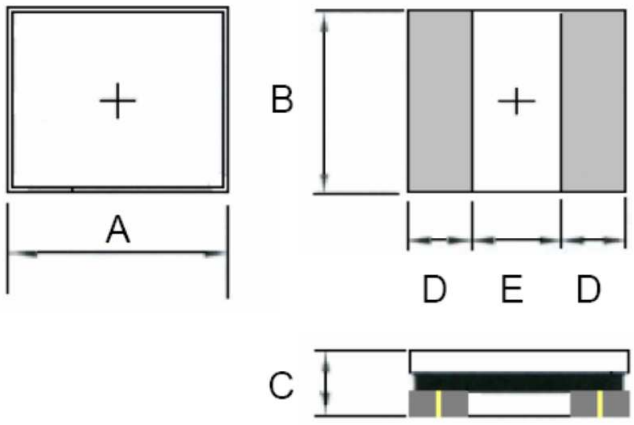
# SPECIFICATION



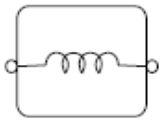
| PROD. NAME | SHIELDED POWER INDUCTOR | PART NO. | SRN2512-4R7M |
|---|---|---|---|
| | | REF | 20150618 |

## I. CONFIGURATION & DIMENSIONS :

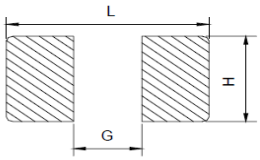



Chip Size:mm
A: 2.5 -0.1/+0.2
B: 2.0 -0.05/+ 0.35
C: 1.2 max.
D: 0.85 ref.
E: 0.80 ref.

## II. SCHEMATIC DIAGRAM:



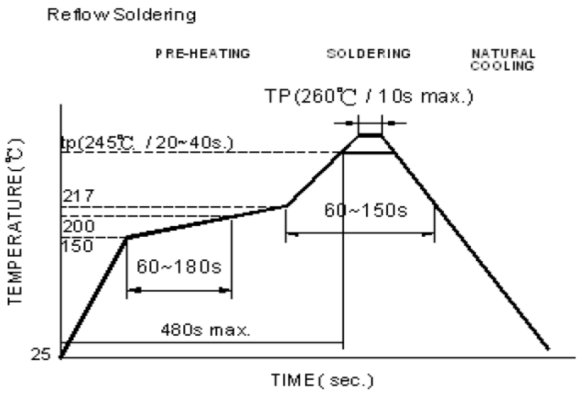
## III. RECOMMENDED PCB PATTERN:




Unit:mm
G: 0.8
H: 2.1
L: 2.6

## IV. GENERAL SPECIFICATION :

a. Temp. rise：40℃max.(ΔT)
b. All test data referenced to 25℃ ambient.
c. Operating Temperature :-40~+125℃
d. Storage temperature and Humidity range
:-40~+125℃ ; 50~60%RH
e. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
f. Reflow times: 3times max.



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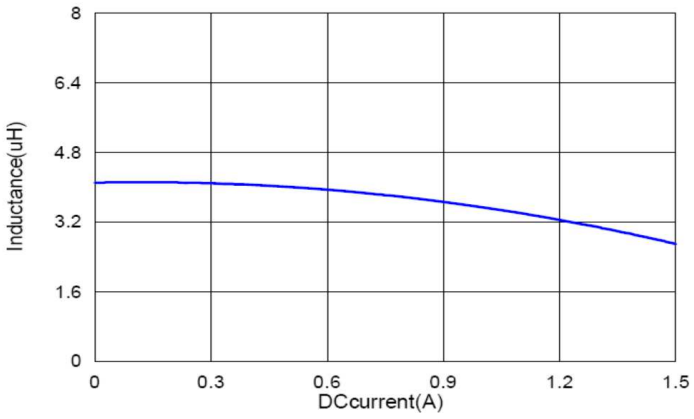
V. ELECTRICAL CHARACTERISTICS :

| PART NO. | Inductance L (uH) ±20% @0A | Rdc(Ω) max. ±20% | Isat(A) typ. | Irms(A) typ. |
|---|---|---|---|---|
| SRN2512-4R7M | 4.7 | 0.176 | 1.5 | 1.2 |

Note:

1. Test frequency of L : 1MHz / 0.1V
2. Saturation Current (Isat) will cause L to drop approximately 30% typical.
3. Heat Rated Current (Irms) will cause the coil temperature rise approximately △t ≦ 40.℃

VI. TYPICAL PERFORMANCE CURVES:



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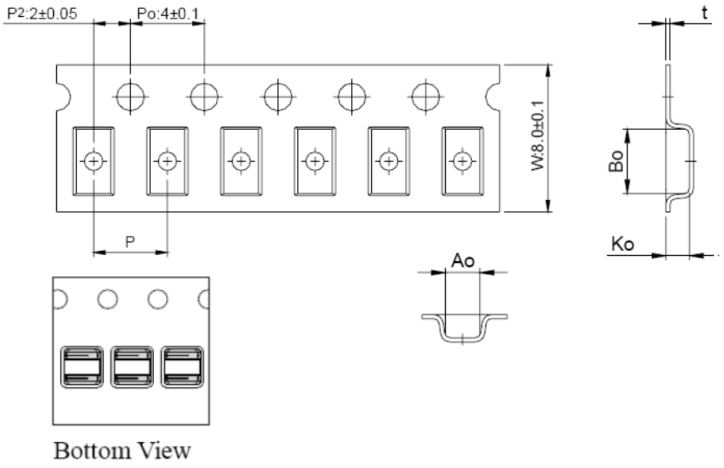
## VII. PACKAGING INFORMATION

( 1 ) Tape packaging dimensions

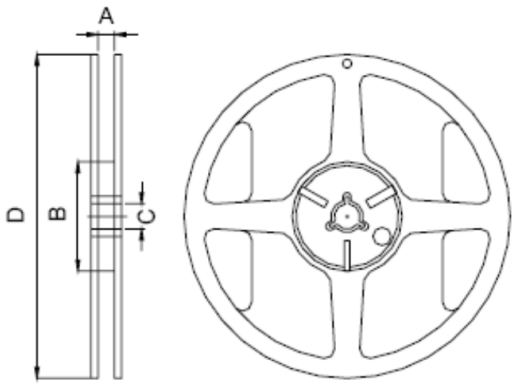



Bottom View

unit:mm

| Bo(mm) | Ao(mm) | Ko(mm) | P(mm) | t(mm) |
|---|---|---|---|---|
| 2.85±0.1 | 2.45±0.1 | 1.40±0.1 | 4.0±0.1 | 0.23±0.05 |

( 2 ) Reel dimensions




7"x8mm

| Type | A(mm) | B(mm) | C(mm) | D(mm) |
|---|---|---|---|---|
| 7"x8mm | 8.4±1.0 | 50 min. | 13±0.8 | 178±2 |

(3) Packaging Quantity

reel type : 2000 pcs./reel

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VIII. RELIABILITY TEST：

| Test item | Specification and Requirement | Test Conditions |
|---|---|---|
| Solder Heat Resistance | Appearance：No damage.<br>Inductance：within±10% of initial value<br>Q：Shall not exceed the specification value.<br>RDC：within ±15% of initial value and shall not exceed the specification value | <table><tr><th>Temperature (°C)</th><th>Time (s)</th><th>Temperature ramp/immersion and emersion rate</th><th>Number of heat cycles</th></tr><tr><td>260 ±5 (solder temp)</td><td>10 ±1</td><td>25mm/s±6 mm/s</td><td>1</td></tr></table><br>Depth: completely cover the termination |
| Solderability Test | More than 95% of terminal electrode should be covered with solder. | Preheat: 150℃,60sec.。<br>Solder: Sn99.5%-Cu0. 5%。<br>Temperature: 245±5℃ 。<br>Flux for lead free: Rosin. 9.5%。<br>Dip time: 4±1sec。<br>Depth: completely cover the termination |
| Life Test | Appearance：No damage.<br>Inductance：within±10% of initial value<br>Q：Shall not exceed the specification value.<br>RDC：within ±15% of initial value and shall not exceed the specification value | Preconditioning:Run through IR reflow for 2 times.( IPC/JEDEC J-STD-020DClassification Reflow Profiles<br>Temperature：125±2℃(Bead)<br>Temperature： 85±2℃(Inductor)<br>Applied current：rated current<br>Duration：1000±12hrs<br>Measured at room temperature after placing for 24±2 hrs |
| Thermal shock | | Preconditioning:Run through IR reflow for 2 times.( IPC/JEDEC J-STD-020DClassification Reflow Profiles<br>Step1：-40±2℃ 30±5min<br>Step2：25±2℃ ≦0.5min<br>Step3：105±2℃ 30±5min<br>Number of cycles： 500<br>Measured at room fempraturc after placing for 24±2 hrs |
| Humidity Resistance Test | | Preconditioning:Run through IR reflow for 2 times.( IPC/JEDEC J-STD-020DClassification Reflow Profiles<br>Humidity：85±2% R.H,<br>Temperature：85℃±2℃<br>Duration：1000hrs Min. with 100% rated current<br>Measured at room temperature after placing for 24±2 |
| Vibration Test | | Preconditioning:Run through IR reflow for 2 times.( IPC/JEDEC J-STD-020DClassification Reflow Profiles<br>Oscillation Frequency: 10～2K～10Hz for 20 minutes<br>Equipment： Vibration checker<br>Total Amplitude:1.52mm±10%<br>Testing Time : 12 hours(20 minutes, 12 cycles each of 3 orientations)。 |