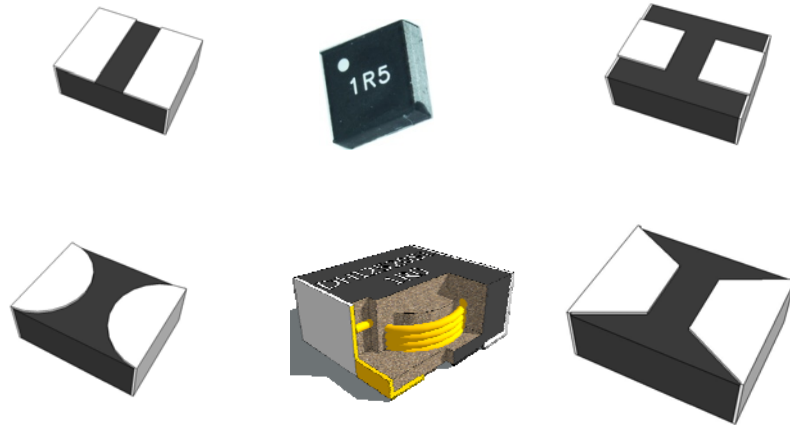


SPECIFICATION

SMD磁粉芯功率电感
Part No : CSH2520P0-R



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Part No

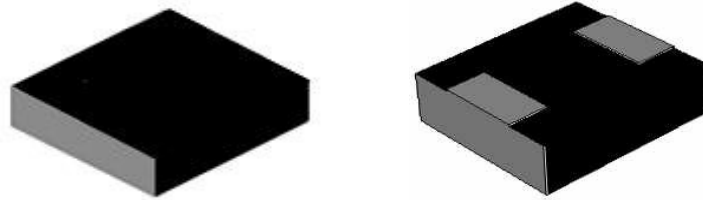
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Rev.

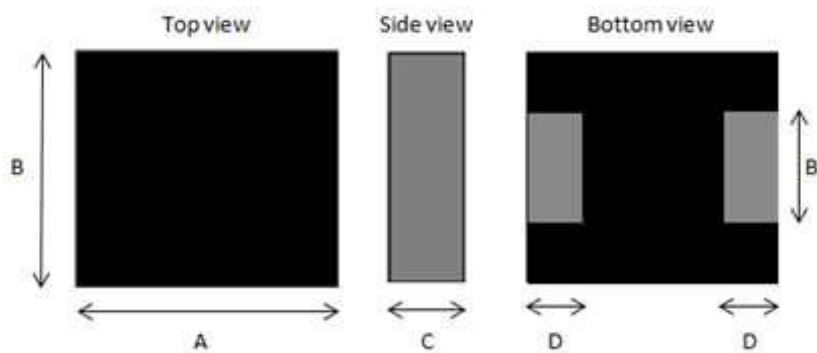
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1. Shape and Dimension(mm)/ 外观与尺寸(mm)

1) Shape/外观



2) Dimensions(mm) /尺寸(mm)



A(mm)	B(mm)	B'(mm)	C(mm)	D(mm)
3.0 ± 0.2	3.0 ± 0.2	2.0 ± 0.2	1.2 max	0.6 ± 0.2



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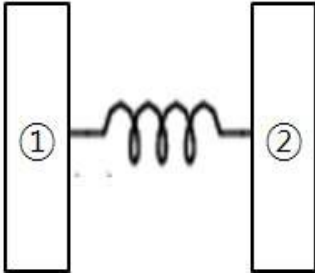
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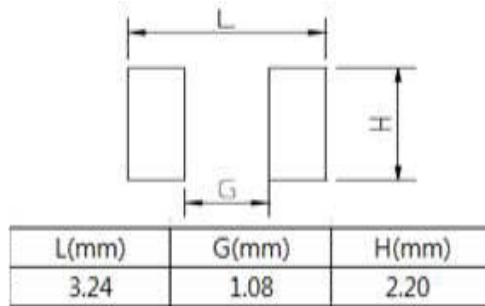
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2. Schematic & Land Pattern/电路图及贴板规格

1) Schematics/电路图



2) Land Pattern(mm) /贴板规格(mm)

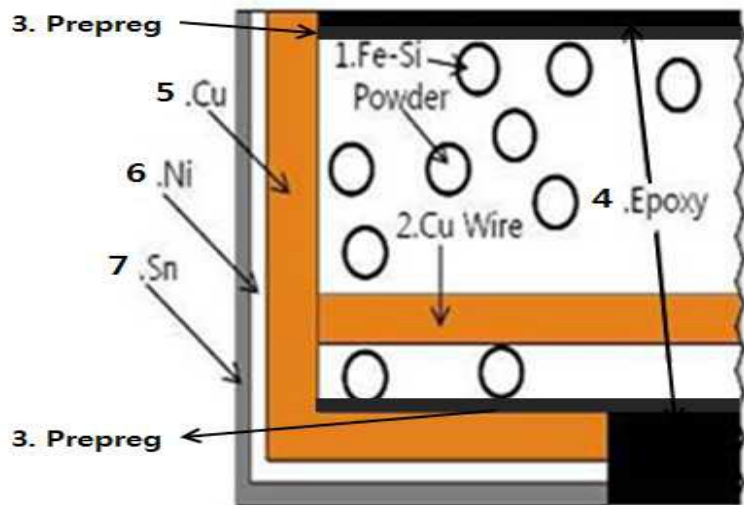


3. Material List & Terminal Construction/材料及内部结构

1) Material List/材料清单

No	Materials
1	Fe-Si alloy powder
2	Cu wire
3	Prepreg
4	Epoxy(Black)
5	Cu
6	Ni
7	Sn

2) Terminal Construction/内部结构



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4. Electrical Performance/产品规格

- 1) Test condition/测试条件: 1MHz, 0.10V
- 2) DCR @ 25°C

Part No	OCL(μ H)	I _{rms} (A)	I _{sat} (A)	DCR(m Ω)
DHI3012-2R2-R	2.2 \pm 20%	2.4	2.6	87 \pm 20%

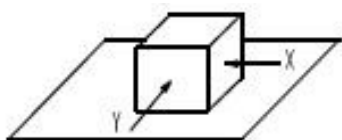
Note.

1. I_{rms} : DC current for an approximate ΔT of 40°C without core loss
I_{rms} : 加载后温升达到40°C时的电流
2. I_{sat} : Amperes peak for 30% roll off(@ 25°C)
I_{sat} : 加载后电感量下降30%时的电流值

5. Mechanical characteristics testing items/机械特性测试项目

- 1) Storage temperature -40 ~ +85°C
- 2) Operation Temperature -40 ~ +85°C (Including coil's self temperature rise)
- 3) External appearance : No external defects can be found in the visual inspection.
- 4) Electrode strength

No electrode detachment should be found when the device is pushed in two directions of X and Y with the force of 5.0N for 60 \pm 1 seconds after soldering between copper plate and the electrodes. (Refer to figure)



5) Heat endurance test

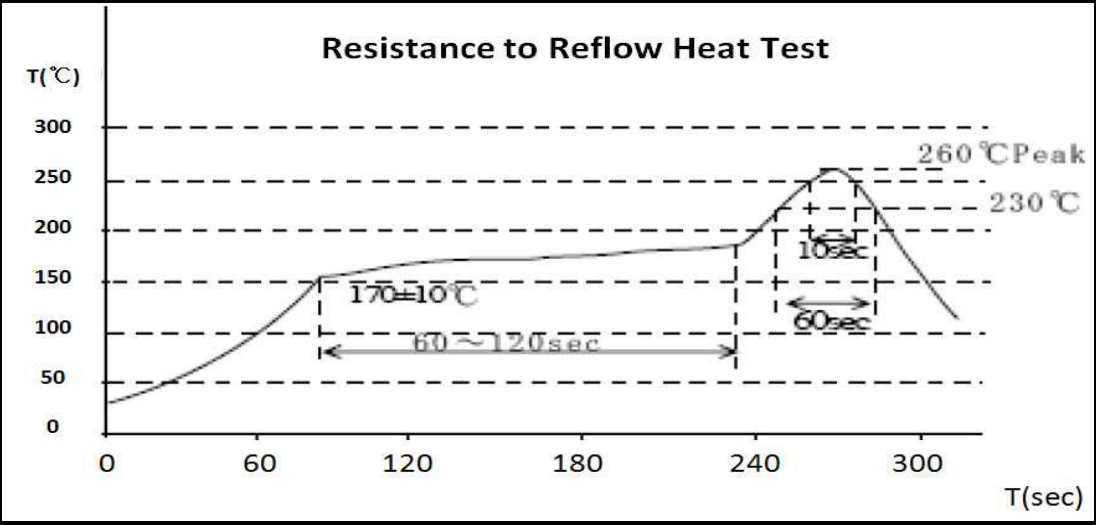
Inductance deviation is within $\pm 10.0\%$ after reflow test be done for 2 times. according to the below chart, then the measurement shall be made in 2 hours after 1 hour storage under room ambient conditions



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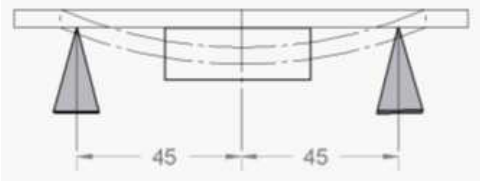
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6) Board bent characteristic

Inductance deviation is within $\pm 5.0\%$, after apply pressure in the direction of the arrow at a rate of about 0.5mm/s until bent with reaches 2mm and hold for 30 seconds



7) Humidity test

Inductance deviation is within $\pm 10.0\%$ after 500 ± 12 hours test under the condition of relative humidity of 90~95% and temperature of $60 \pm 2^\circ\text{C}$. and 1 hours storage under room ambient conditions after the device is wiped with dry cloth.

8) High temperature Storage test

Inductance deviation is within $\pm 10.0\%$ after 500 ± 12 hours test under the condition of temperature of $105 \pm 2^\circ\text{C}$ and 1 hours storage under room ambient conditions after which device is tested within the next 1 hour.

9) Low temperature Storage test

Inductance deviation is within $\pm 10.0\%$ after 500 ± 12 hours test under the condition of temperature of $-40 \pm 2^\circ\text{C}$ and 1 hours storage under room ambient conditions after which device is tested within the next 1 hour.

10) Thermal shock test

Specimen is subject to -40°C for 30 minutes hereafter it is subject to 105°C for 30 minutes(Transition time is 1 minute maximum.) This constitutes one cycle. After 500 cycles, it is then left in room temperature for 1 hour. After which specimen is tested within the next 1 hour and the inductance deviation is within $\pm 10.0\%$

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11) Operating life test

The component is left in a constant temperature chamber of temperature $85\pm 2^{\circ}\text{C}$ applying the rated current for 168hours after the soldering heat resistance test, and then the component is left at room temperature and normal humidity for 2 ± 1 hours. After that, any surface defects shouldn't be found and the rate of inductance against its initial value should be within $\pm 10\%$

12) Humidity operating life test

Inductance deviation is within $\pm 10\%$ and no structure and electric defects can be found after 168hours test under the condition of relative humidity of 80~85% and temperature of $85\pm 2^{\circ}\text{C}$ and allowable current loaded and 1 hour storage under room ambient conditions after which device is tested within the next 2 hours

Application Notice / Handling

- 1) Temperature and humidity conditions : less than 40°C and 70% RH.
- 2) Products should be used within 6 months.
- 3) The packaging material should be kept where no chlorine or sulfur exists in the air.
- 4) Do not touch the electrodes(soldering terminals) with fingers as this may lead to deterioration of solderability.
- 5) The use of tweezers or vacuum pick-ups is strongly recommended for individual components.
- 6) Bulk handling should ensure that abrasion and mechanical shock are minimized

7. Packaging Standard/包装规格

1) Packaging data

Component	L(mm)	W(mm)	H(mm)	Wt(g)	Quantity
Part size	3.20	3.20	1.00	0.03	3,000

- 2) Reel Tape Specification : Units supplied in tape and reel packaging. Meets EIA-481 standard.



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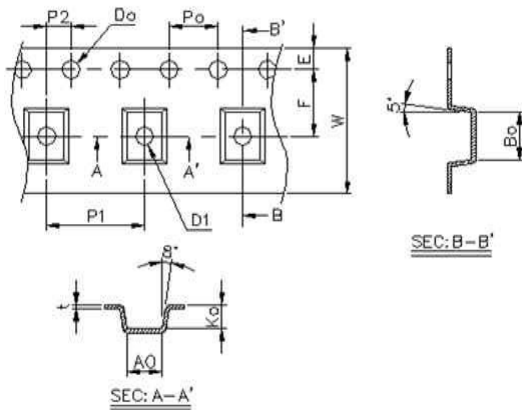
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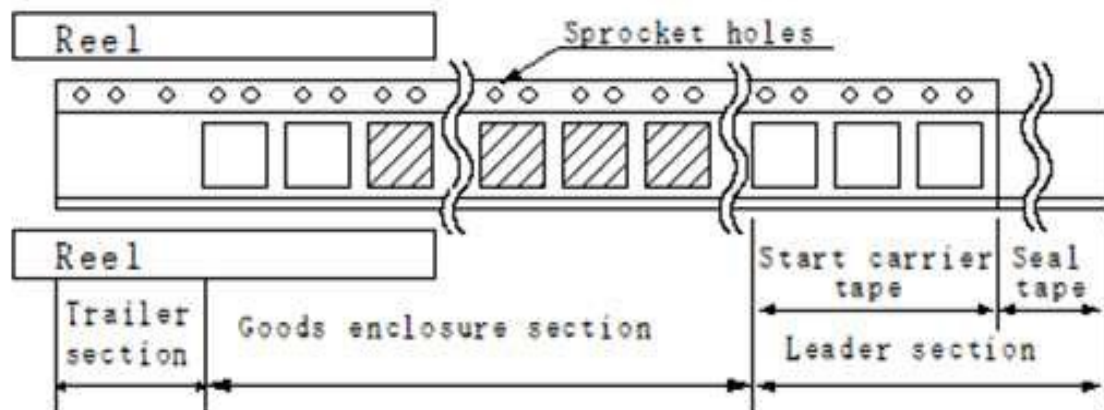


* 표 5-1 치수규격

단위: mm

ITEM	SPEC	Tolerance	ITEM	SPEC	Tolerance
W	8.0	± 0.20	P2	2.00	±0.05
E	1.75	± 0.10	Pox10	40.0	±0.20
F	3.50	± 0.05	T	0.23	± 0.05
Do	1.50	+0.1/-0	Ao	3.20	± 0.1
D1	1.50	±0.1	Bo	3.50	± 0.1
Po	4.00	±0.05	Ko	1.2	± 0.1
P1	4.00	±0.1			

3) Taping dimension and tape direction, Leader, Trailer section dimension



Leader section	Min 400mm
Trailer section size	Min 400mm



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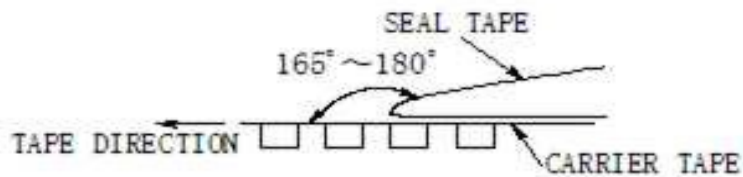
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4) Taping

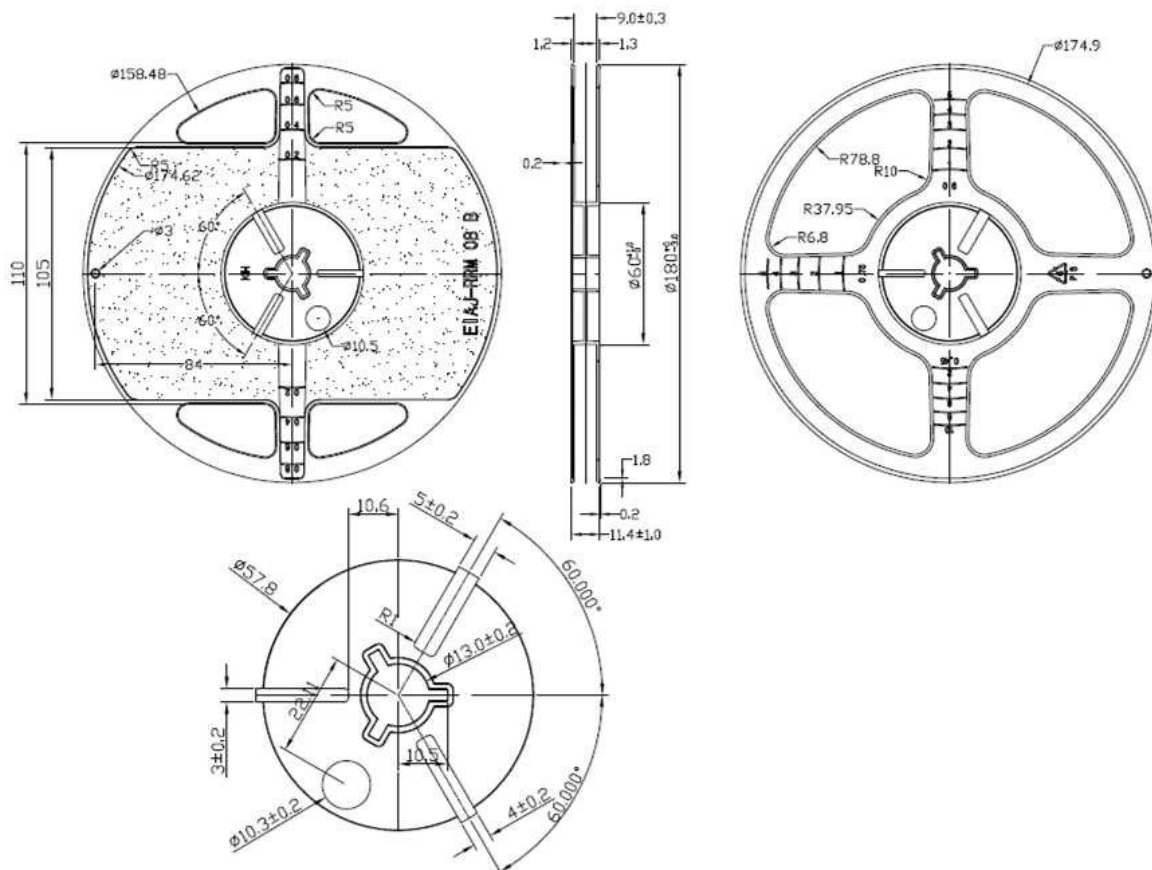
The angle between the seal tape during peel off and the direction of unreeling shall be 165 °C to 180°C.

The seal tape shall adhere uniformly to the carrier tape along both sides in the direction of unreeling.

The peel force with a peel speed of 300mm/MIN±10mm/MIN shall be 0.1N TO 1.3N.

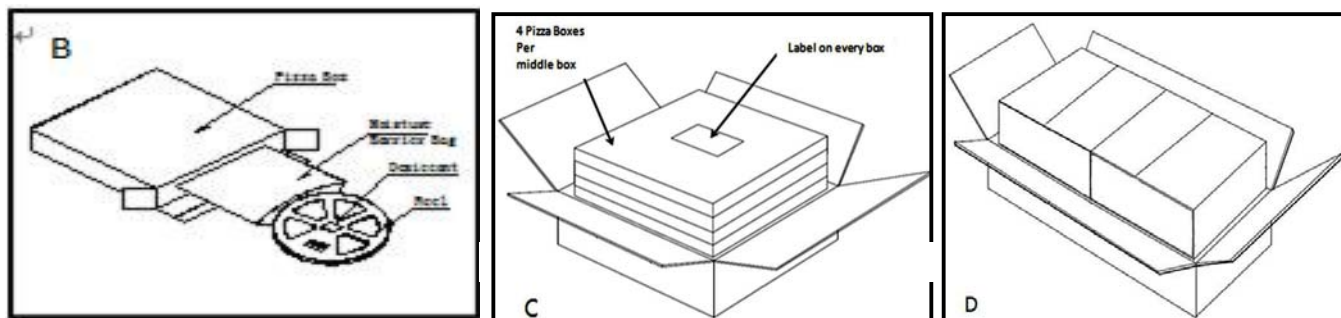


5) Reel Specification



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6) Packing Materials



Packing Materials	B. Pizza Box			C. Middle Box			D. Large Box		
Dimension(mm)	L	W	H	L	W	H	L	W	H
	335	335	50	355	355	230	720	370	255

7) Packing Specification/包装规格

2middle box/Large box, 4Reel/Middle box, 1Reel/Pizza box, 3000pcs/Reel, Total 24000pcs(Large Box)
 Reel Dimensions : $\varnothing 180 \times 11.4$ (mm) /2个中盒/大箱, 4卷/中盒, 1卷/小盒, 3000pcs/卷, 总24000pcs/大盒
 卷轴尺寸: 直径180×11.4 (mm)

8. Environmental substances requirement

1) RoHs Compliance & Halogen Compliance

Test Items	Unit	Test Method	MDL	Results
Cd	mg/kg	With reference to IEC62321:2008, ICP	0.5	N.D.
Pb	mg/kg	With reference to IEC62321:2008, ICP	5	N.D.
Hg	mg/kg	With reference to IEC62321:2008, ICP	2	N.D.
Cr VI	mg/kg	With reference to IEC62321:2008, UV-VIS	1	N.D.
PBBs	mg/kg	With reference to IEC62321:2008, GC-MS	5	N.D.
PBDEs	mg/kg	With reference to IEC62321:2008, GC-MS	5	N.D.
Br	mg/kg	BS EN 14582:2007, IC	30	N.D.
Cl	mg/kg	BS EN 14582:2007, IC	30	N.D.
F	mg/kg	BS EN 14582:2007, IC	30	N.D.
I	mg/kg	BS EN 14582:2007, IC	50	N.D.
Sb	mg/kg	With reference to EPA 3052(1996), US EPA 6010B(1996), ICP	10	N.D.

Note

- 1) N.D. = Not detected(< MDL)
- 2) mg/kg = ppm
- 3) MDL = Method Detection Limit
- 4) Test instrument : SGS TEST KOREA



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