

200°C Power Inductors AT563PKA



- High temperature materials allow operation in ambient temperatures up to 200°C.
- Soldered self-leaded construction for excellent solderability.
- Very low DCR values and excellent current handling

Core material Ferrite

Terminations Tin-silver-copper over copper

Weight 0.95–1.25 g

Ambient temperature –55°C to +140°C with Irms current

Maximum part temperature +200°C (ambient + temp rise).

Storage temperature Component: –55°C to +200°C.
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)		SRF (MHz) ³		Isat (A) ⁴			Irms (A) ⁵	
		typ	max	min	typ	10% drop	20% drop	30% drop	20°C rise	40°C rise
AT563PKA301MLZ	0.3	2.6	3.0	200	238	14.0	16.0	17.0	8.0	12.0
AT563PKA901MLZ	0.9	5.1	6.0	122	153	8.6	10.2	10.9	6.1	8.8
AT563PKA122MLZ	1.2	5.1	7.0	100	125	7.0	8.4	9.3	3.4	5.6
AT563PKA182MLZ	1.8	7.7	9.0	86	108	6.2	7.4	8.1	3.2	5.0
AT563PKA222MLZ	2.2	6.8	10	74	92	6.0	6.7	7.2	2.9	4.5
AT563PKA272MLZ	2.7	9.4	11	63	79	5.1	6.0	6.4	2.7	4.2
AT563PKA332MLZ	3.3	11.1	13	57	71	4.7	5.5	6.0	2.4	4.0
AT563PKA392MLZ	3.9	15.3	18	54	68	4.3	5.2	5.5	2.4	4.0
AT563PKA472MLZ	4.7	20.4	24	46	57	4.0	4.4	4.8	2.4	3.7
AT563PKA562MLZ	5.6	21.3	25	43	53	3.6	4.1	4.4	2.2	3.3
AT563PKA682MLZ	6.8	25.5	30	38	48	3.3	3.7	4.0	2.2	3.3
AT563PKA822MLZ	8.2	29.8	35	35	44	2.9	3.4	3.7	2.2	3.2

Continued on next page

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

AT563PKA822MLZ

Screening: Z = Unscreened

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

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.

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

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

6. Electrical specifications at 25°C.

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

AT563PKA Series (3316)

Part number ¹	Inductance ² ±20% (µH)	DCR (mOhm)		SRF (MHz) ³		Isat (A) ⁴			Irms (A) ⁵	
		typ	max	min	typ	10% drop	20% drop	30% drop	20°C rise	40°C rise
AT563PKA103MLZ	10	32.3	038	30	38	2.7	3.1	3.4	2.1	3.1
AT563PKA123MLZ	12	40.8	48	26	33	2.5	2.9	3.1	1.7	2.7
AT563PKA153MLZ	15	49.3	58	25	31	2.2	2.5	2.8	1.9	2.6
AT563PKA183MLZ	18	59.5	70	21	27	2.1	2.4	2.6	1.9	2.5
AT563PKA223MLZ	22	72.3	85	20	25	1.9	2.1	2.3	1.8	2.4
AT563PKA273MLZ	27	85	100	19	24	1.7	1.9	2.1	1.3	1.9
AT563PKA333MLZ	33	109	128	16	20	1.5	1.7	1.9	1.3	1.8
AT563PKA393MLZ	39	116	136	14	18	1.3	1.5	1.7	1.3	1.8
AT563PKA473MLZ	47	146	172	12	15	1.2	1.4	1.5	1.1	1.5
AT563PKA563MLZ	56	170	200	11	14	1.1	1.3	1.4	0.9	1.3
AT563PKA683MLZ	68	221	260	10	13	0.85	1.2	1.3	0.82	1.2
AT563PKA823MLZ	82	264	310	9.5	12	0.82	1.1	1.2	0.81	1.2
AT563PKA104MLZ	100	306	360	8.3	10	0.80	0.96	1.1	0.80	1.1
AT563PKA124MLZ	120	384	452	8.3	10	0.70	0.85	0.98	0.68	0.90
AT563PKA154MLZ	150	432	508	7.0	8.7	0.65	0.80	0.86	0.63	0.87

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

AT563PKA154MLZ

Screening: Z = Unscreened

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

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

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

6. Electrical specifications at 25°C.

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

