Outgassing Compliant Power Inductors AE563PKA

- High temperature materials allow operation in ambient temperatures up to 155°C.
- Tin-lead (Sn-Pb) soldered self-leaded construction for excellent solderability.
- Passes NASA low outgassing specifications
- Very low DCR values and excellent current handling

Core material Ferrite

Terminations Tin-lead (63/37) over copper

Weight 0.95 – 1.25 g

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 750 per 13″ reel
Plastic tape: 24 mm wide, 0.35 mm thick, 12 mm pocket spacing, 6.4 mm pocket depth

Part number[1]	Inductance[2] ±20% (µH)	DCR (mOhm) typ	DCR (mOhm) max	SRF (MHz)[3] min	SRF (MHz)[3] typ	Isat (A)[4] 10% drop	Isat (A)[4] 20% drop	Isat (A)[4] 30% drop	Irms (A)[5] 20°C rise	Irms (A)[5] 40°C rise
AE563PKA301MSZ	0.3	2.6	3.0	200	238	14.0	16.0	17.0	8.0	12.0
AE563PKA901MSZ	0.9	5.1	6.0	122	153	8.6	10.2	10.9	6.1	8.8
AE563PKA122MSZ	1.2	5.1	7.0	100	125	7.0	8.4	9.3	3.4	5.6
AE563PKA182MSZ	1.8	7.7	9.0	86	108	6.2	7.4	8.1	3.2	5.0
AE563PKA222MSZ	2.2	6.8	10	74	92	6.0	6.7	7.2	2.9	4.5
AE563PKA272MSZ	2.7	9.4	11	63	79	5.1	6.0	6.4	2.7	4.2
AE563PKA332MSZ	3.3	11.1	13	57	71	4.7	5.5	6.0	2.4	4.0
AE563PKA392MSZ	3.9	15.3	18	54	68	4.3	5.2	5.5	2.4	4.0
AE563PKA472MSZ	4.7	20.4	24	46	57	4.0	4.4	4.8	2.4	3.7
AE563PKA562MSZ	5.6	21.3	25	43	53	3.6	4.1	4.4	2.2	3.3

Continued on next page

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

AE563PKA562MSZ

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)
1/2/3 = EEE-INST-002 (Family 1) Level 1/2/3
4/5 = MIL-STD-981 (Family 04) Class B=4, Class S=5
F = ESCC3201 (F4 operational life performed at 105°C)

- Screening performed to the document's latest revision.
- Lot qualification (Group B) available.
- Testing T and U have been replaced with more detailed codes 4, 5, and 1, 2, 3, respectively. Codes T and U can still be used, if necessary. Custom testing also available.
- Country of origin restrictions available; prefix options G or F.

2. Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc using an Agilent/HP 4263B LCR meter or equivalent.
3. SRF measured using Agilent/HP 8753D network analyzer or equivalent.
4. Typical DC current at which the inductance drops 10% (typ) from its value without current.
5. Typical Current that causes a 40°C temperature rise from 25°C ambient.
6. Electrical specifications at 25°C.

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

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Document AE196-1 Revised 04/11/23

AE563PKA Series (3316)

Part number[1]	Inductance[2] ±20% (µH)	DCR (mOhm) typ	DCR (mOhm) max	SRF (MHz)[3] min	SRF (MHz)[3] typ	Isat (A)[4] 10% drop	Isat (A)[4] 20% drop	Isat (A)[4] 30% drop	Irms (A)[5] 20°C rise	Irms (A)[5] 40°C rise
AE563PKA682MSZ	6.8	25.5	30	38	48	3.3	3.7	4.0	2.2	3.3
AE563PKA822MSZ	8.2	29.8	35	35	44	2.9	3.4	3.7	2.2	3.2
AE563PKA103MSZ	10	32.3	38	30	38	2.7	3.1	3.4	2.1	3.1
AE563PKA123MSZ	12	40.8	48	26	33	2.5	2.9	3.1	1.7	2.7
AE563PKA153MSZ	15	49.3	58	25	31	2.2	2.5	2.8	1.9	2.6
AE563PKA183MSZ	18	59.5	70	21	27	2.1	2.4	2.6	1.9	2.5
AE563PKA223MSZ	22	72.3	85	20	25	1.9	2.1	2.3	1.8	2.4
AE563PKA273MSZ	27	85	100	19	24	1.7	1.9	2.1	1.3	1.9
AE563PKA333MSZ	33	109	128	16	20	1.5	1.7	1.9	1.3	1.8
AE563PKA393MSZ	39	116	136	14	18	1.3	1.5	1.7	1.3	1.8
AE563PKA473MSZ	47	146	172	12	15	1.2	1.4	1.5	1.1	1.5
AE563PKA563MSZ	56	170	200	11	14	1.1	1.3	1.4	0.9	1.3
AE563PKA683MSZ	68	221	260	10	13	0.85	1.2	1.3	0.82	1.2
AE563PKA823MSZ	82	264	310	9.5	12	0.82	1.1	1.2	0.81	1.2
AE563PKA104MSZ	100	306	360	8.3	10	0.80	0.96	1.1	0.80	1.1
AE563PKA124MSZ	120	384	452	8.3	10	0.70	0.85	0.98	0.68	0.90
AE563PKA154MSZ	150	432	508	7.0	8.7	0.65	0.80	0.86	0.63	0.87
AE563PKA184MSZ	180	525	618	6.0	7.5	0.62	0.70	0.80	0.54	0.76
AE563PKA224MSZ	220	618	727	5.3	6.6	0.50	0.70	0.65	0.53	0.73
AE563PKA274MSZ	270	819	963	4.6	5.8	0.44	0.54	0.62	0.43	0.62
AE563PKA334MSZ	330	935	1100	4.4	5.5	0.42	0.48	0.58	0.41	0.57
AE563PKA394MSZ	390	1105	1300	3.9	4.8	0.41	0.46	0.53	0.38	0.53
AE563PKA474MSZ	470	1360	1600	3.6	4.3	0.35	0.44	0.48	0.34	0.47

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

AE563PKA474MSZ

Screening: **Z** = Unscreened
Y = Unscreened (SLDC Option A)
W= Unscreened (SLDC Option B)
G = Coilcraft CP-SA-10001 Group A (SLDC Option A)
D = Coilcraft CP-SA-10001 Group A (SLDC Option B)
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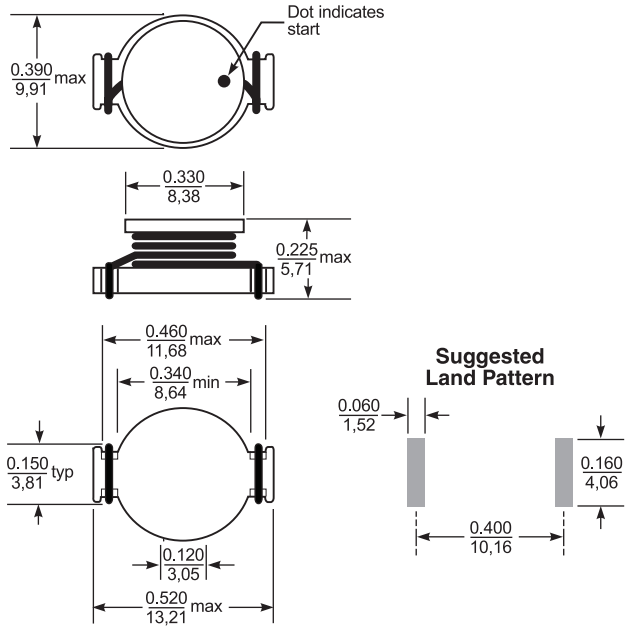

Dimensions are in inches / mm

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