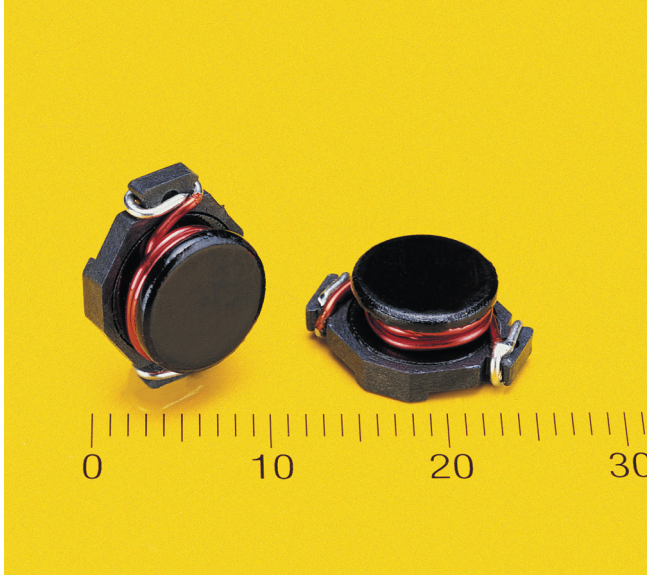


Outgassing Compliant Power Inductors AE563PKA



- 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, +105°C to +155°C with derated current

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) | | 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 |
| 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 | 6.0 | 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 |
| 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 **testing** code:

↓
AE563PKA301MSZ

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 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.

Coilcraft CPS
CRITICAL PRODUCTS & SERVICES

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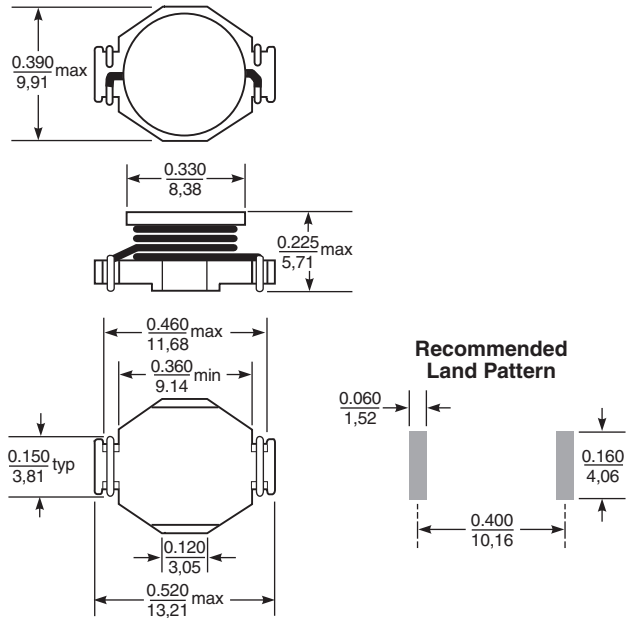
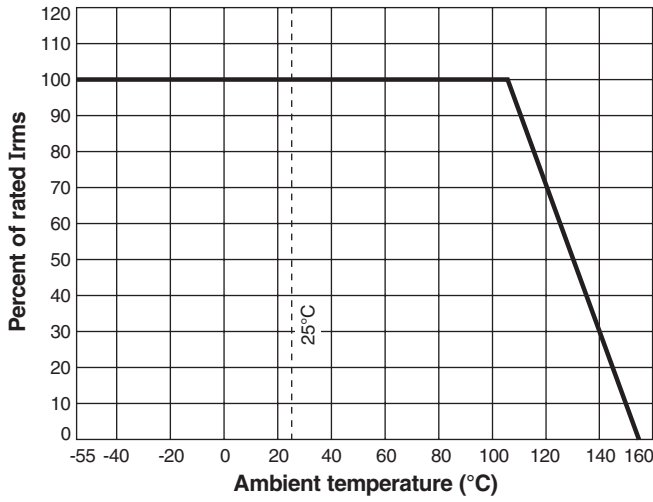
Fax 847-639-1508
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Document AE196-1 Revised 04/22/11

This product may not be used in medical or high risk applications without prior Coilcraft approval. Specifications subject to change without notice. Please check our web site for latest information.

AE563PKA Series (3316)

Irms Derating



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



CRITICAL PRODUCTS & SERVICES

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Document AE196-2 Revised 04/22/11

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