

ITEM P/N	PSPMAA1040H-R47M-ANP	TEST INSTRUMENT	Zentech-3305 / Zentech502BC
PRODUCT	SMD INDUCTOR	TEST FREQUENCY	100 kHz / 1.0V

**CUSTOMER :**

**CUSTOMER P/N :**

**DESCRIPTION :** SMD INDUCTOR

**P/N :** PSPMAA1040H-R47M-ANP

**REVISION NO. :** Version:1.0

**DATE :** 2019-9-24

**NOTES :** STANDARD

<b>DOCUMENTED</b>	
<b>APPROVED</b>	<b>Yuki</b>
<b>CHECKED</b>	<b>Ben</b>
<b>PREPARED</b>	<b>Peter</b>

**CUSTOMER APPROVAL**

company seals



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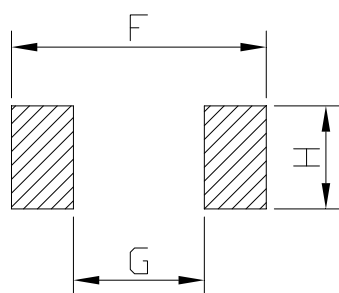
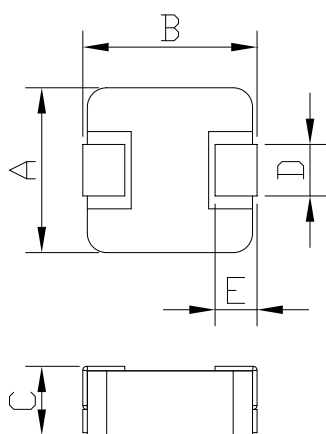


# COIL SPECIFICATION



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## PACKING DIMENSIONS (mm)



RECOMMANED  
LAND PATTERN

1040H	Dimensions
A	10.2 ± 0.3
B	11.0 ± 0.5
C	4.0MAX
D	3.0 ± 0.3
E	2.0 ± 0.5
F	11.8Ref.
G	6.00Ref.
H	3.50Ref.

## EXPLANATION OF PART NUMBERS

<b>PSPMAA</b> <u>Serial Codes</u>	<b>1040H</b> <u>Size</u>	-	<b>R47M</b> <u>Inductance Code</u>	-	<b>ANP</b> <u>Description</u>
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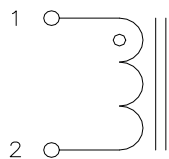
## ELECTRICAL CHARACTERISTICS

ITEM P/N	@ 25 °C Ambient Temperature					
	INDUCTANCE		I <sub>rms</sub> (A)Max.	I <sub>sat</sub> (A) Max.	DCR (mΩ) Typical	DCR (mΩ) Max.
	Lo (μH)	TOLERANCE				
PSPMAA1040H-R47M-ANP	0.47	±20%	20	36	1.2	1.6

- ⊙ 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 Diagram:

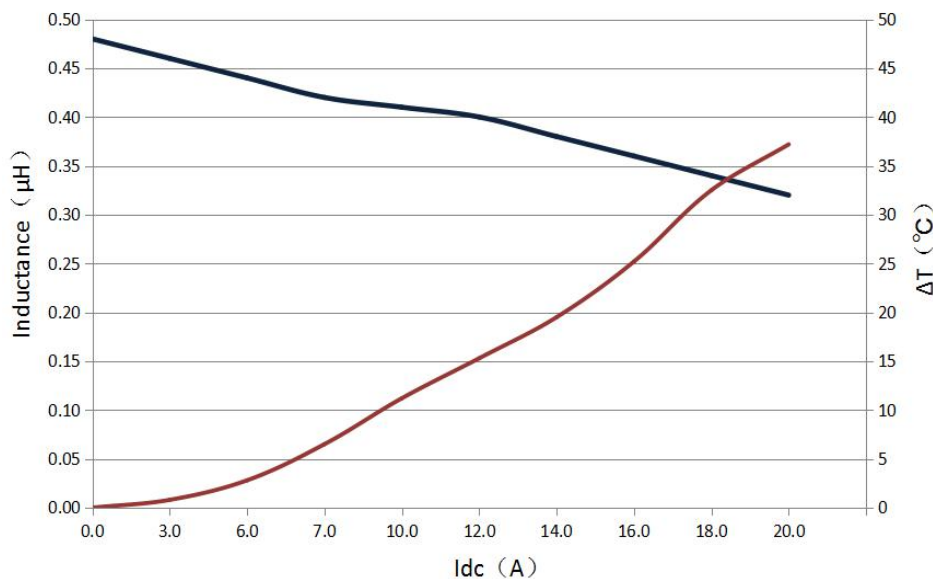


## MARKING



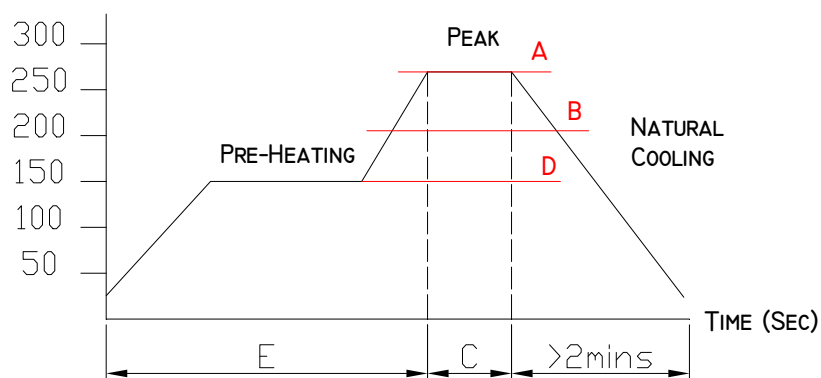
- ⊙ Inductor Contents ONE (1) Set(s) of Coil
- ⊙ DC/AC Current Shall Be Introduced By Any One of Two Pads

## PERFORMANCE CURVES:



## RECOMMENDED SOLDERING TEMP. GRAPH

TEMPERATURE (°C)



A	260°C
B	230°C
C	10 Sec
D	150°C
E	60~240 Sec

# CHARACTERISTICS



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## MECHANICAL RELIABILITY

TEST	Specification & Requirement	Method Used
Solderability	The surface of terminal/pin tested shall be covered with new solder by 95%	Solder heat proof: Preheating: 180 ±10°C 90 seconds Soldering: 255 ±5°C for 3 ±1 sec
Shock	Inductance change within ± 5% Without mechanical damage	Drop down with 981m/s2 (100G) shock Attitude upon a rubber block method shock testing machinem, 3 tests.
Vibration	Inductance change within ± 5% Without mechanical damage	Vibration frequency: 10Hz to 55Hz to 10Hz 60 seconds cycle Vibration time: 2 hours

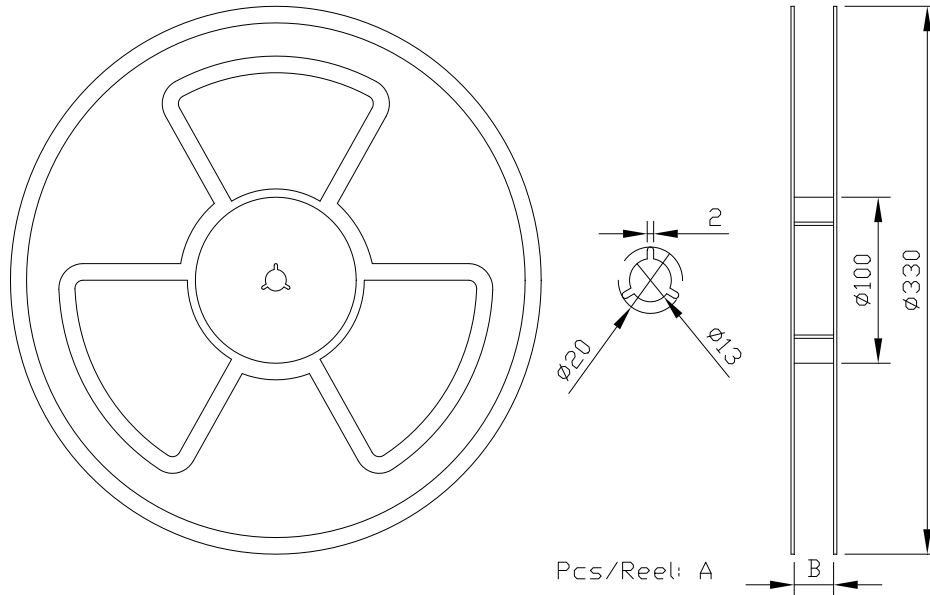
## ENDURANCE RELIABILITY

TEST	Specification & Requirement	Method Used
Thermal Shock	Inductance change within ± 5% Without mechanical damage	-25°C, (30 mins) -> room temp. (5 mins) -> 125°C, (30 mins) -> room temp. (5 mins) 100 cycles
Heat Resistance	Inductance change within ± 5% Without mechanical damage	Apply IDC current @ 85°C ambient Duration: 1000 hrs
Humidity Resistance	Inductance change within ± 5% Without mechanical damage	Apply IDC current @ 60°C ambient Humidity: 90~95% Duration: 1000 hrs
Low Temp. Storing	Inductance change within ± 5% Without mechanical damage	Storing Temp. -25 ±2 °C for total 1,000 +4/-0 hours
High Temp. Storing	Inductance change within ± 5% Without mechanical damage	Storing Temp. 125 ±2 °C for total 1,000 +4/-0 hours

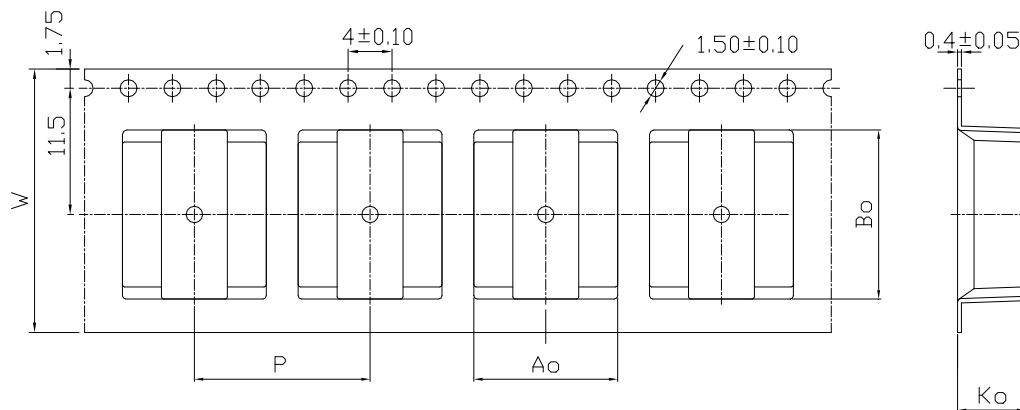


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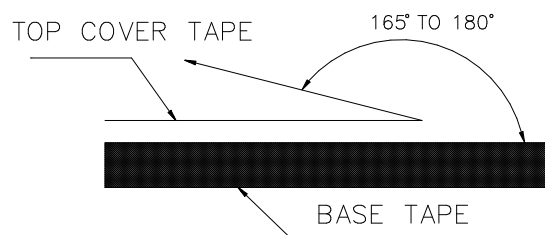
## CARRIERTAPEING REEL & CARRIER MATERIALS (PAPER PLASTICS) UNIT : (mm)



A	B	W	P	Ao	Bo	Ko
800	25	24	16	11.0±0.1	12.6 ± 0.1	4.1Typ



Typical Pulling Force:  
10 grams



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## TEST DATA

SPEC No.	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	DCR Max( mΩ )	INDUCTANCE	
	10.2 ± 0.3	11.0 ± 0.5	4.0MAX	3.0 ± 0.3	2.0 ± 0.5		L(0)±20%	36 A ≈65% L(0)
1	10.10	10.89	3.98	3.12	2.27	1.27	0.48	PASS
2	10.12	10.87	3.95	3.10	2.17	1.25	0.46	PASS
3	10.13	10.86	3.99	3.09	2.15	1.26	0.48	PASS
4	10.20	10.79	3.95	3.12	2.28	1.25	0.46	PASS
5	10.15	10.79	3.88	3.12	2.21	1.26	0.46	PASS
6	10.18	10.88	3.89	3.12	2.24	1.27	0.46	PASS
7	10.10	10.86	3.88	3.14	2.26	1.25	0.47	PASS
8	10.15	10.78	3.95	3.16	2.23	1.27	0.46	PASS
9	10.06	10.78	3.85	3.10	2.26	1.25	0.46	PASS
10	10.15	10.78	3.98	3.09	2.23	1.26	0.47	PASS
$\bar{X}$	10.13	10.83	3.93	3.12	2.23	1.26	0.47	
R	0.14	0.11	0.14	0.07	0.13	0.02	0.02	

© 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于如下清单：

- |                       |                  |
|-----------------------|------------------|
| 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              |                  |

