

ITEM P/N	PSPNAQ4020-4R7M	TEST INSTRUMENT	LCZ1068/1310BIAS/502AC
PRODUCT	SMD INDUCTOR	TEST FREQUENCY	1KHz / 0.25V

CUSTOMER :**CUSTOMER P/N :****DESCRIPTION :** SMD INDUCTOR**P/N :** PSPNAQ4020-4R7M**REVISION NO. :** Version:1.0**DATE :** 2017-4-9**NOTES :** STANDARD

DOCUMENTED	
APPROVED	Yuki
CHECKED	Ben
PREPARED	Peter

CUSTOMER APPROVAL

company seals



PROD TECHNOLOGY CO., LTD.

TEL :0755-86667379

<http://www.prodtech.cn>

E-LIVEN TECHNOLOGY CO., LTD.

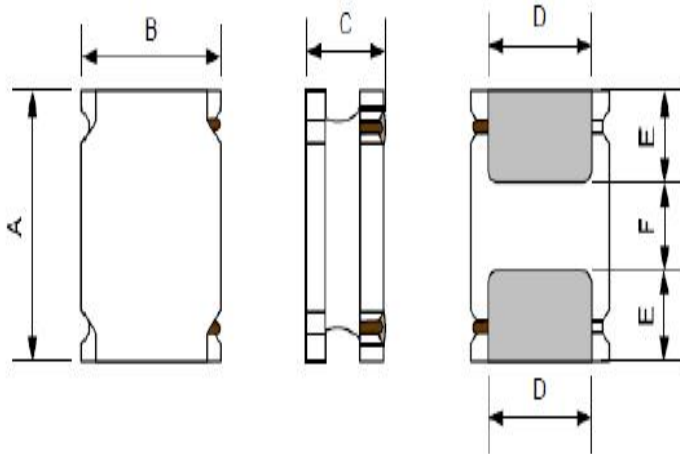
NO.28 ho-cheng RD, bade city, taoyuan,
taiwan

COIL SPECIFICATION

RoHS
COMPLIANT

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PACKING DIMENSIONS (mm)



4020	Dimensions
A	4.00±0.2
B	4.00±0.2
C	2.00Max.
D	3.30±0.2
E	0.95±0.2
F	2.10±0.2

EXPLANATION OF PART NUMBERS

PSPNAQ <u>Serial Codes</u>	4020 <u>Size</u>	-	4R7M <u>Inductance Code</u>
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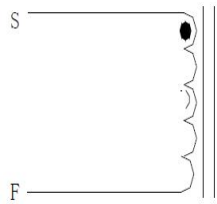
ELECTRICAL CHARACTERISTICS

ITEM P/N	@ 25 °C Ambient Temperature				
	INDUCTANCE		Irms (A) Max.	Isat (A) Max.	DCR (mΩ) ±30%.
	Lo (μH)	TOLERANCE			
PSPNAQ40 20-4R7M	4.70	±20%	1.27	2.35	85.0

- ⊙ All test Data is referenced to 25°C ambient
- ⊙ Typical Heat Rating DC Current would cause an approximately ΔT of 40°C
- ⊙ Typical Saturation DC Current would cause Lo to drop approximately 35%
- ⊙ Operation Temperature Range : -40°C ~ 125°C
- ⊙ The Part temperature (ambient + ΔT) should not exceed 125°C under worst case operating conditions.
- ⊙ Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all effect the part temperature. Part temperature should be verified in the end application.

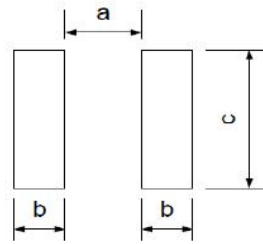
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SCHEMATIC



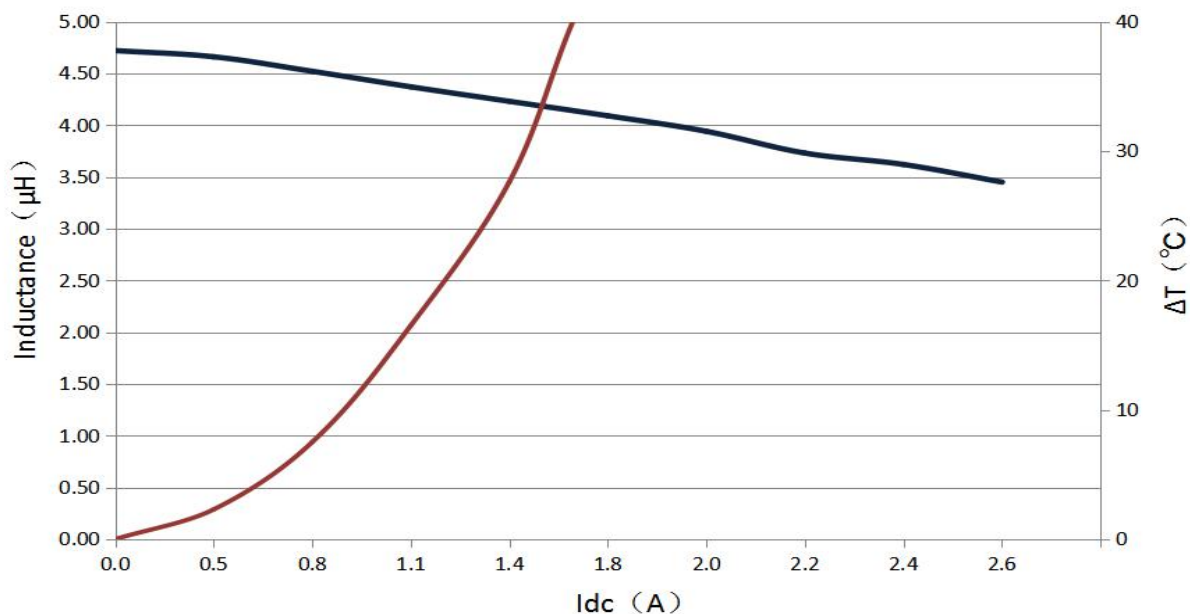
"●" 表示起线

Recommended Land Pattern

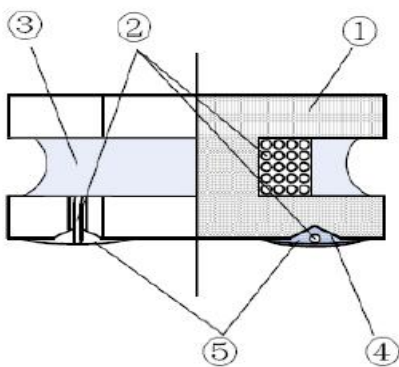


a.	1.9Typ.
b.	1.1Typ.
c.	3.7Typ.

PERFORMANCE CURVES



Construction and materials

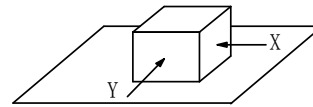


Code	Part Name	Material Name
1	Ferrite Core	Ni-Zn Ferrite
2	Wire	Polyurethane system enameled copper wire
3	Magnetic Glue	Epoxy resin and magnetic powder
4	Plating Electrodes	Ag
		Ni
		Sn
5	Outer Electrodes	Top surface solder coating Sn, Ag, Cu

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RELIABILITY TEST:

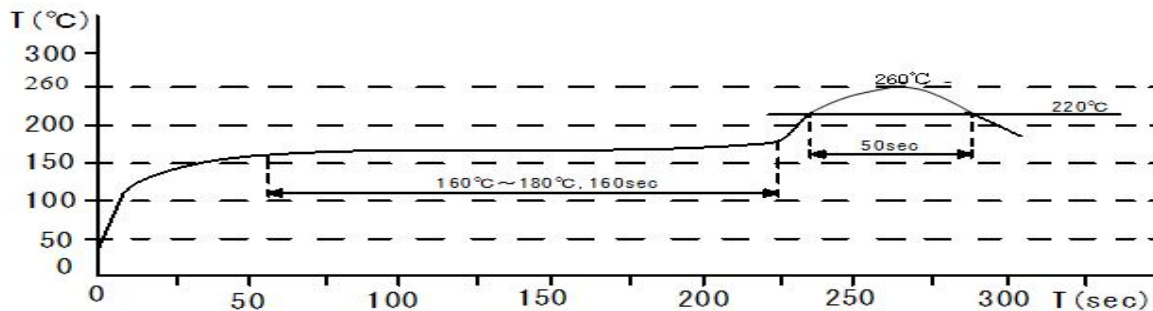
- Storage Temperature range : $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$
- Operating temperature range: $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$ (Including coil's self temperature rise)
- External appearance : No external defects can be found in the visual inspection.
- Electrode strength : No electrode detachment should be found when the device is pushed in two directions of X and Y with the force of 10.0N for 10 ± 2 seconds after soldering between copper plate and the electrodes.



(Refer to figure at right)

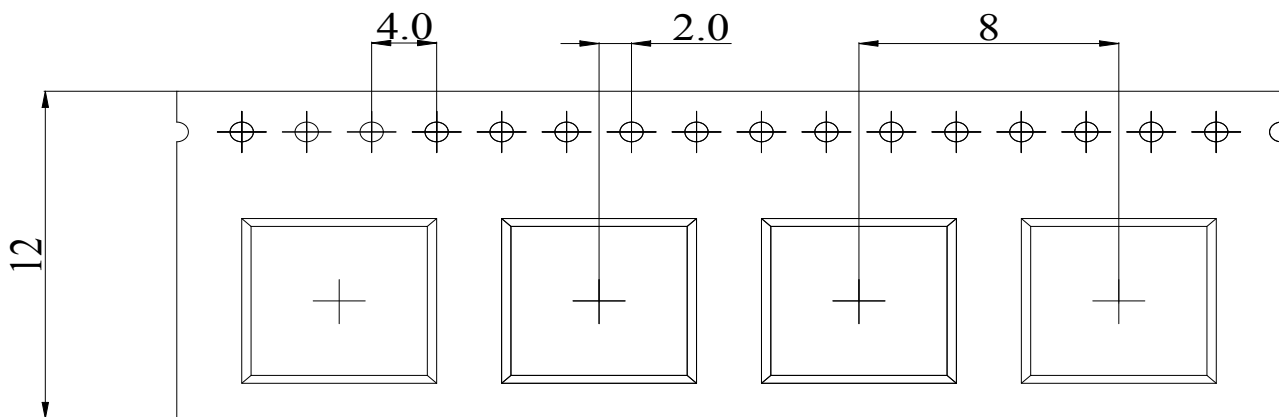
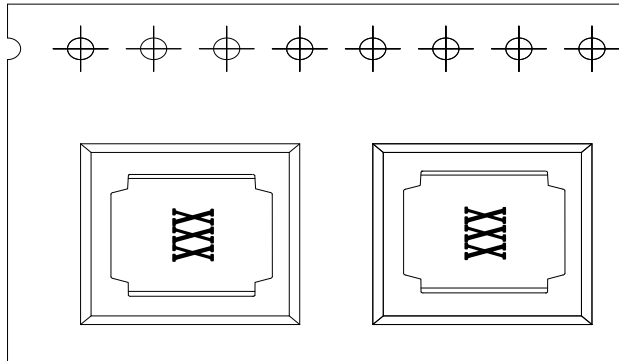
- Vibration test : Inductance deviation is within $\pm 3.0\%$ after 1 hour sweeping vibration in each three directions, namely, forward and backward, up and down, right and left. The frequency is $10 \sim 55 \sim 10\text{Hz}$ and the amplitude of 1 minute cycle is 1.5mm PP.

- Recommended reflow condition:

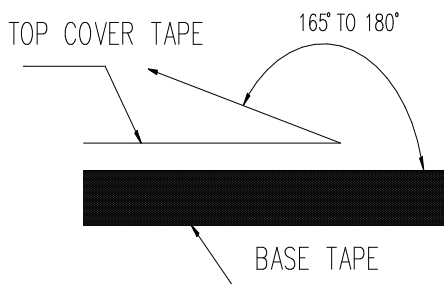


- Humidity test : Inductance deviation is within $\pm 5.0\%$ after 96 ± 4 hours test under the condition of relative humidity of $90 \sim 95\%$ and temperature of $40 \pm 2^{\circ}\text{C}$, and 1 hour storage under room ambient conditions after the device is wiped with dry cloth.

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CARRIERTAPEING REEL & CARRIER MATERIALS (PAPER PLASTICS) UNIT : (mm)

carrier tape(W)	carrier tape(P)	Reel spec (W)	Reel QTY (PCS/R)	inner box QTY (PCS)	outer box QTY (PCS)	封袋方式
12mm	8mm	13inch	3000	9000	27000	热封上带



Room Temp (°C)	Room Humidity (%)	Room atm (hPa)	Tearing Speed (mm/min)
5~35	45~85	860~1060	300

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TEST DATA

SPEC No.	A (mm) 4.00±0.2	B (mm) 4.00±0.2	C (mm) 2.00Max.					DCR		INDUCTANCE	
								±30%(Ω)	L(0)±20%	2.35 A	≈65% L(0)
1	4.01	4.01	1.90					76.0	4.92	PASS	
2	4.00	4.00	1.92					78.0	4.63	PASS	
3	4.02	4.01	1.89					72.0	4.78	PASS	
4	3.99	4.00	1.92					69.0	4.58	PASS	
5	4.01	4.01	1.90					65.0	4.52	PASS	
6	4.02	4.01	1.95					78.0	4.49	PASS	
7	4.02	4.02	1.95					73.0	4.61	PASS	
8	4.01	4.00	1.92					66.0	4.57	PASS	
9	3.98	3.99	1.91					62.0	4.49	PASS	
10	4.01	4.01	1.93					59.0	4.65	PASS	
\bar{X}	4.01	4.01	1.92					69.80	4.624		
R	0.04	0.03	0.06					19.00	0.430		

© All test Data is referenced to 25°C ambient

产品注意事项

使用本产品时，请注意以下事项

- ◎ 产品保存期限为12个月，保存条件：温度5~40℃，湿度10~80%RH以内，超过保存期限可能会使产品端子电极发生氧化。
- ◎ 请勿在极端环境下使用和保存（高盐，强酸，强碱，强辐射等）。
- ◎ 产品焊接前，请进行预热；预热温度与焊接温度之间温差建议控制在150℃以内。
- ◎ 产品焊接后需重新拆卸焊接修正时，请遵循规格书规定的条件范围；过高的加热温度以及反复的拆卸可能会导致产品失效。
- ◎ 产品焊接到线路板后，请注意不可因线路板整体变形或局部变形而施加给电感剩余应力，这可能会导致电感发生破裂，脱落，以致失效。
- ◎ 产品请勿接触清洗剂，酒精等液体，这会侵蚀产品本体，从而导致产品失效。
- ◎ 产品通电后温度会随电流的增大而上升，设计时请务必考虑留有余量。
- ◎ 过高的静电会对产品产生永久性损害，请注意静电防护。
- ◎ 产品通电过程请勿触摸产品任何部位，防止触电。
- ◎ 本产品作为磁性产品，设计时请务必考虑周边元器件与本产品可能产生的相互影响。
- ◎ 本产品适用于一般电子设备，如：AV设备，通信设备，家电产品，娱乐设备，计算机设备，个人设备，办公设备，计测设备，工业机器人等。且该一般电子设备需在常规的操作和使用方法环境下使用。对于需要高度安全性和可靠性的，或者因本产品失效造成设备故障，误操作，运转不良等危及到人的生命身体及财产安全，以及对社会产生较大不良影响的特殊用途，设计使用前务必同本公司沟通，设计使用者如在未取得我司书面同意状况下使用造成任何后果，我司不予承担。特殊用途包含但不限定如下清单：

- | | |
|-----------------------|------------------|
| 1 军用设备 | 8 关系到国防安全的设备 |
| 2 运输设备（汽车，轨道交通产品，船舶等） | 9 防灾赈灾设备 |
| 3 航空，航天设备 | 10 各种安规设备 |
| 4 发电控制设备 | 11 紧急救护设备 |
| 5 核动力相关设备 | 12 其他被认定为特殊用途的设备 |
| 6 爆炸引燃控制设备 | |
| 7 交通控制设备 | |

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