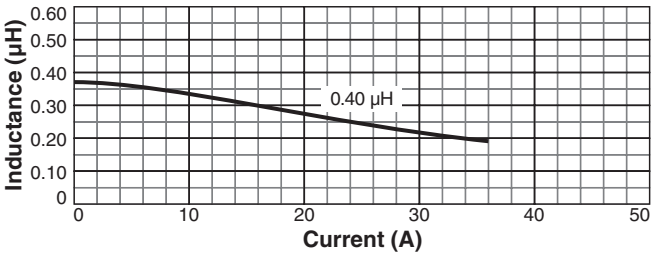
L vs Current

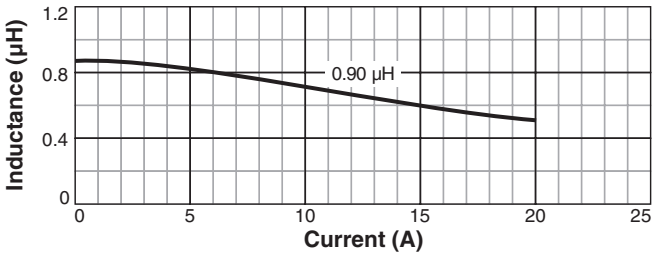


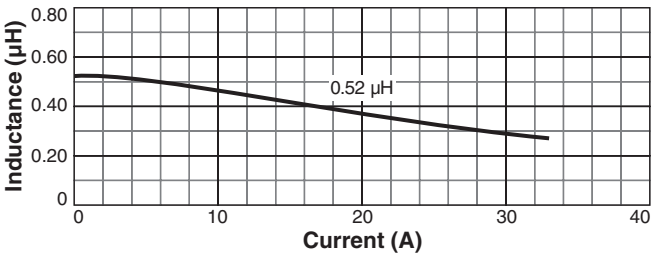


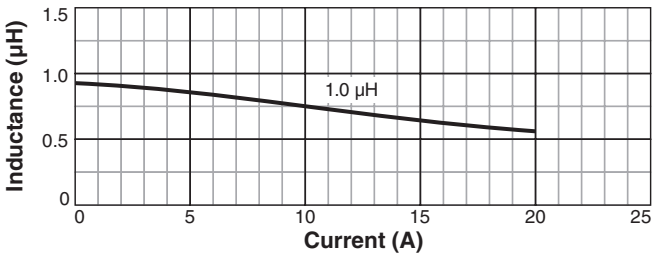


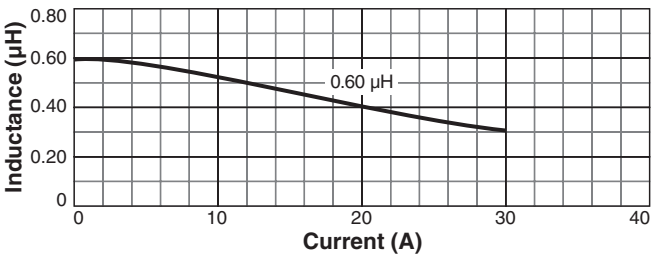


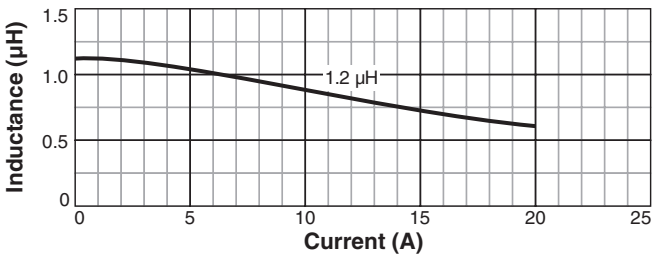












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Document AE1576-3 Revised 05/03/24

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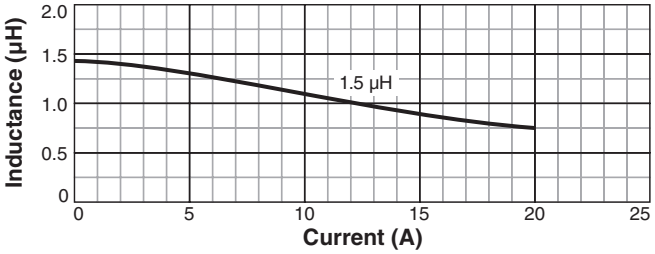
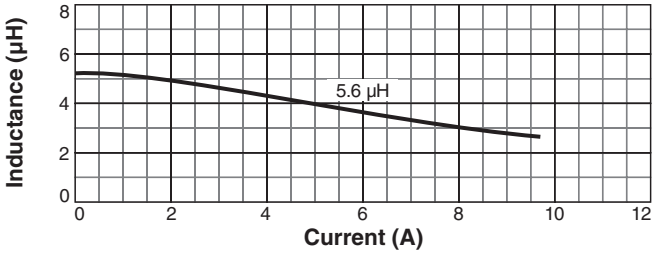
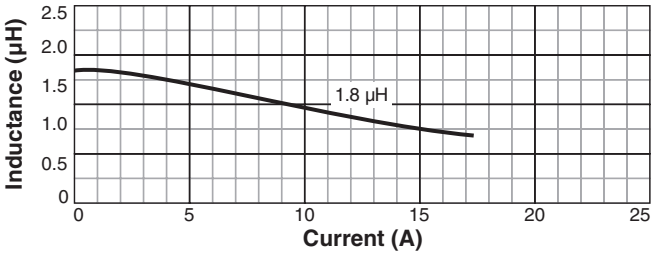
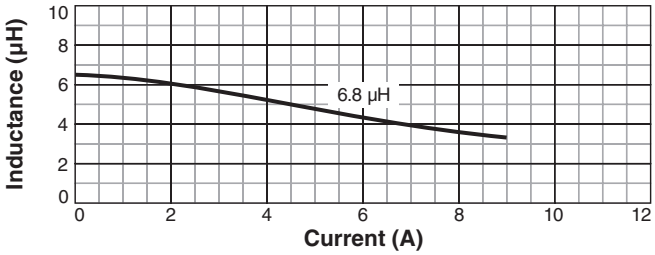
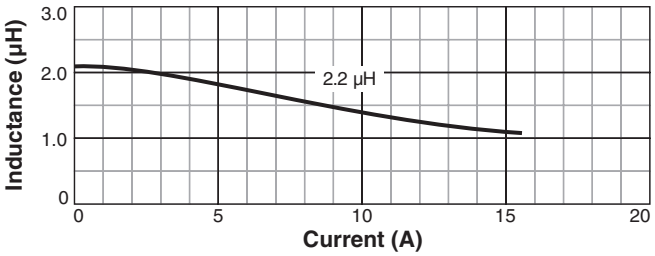
L vs Current

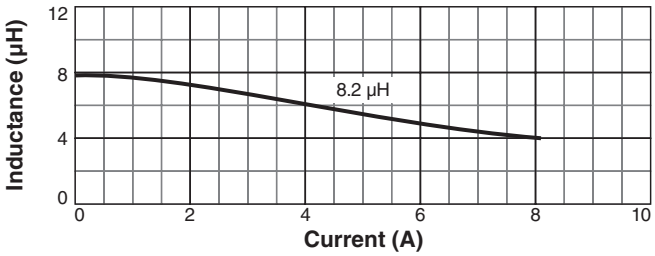


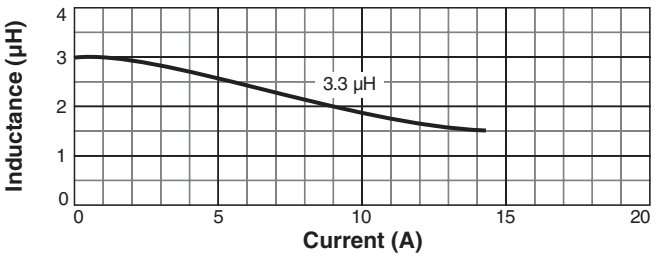


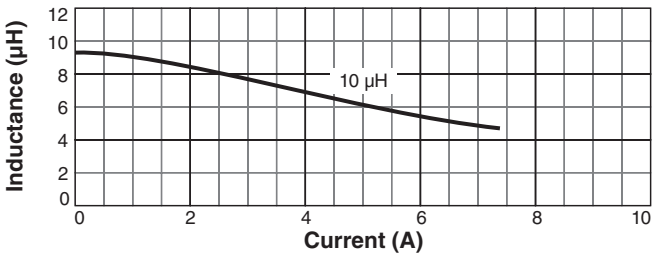


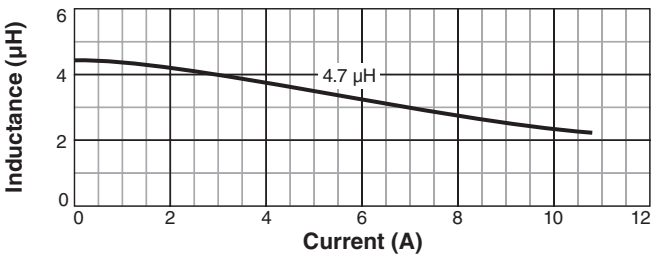


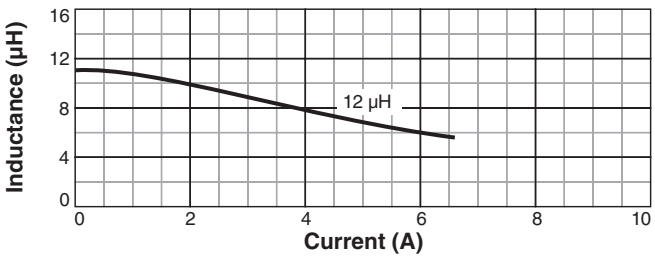












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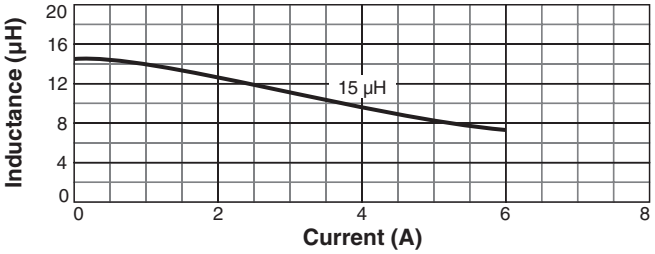
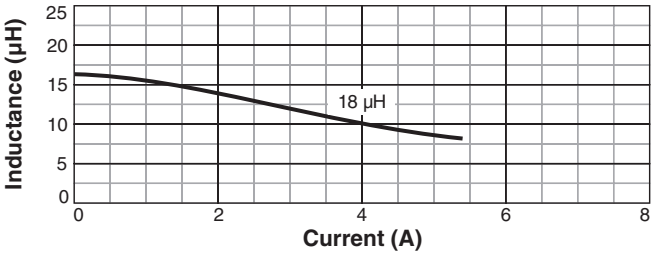
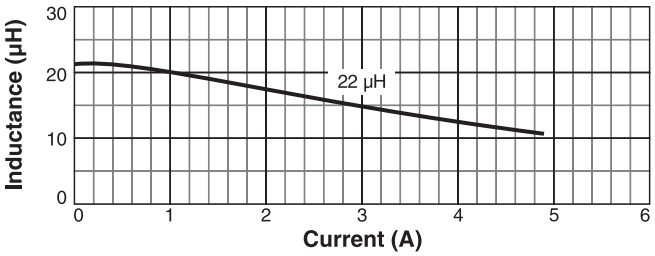
L vs Current







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