KOA SPEER ELECTRONICS, INC.

RoHS COMPLIANT

spec sheet

SS-202 R5
AHA 6/30/06

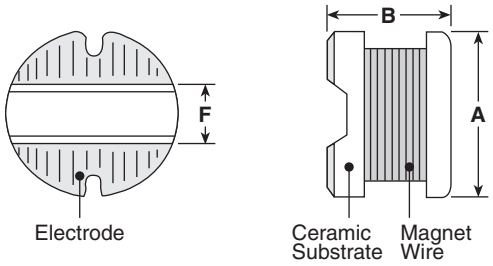
Fixed High-Frequency Inductors
Type SDR1006 *(SMD Power Chokes)*

ISO 9001:2000 CERTIFIED
TS-16949 CERTIFIED

1. Scope

This specification applies to SMD type choke coil SDR1006 produced by KOA Speer Electronics, Inc.

2. Dimensions



Size	Dimensions inches (mm) A	B	F (typ.)
1006	.374±.012 (9.5±0.3)	.217±.012 (5.5±0.3)	.114 (2.9)

3. Type Designation

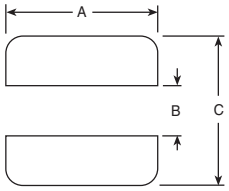
The type designation shall be in the following form:

SDR	1006	T	TEB	100	M
Type	Size	Termination Material	Packaging	Nominal Inductance	Tolerance
	1006	T: Sn (Other termination styles available, contact factory for options)	TEB: 13" Embossed Plastic (1006: 800 pieces/reel)	100: 10μH 101: 100μH	K: ±10% M: ±20%

4. Structure

Item	Materials
(1) Core:	Ferrite dr. core
(2) Winding Wire:	Enameled copper wire
(3) Terminal Electrode:	Ag + Sn/Pb

5. PCB Pattern



Size	Dimensions inches (mm) A	B	C
1006	.39 (10.0)	.11 (2.8)	.39 (10.0)

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6. Test Condition

Unless otherwise specified, the test shall be performed at the temperature of 15 ~ 35°C and the humidity of 25 ~ 85% specified in JIS-C-5001. If there is any question about the results, the test shall be performed at the temperature of 20 ± 2 °C and the humidity of 65 ± 5%. If there is any question about measurement of absolute, the inductance shall be measured by LCR-meter without using its jig.

7. Symbol of Nominal Inductance & Tolerance

(A) When we indicate the nominal inductance by numerals, the unit shall be "μH" and indicated by 3 numerals. The first 2-digits mean significant figures and the last digit means numbers of "ZERO". The decimal points shall be indicated by "R", which are all significant figures.

Example: 1R0. . . . . 1μH 100 . . . . . 10μH 470. . . . . 47μH
101 . . . . . 100μH 221 . . . . . 220μH 820. . . . . 820μH

(B) The tolerance of nominal inductance shall be K (± 10%), M (± 20%), Y (± 15%), which will be indicated after figures of inductance.

8. Rating

Part Designation	Nominal Inductance L (µH) @ 1KHz	Inductance Tolerance	DC Resistance Maximum (Ω)	Allowable DC Current Maximum (Amps)	Operating Temperature Range	Storage Temperature Range
SDR1006TTEB100M	10	M: ±20%	0.06	2.60	-40°C to +85°C	-40°C to +105°C
SDR1006TTEB120M	12		0.07	2.45		
SDR1006TTEB150M	15		0.08	2.25		
SDR1006TTEB180M	18		0.09	2.15		
SDR1006TTEB220M	22		0.10	1.95		
SDR1006TTEB270M	27		0.11	1.75		
SDR1006TTEB330K	33	K: ±10%	0.12	1.50		
SDR1006TTEB390K	39		0.14	1.35		
SDR1006TTEB470K	47		0.17	1.25		
SDR1006TTEB560K	56		0.19	1.15		
SDR1006TTEB680K	68		0.22	1.10		
SDR1006TTEB820K	82		0.25	1.00		
SDR1006TTEB101K	100		0.35	0.97		
SDR1006TTEB121K	120		0.40	0.89		
SDR1006TTEB151K	150		0.47	0.78		
SDR1006TTEB181K	180		0.63	0.72		
SDR1006TTEB221K	220		0.73	0.66		
SDR1006TTEB271K	270		0.97	0.57		
SDR1006TTEB331K	330		1.15	0.52		
SDR1006TTEB391K	390		1.30	0.48		
SDR1006TTEB471K	470		1.48	0.42		
SDR1006TTEB561K	560		1.90	0.33		
SDR1006TTEB681K	680		2.25	0.28		
SDR1006TTEB821K	820		2.55	0.24		

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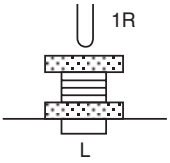
9. Mechanical Performance

Item	Performance	Test Method (JIS C 5321)
Body Strength	No damage	Load 1kg. for 10 seconds  R: The top of loading stick L: Slot-width SDR1006: .236" (6.0 mm)
Resistance to Vibration	Change of Inductance: ±5%	To put the sample on paper phenolic resin laminate base and to vibrate at the frequency of 10-55-10 Hz for each X, Y, Z direction for 2 hours and to sweep it at a full vibration width .059" (1.5mm) for 1 minute.
Resistance to Soldering	No remarkable visual damage	To immerse into Solder bath of 260 ± 5 °C for 10 ± 1 seconds.
Solderability	The electrode shall be covered with new solder	To immerse for 3 ± 0.5 seconds at 235 ± 5 °C

10. Environmental Tests

Item	Performance	Test Method (JIS C 5321)
Resistance to Cold	Change of Inductance: ±10%	To leave in a bath at -40 ± 2 °C for 1,000 hours.
Temperature Cycling	Change of Inductance: ±10%	To keep at -25°C ~ 85°C for 30 minutes in 5 cycles and leave for 10 ~ 15 minutes in normal temperature at the time of transition between low temperatures and high temperatures
Resistance to Heat	Change of Inductance: ±10%	To leave in a bath at 85 ± 2 °C for 2 hours. (Resistance to heat of Ferrite Core: 120°C)
T. C. R	Change of Inductance: ±5%	20°C shall be standard and change of inductance shall be measured at -25°C ~ 85°C.
Resistance to Damp (Steady State)	Change of Inductance: ±10%	Temperature: 60 ± 2 °C Humidity: 90 ~ 95% Test hours: 1,000 hours
Endurance (Under Damp and Load)	Change of Inductance: ±10%	Temperature: 40 ± 2 °C Humidity: 90 ~ 95% To supply allowable current for 1,000 hours continually
Endurance (Under high Temperature)	Change of Inductance: ±10%	Temperature: 85 ± 2 °C To supply allowable current for 1,000 hours

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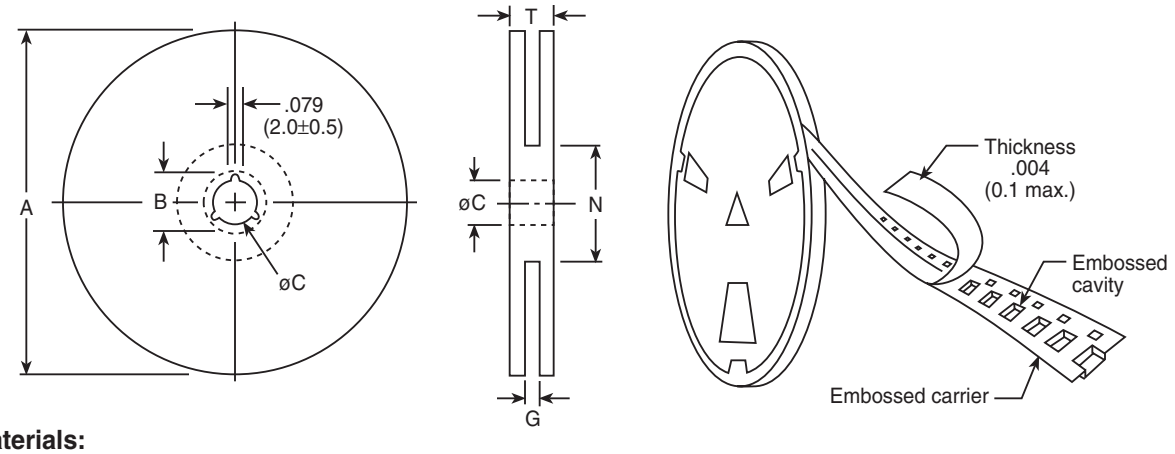
SDR1006 Packaging

Carrier Tape Reels

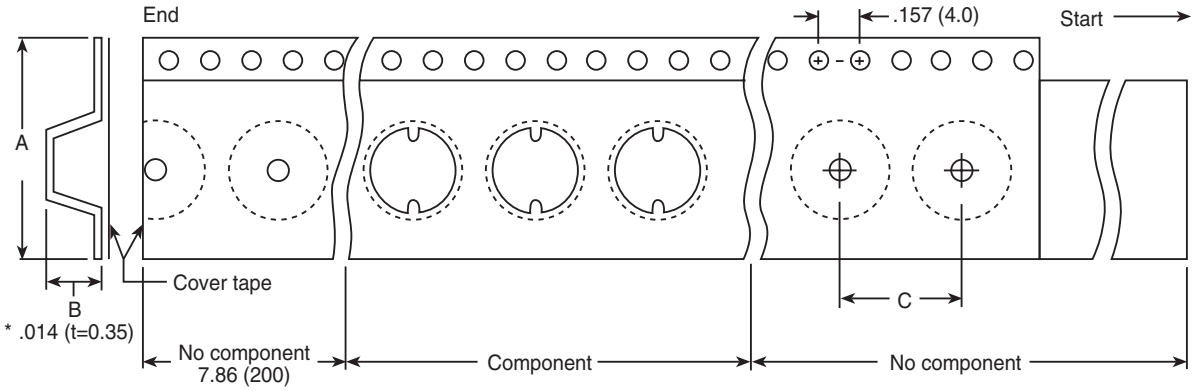


Materials:

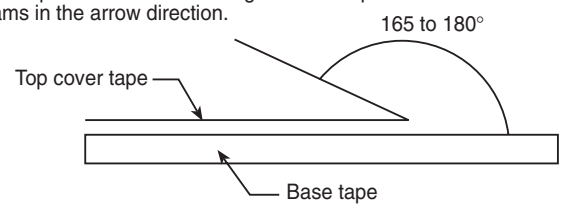
Paper Plastics

Dimensions in inches (mm)

Type	A	B	C	G	N	T
1006	12.98 (330)	.944 (24 ± 1)	.511 ± .02 (13 ± 0.5)	1.02 (26)	1.97 (50 Min.)	1.24 (31.5)



** Strength of cover tape: The force for tearing off cover tape is 10 to 130 grams in the arrow direction.



Size	**Dimensions** inches (mm)		
	A	**B**	**C**
1006	.944 (24)	.26 (6.7)	.114 (12)

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