KOA SPEER ELECTRONICS, INC.

RoHS COMPLIANT

spec sheet

SS-201 R2
AHA 6/30/06

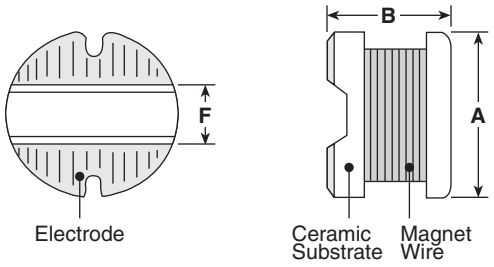
Fixed High-Frequency Inductors
Type SDR0805 *(SMD Power Chokes)*

ISO 9001:2000 CERTIFIED
TS-16949 CERTIFIED

1. Scope

This specification applies to SMD type choke coil SDR0805 produced by KOA Speer Electronics, Inc.

2. Dimensions and Construction



Size	Dimensions inches *(mm)*		
	A	B	F (typ.)
0805	.295±.012 *(7.5±0.3)*	.197±.012 *(5.0±0.3)*	.102 *(2.6)*

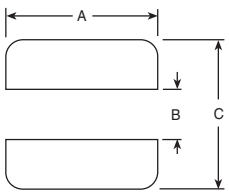
3. Type Designation

SDR	0805	T	TEB	100	M
Type	Size	Termination Material	Packaging	Nominal Inductance	Tolerance
	0805	T: Sn (Other termination styles available, contact factory for options)	TEB: 13" Embossed Plastic (0805: 1,000 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
0805	.31 (8.0)	.094 (2.4)	.31 (7.8)

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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 471 . . . . . 470μH

(B) The tolerance of nominal inductance shall be K (± 10%), M (± 20%), Y (Special), 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
SDR0805TTEB100M	10	M: ±20%	0.07	2.3	-25°C to +85°C	-40°C to +100°C
SDR0805TTEB120M	12		0.08	2.0		
SDR0805TTEB150M	15		0.09	1.8		
SDR0805TTEB180M	18		0.10	1.6		
SDR0805TTEB220M	22		0.11	1.5		
SDR0805TTEB270M	27	K: ±10%	0.12	1.3		
SDR0805TTEB330K	33		0.14	1.2		
SDR0805TTEB390K	39		0.16	1.1		
SDR0805TTEB470K	47		0.20	1.0		
SDR0805TTEB560K	56		0.24	0.94		
SDR0805TTEB680K	68		0.30	0.85		
SDR0805TTEB820K	82		0.37	0.78		
SDR0805TTEB101K	100		0.45	0.72		
SDR0805TTEB121K	120		0.48	0.66		
SDR0805TTEB151K	150		0.68	0.58		
SDR0805TTEB181K	180		0.77	0.51		
SDR0805TTEB221K	220		0.96	0.49		
SDR0805TTEB271K	270		1.11	0.42		
SDR0805TTEB331K	330		1.26	0.40		
SDR0805TTEB391K	390		1.77	0.36		
SDR0805TTEB471K	470		1.96	0.34		

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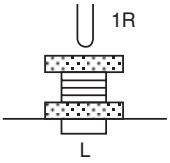
9. Mechanical Performance

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 SDR 0805: .157" (4.0 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.
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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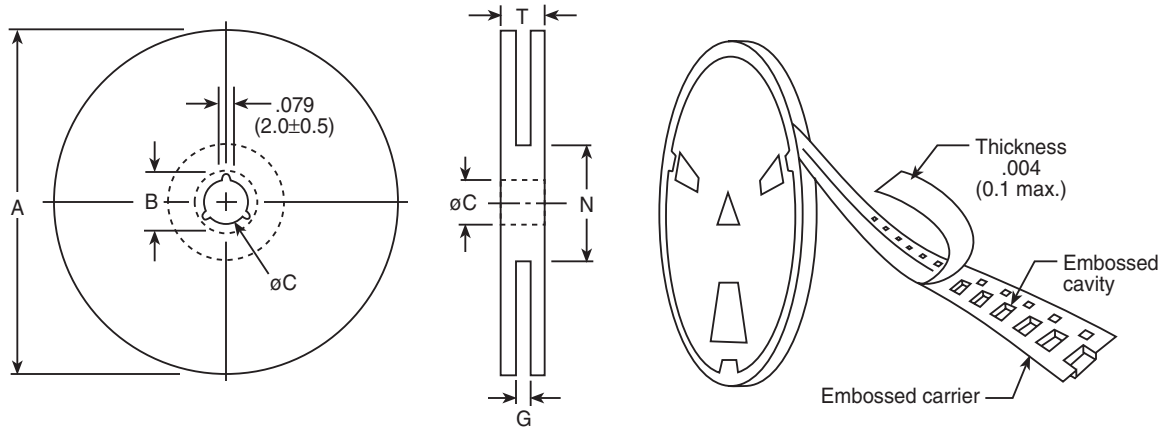
SDR 0805 Packaging

Carrier Tape Reels



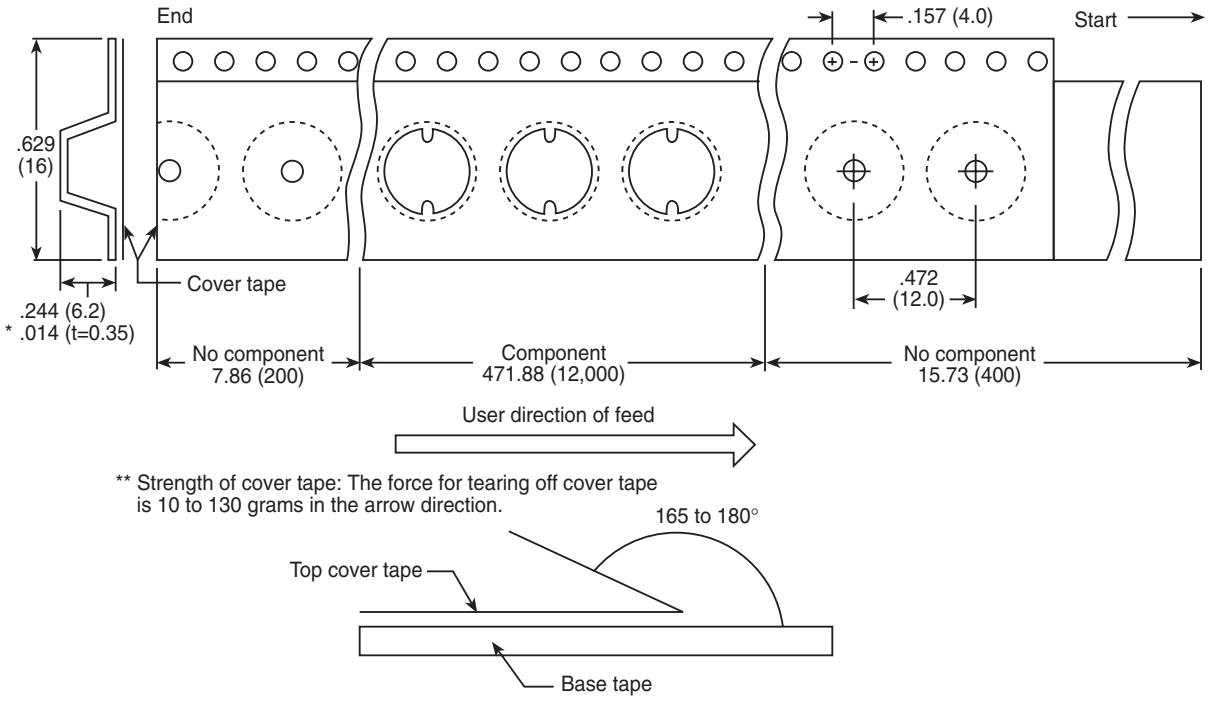
Materials:

Paper Plastics

Dimensions in inches (mm)

Type	A	B	C	G	N	T
.629 (16)	12.98 (330)	.944 (24 ± 1)	.511 (13 ± 0.5)	.708 (18)	1.97 (50 - 0)	.924 (23.5)

* SDR 0805: 1,000 Pieces/Reel



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