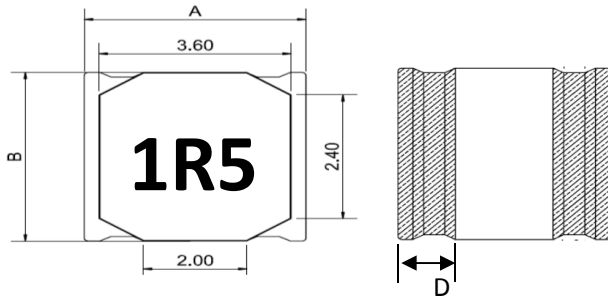


SPECIFICATION

PROD. NAME	Semi-shielded power inductor	PART NO.	SRN4018A SERIES
		REF. :	REV.:B (20151001)

I. CONFIGURATION & DIMENSIONS :



- A : 4.0 ±0.2 mm
- B : 4.0 ±0.2 mm
- C : 1.88 mm Max. (R82~2R7)
: 1.80 mm Max. (3R3~221)
- D : 1.30 mm typ.

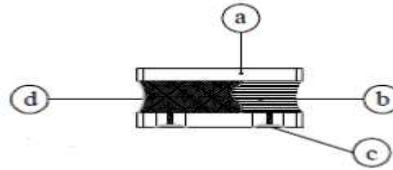


II. SCHEMATIC DIAGRAM :

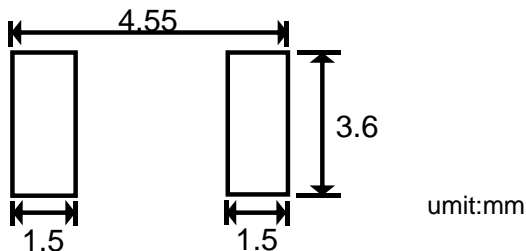


III. MATERIALS:

- a) Core : Ferrite Core
- b) Wire : R82~2R7 - Polyurethane (P180)
3R3~221 - Polyesterimide (E180)
- c) Terminal : Ag/Ni/Sn
- d) Coating : Magnetic Epoxy Resin

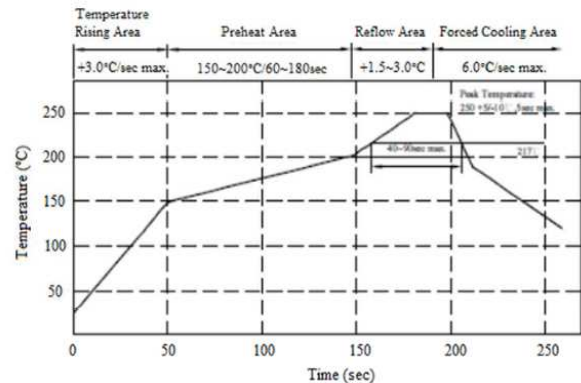


IV. RECOMMENDED PCB PATTERN:



V. GENERAL SPECIFICATION :

- a. Temp. rise : 40°C TYP.
- b. Operating temp. : -40°C ~ +125°C
(Temp. rise included)
- c. Storage temp. : -10°C ~ +40°C
- d. Humidity : 30 ~ 70% R.H.
Note : MSL=1
- e. Qualification to AEC-Q200, available for automotive application on driver assistant infotainment & lighting system.



Peak Temp: 255°C max.
Max. time above 217°C : 90sec. max.
Reflow : 2 times maximum

SPECIFICATION

PAGE: 2

PROD. NAME	Semi-shielded power inductor	PART NO.	SRN4018A SERIES
		REF. :	REV.:B (20151001)

VI. ELECTRICAL CHARACTERISTICS :

PART NO.	Inductance (uH)	SRF min. (MHz)	Rdc (mΩ)	Isat (A) typ.	Idc (A) typ.
SRN4018A-R82Y	0.82 ± 30%	100	16(±30%)	4.20	4
SRN4018A-1R0Y	1.00 ± 30%	90	19(±30%)	4.7	3.7
SRN4018A-1R2Y	1.20 ± 30%	80	21(±30%)	4.0	3.5
SRN4018A-1R5Y	1.50 ± 30%	70	32(±30%)	3.5	3.1
SRN4018A-2R2M	2.20 ± 20%	60	37(±20%)	3.0	2.9
SRN4018A-2R7M	2.70 ± 20%	52	43(±20%)	2.4	2.3
SRN4018A-3R3M	3.30 ± 20%	45	55(±20%)	2.3	2.2
SRN4018A-4R7M	4.70 ± 20%	35	70(±20%)	2.0	1.9
SRN4018A-6R8M	6.80 ± 20%	30	98(±20%)	1.6	1.5
SRN4018A-100M	10.00 ± 20%	25	150(±20%)	1.4	1.3
SRN4018A-150M	15.00 ± 20%	18	220(±20%)	1.1	1
SRN4018A-220M	22.00 ± 20%	15	290(±20%)	0.95	0.9
SRN4018A-330M	33.00 ± 20%	12	460(±20%)	0.75	0.7
SRN4018A-470M	47.00 ± 20%	10	650(±20%)	0.62	0.6
SRN4018A-680M	68.00 ± 20%	8	940(±20%)	0.50	0.5
SRN4018A-101M	100.0 ± 20%	6	1330(±20%)	0.45	0.42
SRN4018A-151M	150.0 ± 20%	5	2000(±20%)	0.35	0.32
SRN4018A-221M	220.0 ± 20%	3	2960(±20%)	0.30	0.28

Note 1 : Isat : DC current (A) that will cause LO to drop approximately 30%

Note 2 : Idc Based on temperature rise (ΔT : 40°C typical.)

Note 3 : Test frequency:100kHz,1V

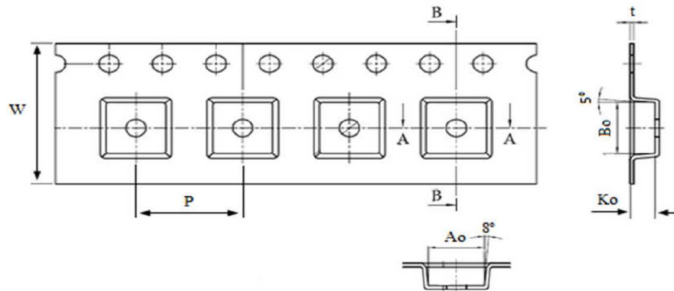
BOURNS INDUCTIVE COMPONENTS

SPECIFICATION

PROD. NAME	Semi-shielded power inductor	PART NO.	SRN4018A SERIES
		REF. :	REV.:B (20151001)

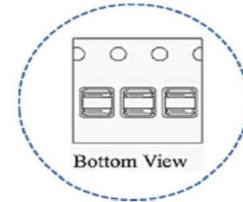
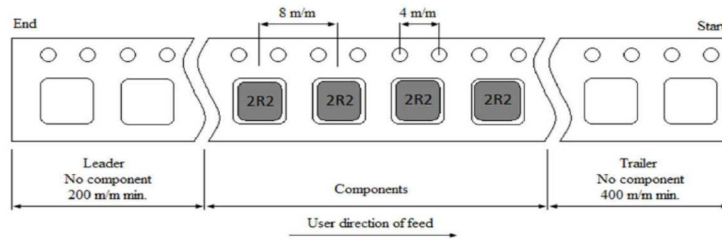
VII. PACKAGING INFORMATION

(1) Tape packaging dimensions

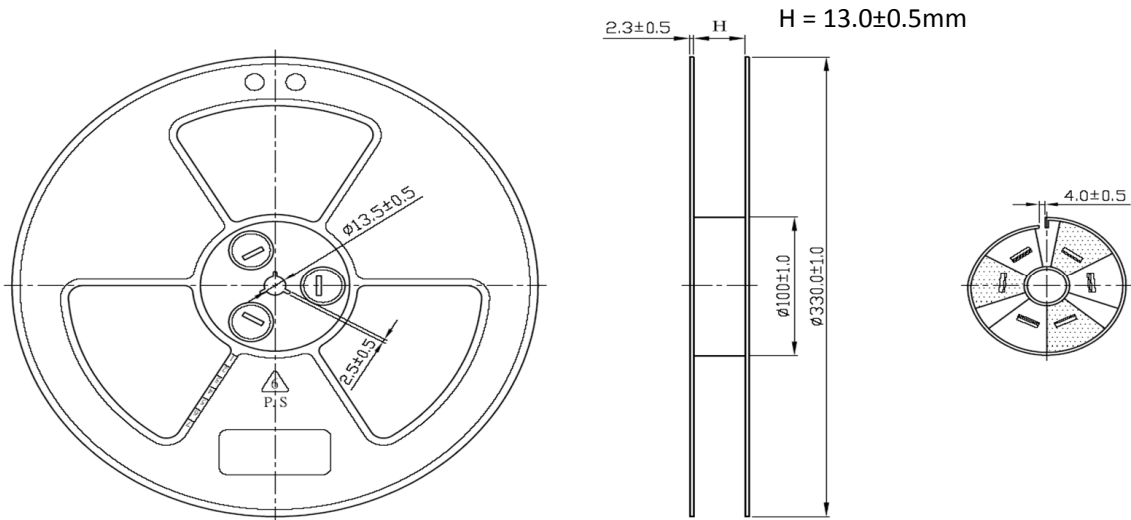


unit:mm

Ao	4.50
Bo	4.35
Ko	1.90
t	0.25
W	12.00
P	8.00



(2) Reel dimensions



(3) Quantity

Quantity : $\phi 330$ mm reel type : 3000 pcs./reel
Outer Box: 5 reels/Box

SPECIFICATION

PROD. NAME	Semi-shielded power inductor	PART NO.	SRN4018A SERIES
		REF. :	REV.:B (20151001)

VIII. RELIABILITY TEST :

Item	Reference documents	AEC-Q200 Test Condition	Specification
1. High Temperature Exposure	MIL-STD-202 Method 108	1. Temperature : 125°C 2. Time : 1000 hours.	1. No mechanical and electrical damage 2. Inductance shall not change more than ±20%
2. Temperature Cycling	JESD 22 Method JA-104	1. Temperature : -40°C ~ 125°C 2. Number of cycle : 1000 cycles 3. Dwell time : 30 minutes	1. No mechanical and electrical damage 2. Inductance shall not change more than ±20%
3. Biased Humidity Test	MIL-STD-202 Method 103	1. Temperature : 85±5°C 2. Time : 1000 hours. 3. Humidity :85±5% RH.	1. No mechanical and electrical damage 2. Inductance shall not change more than ±20%
4. Operational Life	MIL-PRF-27-3.26/4.7.23 & User Spec.	1. Temperature : 125°C (Temp. rise included) 2. Time : 1000 hours. 3. Apply rated current	1. No mechanical and electrical damage 2. Inductance shall not change more than ±20%
5. External Visual	MIL-STD-883 Method 2009	Inspect product construction, Marking and workmanship.	1. No contamination on the surface of product. 2. Clear Marking. 3. No crack.
6. Physical Dimensions	JESD22 Method JB-100	Verify physical dimensions to the applicable product detail specification.	Per product specification standard.
7. Resistance to solvents	MIL-STD-202 Method 215	Immerse into solvent for 3±0.5 minutes and brush 10 times for 3 cycles.	1. No body change in appearance. 2. No marking blurred 3. Inductance shall not change more than ±20%
8. Mechanical Shock	MIL-STD-202 Method 213	1. Peak acceleration 100g's 2. Duration of pulse : 6ms 3. Waveform : Half-sine 4. Velocity change : 12.3 ft/sec 5. Direction: ±X, ±Y, ±Z (3 times / axis)	1. No mechanical and electrical damage 2. Inductance shall not change more than ±20%
9. Vibration Test	MIL-STD-202 Method 204	1. Frequency and Amplitude : 10-2000-10Hz 2. Sweep time : 20 min 3. Acceleration : 5g 4. Direction : X, Y, Z 5. Number of sweep : 12 times/axis	1. No mechanical and electrical damage 2. Inductance shall not change more than ±20%
10. Resistance to soldering heat test.	MIL-STD-202 Method 210 & J-STD020D.1	1. Highest temperature : 260±5°C 2. Time (temp ≥ 217°C) : 60~150 second. 3. IR reflow : 3 times	1. No mechanical and electrical damage. 2. Inductance shall not change more than ±20%
11. ESD	AEC-Q200-002 or ISO/DIS 10605	1. ESD Voltage : 15KV 2. Mode 1: 150pF / 330Ω 3. Mode 2: 150pF / 2000Ω 4. Discharge times and polarity : 3 times pos. / 3 times eng. for each condition.	1. No mechanical and electrical damage. 2. Inductance shall not change more than ±20%
12. Solderability test	J-STD-002	1. Baking in pre-testing. 150±5°C / 16 hours ± 30 min 2. Peak temperature : 240 ±5°C 3. Time (temp ≥ 217°C) : 60~150 second. 4. IR reflow : 1 time	The terminal shall be at least 95% covered by fresh solder.
13. Electrical Characterization	MIL-STD-202 Method 304 & User Spec	1. Operating temperature: -40 ~ 125°C 2. Room temperature : 25°C.	1. No mechanical and electrical damage 2. Inductance shall not change more than ±20%
14. Flammability			
15. Board Flex	AEC-Q200-005	1. Deflection speed : 1mm/sec 2. Amount of deflection : 2mm 3. Span : 90mm 4. Direction for test : Bottom of PCB 5. Holding time : 60 sec.	1. No mechanical and electrical damage 2. Inductance shall not change more than ±20%
16. Terminal strength test	AEC-Q200-006	1. Apply push force to samples mounted on PCB. 2. Force of 1.8kg for 60±1 seconds	After test, inductors shall be no mechanical damage.