

ITEM P/N	PSPNAQ5020-4R7M	TEST INSTRUMENT	LCZ1068/1310BIAS/502AC
PRODUCT	SMD INDUCTOR	TEST FREQUENCY	1KHz / 0.25V

CUSTOMER :**CUSTOMER P/N :****DESCRIPTION :** SMD INDUCTOR**P/N :** PSPNAQ5020-4R7M**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

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E-LIVEN TECHNOLOGY CO., LTD.

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

Version:1.0

SPECIFICATION FOR APPROVAL**RoHS
COMPLIANT****ITEM P/N****PSPNAQ5020-4R7M****TEST INSTRUMENT****LCZ1068/1310BIAS/502AC****PRODUCT****SMD INDUCTOR****TEST FREQUENCY****1KHz / 0.25V**

Version	REVISION ITEM	BEFORE REVISION	AFTER REVISION	DATE
1.0	First Version			2017-4-9



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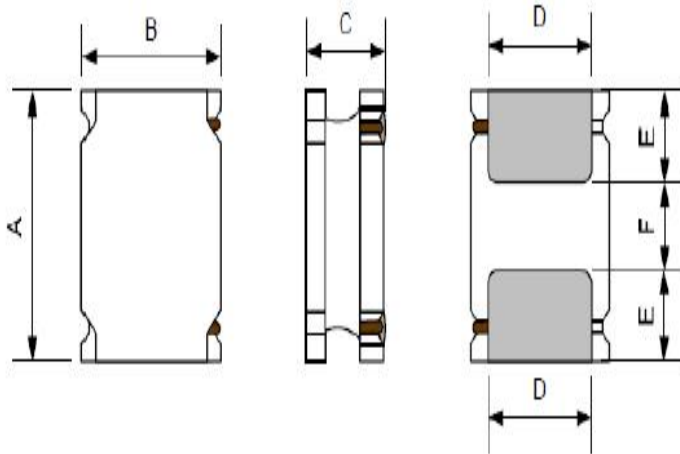
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PACKING DIMENSIONS (mm)

5020	Dimensions
A	5.00±0.2
B	5.00±0.2
C	2.00Max.
D	4.00±0.2
E	1.25±0.2
F	2.50±0.2

EXPLANATION OF PART NUMBERS

PSPNAQ <u>Serial Codes</u>	5020 <u>Size</u>	-	4R7M <u>Inductance Code</u>
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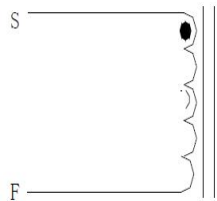
ELECTRICAL CHARACTERISTICS

ITEM P/N	@ 25 °C Ambient Temperature				
	INDUCTANCE		Irms (A) Max.	Isat (A) Max.	DCR (mΩ) ±30%.
	Lo (μH)	TOLERANCE			
PSPNAQ50 20-4R7M	4.70	±20%	2.25	2.50	57.0

- ⊙ 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.

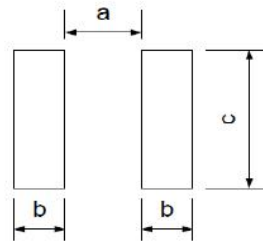
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SCHEMATIC



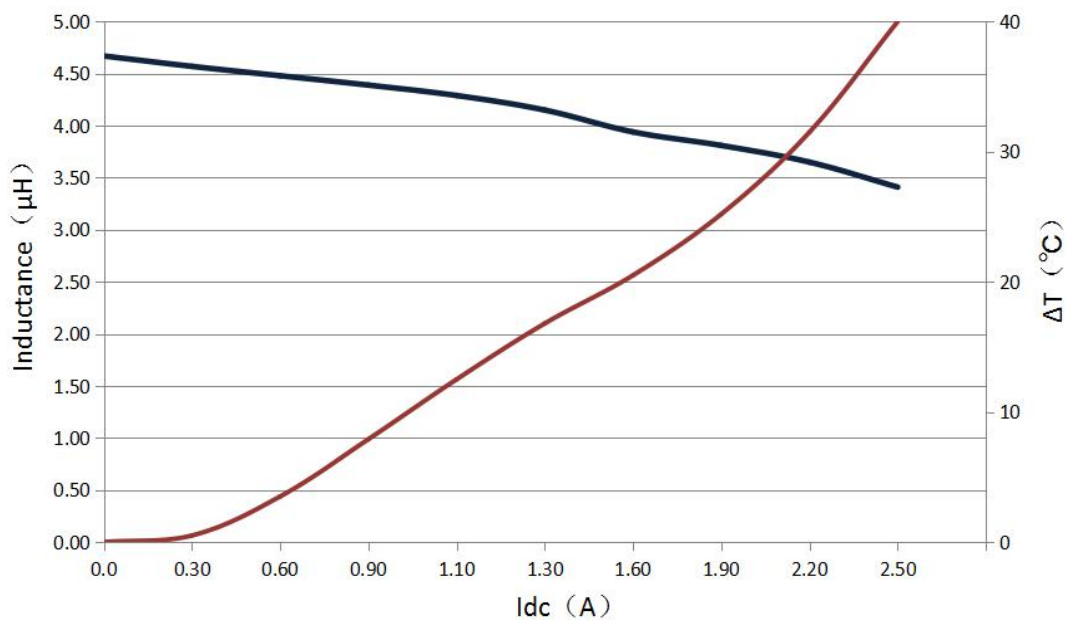
"●" 表示起线

Recommended Land Pattern

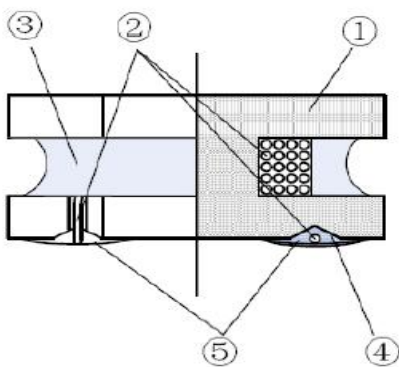


a.	2.1Typ.
b.	1.5Typ.
c.	4.4Typ.

PERFORMANCE CURVES



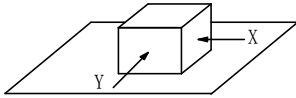
Construction and materials

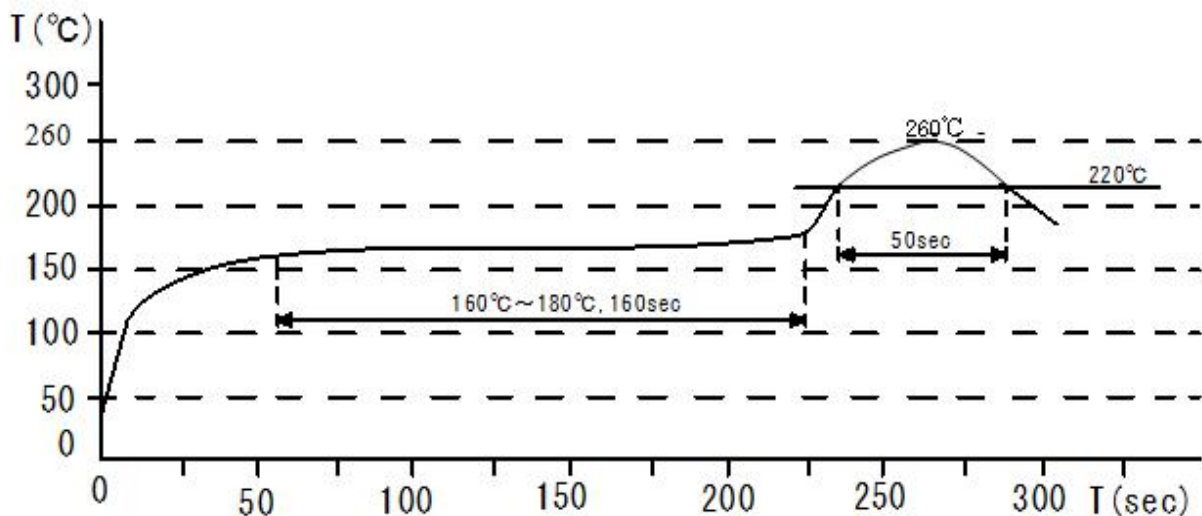


Code	Part Name	Material Name
1	Ferrite Core	Ni-Zn Ferrite
2	Wire	Polyurethane system enameled copper wire
3	Magnetic Glue	Epoxy resin and magnetic powder
4	Plating Electrodes	Ag
		Ni
		Sn
5	Outer Electrodes	Top surface solder coating Sn, Ag, Cu

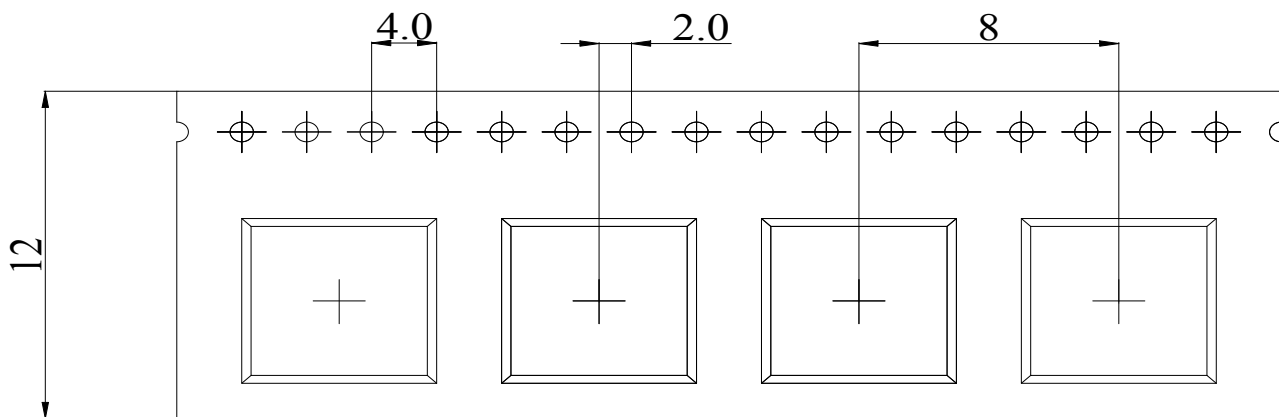
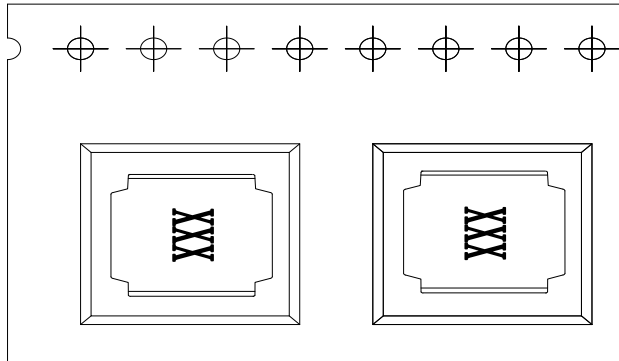
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RELIABILITY TEST:

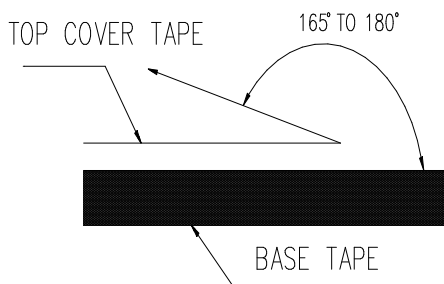
Storage Temperature range	-40°C ~ +125°C
Operating temperature range	-40°C ~ +125°C (Including coil's self temperature rise)
External appearance	No external defects can be found in the visual inspection.
Electrode strength	No electrode detachment should be found when the device is pushed in two directions 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) <div style="text-align: center;">  </div>
Vibration test	Inductance deviation is within ±3.0% after 1 hour sweeping vibration in each three directions, namely, forward and backward, up and down, right and left. The frequency is 10~55~10Hz and the amplitude of 1 minute cycle is 1.5mm PP.
Humidity test	Inductance deviation is within ±5.0% after 96±4 hours test under the condition of relative humidity of 90~95% and temperature of 40±2°C and 1 hour storage under room ambient conditions after the device is wiped with dry cloth.

Recommended reflow condition

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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	2500	7500	22500	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)	B (mm)	C (mm)	DCR ±30%(mΩ)	INDUCTANCE	
	5.00±0.2	5.00±0.2	2.00Max.		L(0)±20%	2.5 A ≈65% L(0)
1	4.99	4.98	1.96	58.0	4.49	PASS
2	4.97	4.98	1.96	60.0	4.39	PASS
3	4.99	4.97	1.96	59.0	4.57	PASS
4	5.00	4.97	1.92	59.0	4.64	PASS
5	4.98	4.99	1.95	61.0	4.58	PASS
6	4.99	4.97	1.95	62.0	4.51	PASS
7	4.98	4.97	1.96	60.0	4.31	PASS
8	4.97	4.98	1.93	65.0	4.47	PASS
9	4.98	4.98	1.95	62.0	4.43	PASS
10	4.97	4.98	1.95	62.0	4.29	PASS
\bar{X}	4.98	4.98	1.95	60.80	4.468	
R	0.03	0.02	0.04	7.00	0.350	

⊙ All test Data is referenced to 25°C ambient



ANNOUNCEMENTS

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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