

# SPECIFICATION FOR APPROVAL



ITEM P/N	PSPMAA0503-2R2M-ANP	TEST INSTRUMENT	Zentech-3305 / Zentech502BC
PRODUCT	SMD Inductor	TEST FREQUENCY	100 kHz / 1.0V

**CUSTOMER :**

**CUSTOMER P/N :**

**DESCRIPTION :** SMD INDUCTOR

**P/N :** PSPMAA0503-2R2M-ANP

**REVISION NO. :** Version: 2.0

**DATE :** 2017/5/9

**NOTES :** STANDARD

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

<b>CUSTOMER APPROVAL</b>

company seals



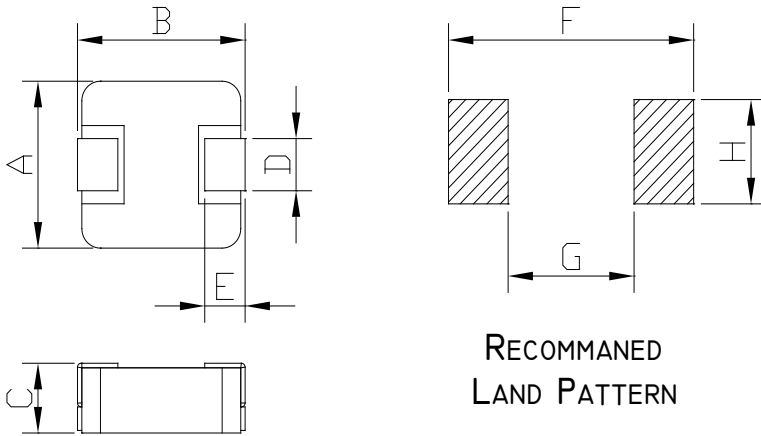


# COIL SPECIFICATION

RoHS  
COMPLIANT

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## PACKING DIMENSIONS (mm)



0503-2R2M	Dimensions
A	5.2 ± 0.3
B	5.4 ± 0.3
C	3.0 MAX
D	2.2 ± 0.3
E	1.2 ± 0.2
F	5.99 Typ
G	2.2 Typ
H	2.5 Typ

## EXPLANATION OF PART NUMBERS

<b>P S P M A A</b>	<b>0 5 0 3</b>	-	<b>2 R 2 M</b>	-	<b>A N P</b>
<u>Serial Codes</u>	<u>Size</u>		<u>Inductance</u>		<u>Descriptio</u>

## ELECTRICAL CHARACTERISTICS

ITEM P/N	@ 26 °C Ambient Temperature				DCR mΩ @ 25°C Typical	DCR mΩ @ 25°C MAX
	INDUCTANCE		Typical Heat Rating DC Current (A) (I <sub>dc</sub> )	Typical Saturation DC Current (A) (I <sub>sat</sub> )		
	Lo (μH)	TOLERANCE				
PSPMAA050 3-2R2M-ANP	2.2	±20%	5.5	7.5	25	29

- ⊙ 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 30%
- ¥ Operation Temperature Range : -55°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.

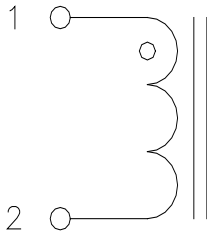
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# CHARACTERISTICS

**RoHS  
COMPLIANT**

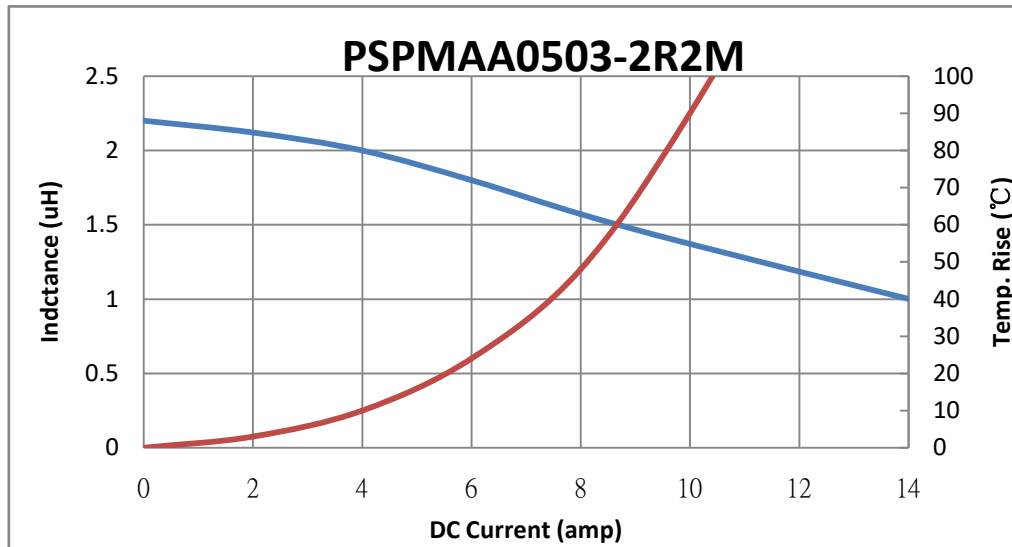
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## CONNECTIONS



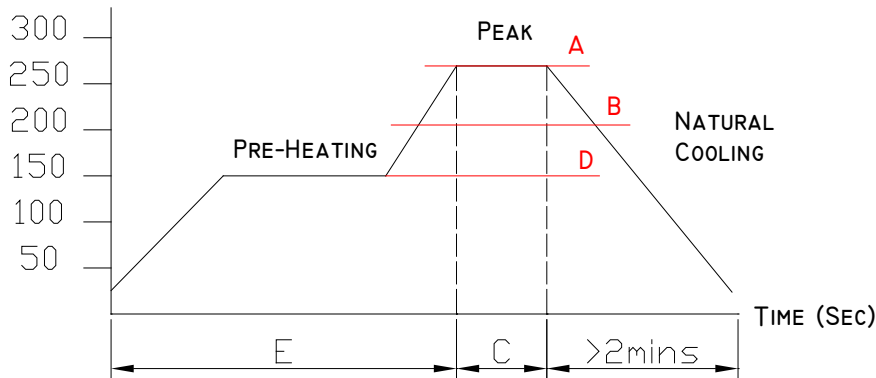
- ⊙ Inductor Contents ONE (1) Set(s) of Coil
- ⊙ DC/AC Current Shall Be Introduced By Any One of Two Pads

## PERFORMANCE CURVES



## RECOMMENDED SOLDERING TEMP. GRAPH

TEMPERATURE (°C)



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

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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**

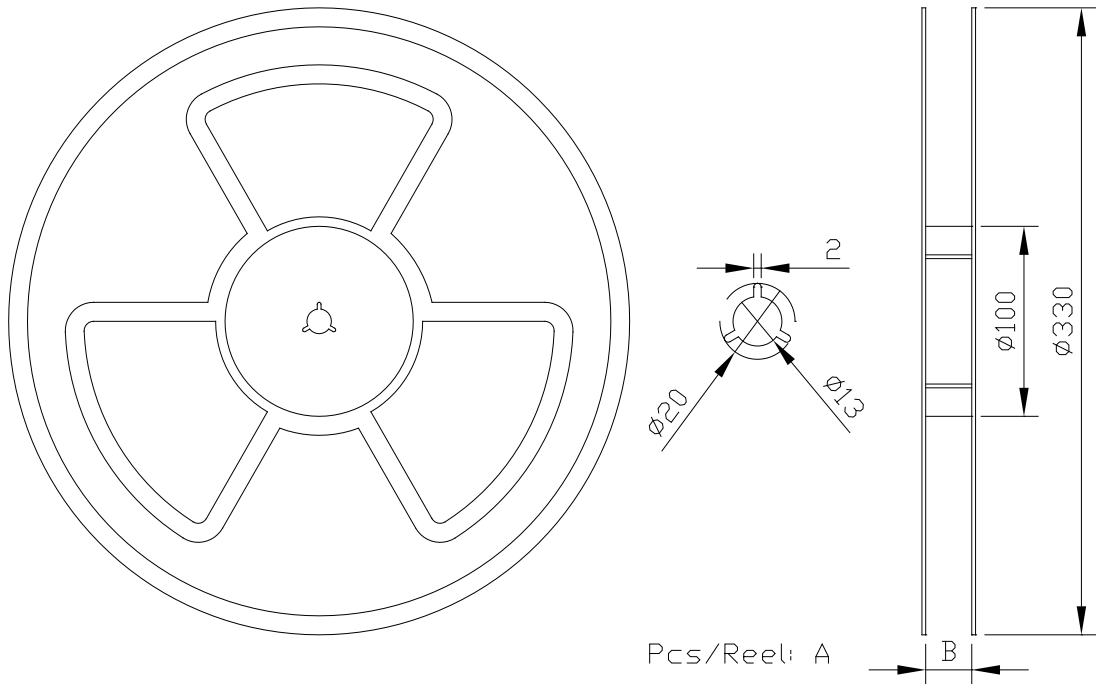
TEST	Specification & Requirement	Method Used
Thermal Shock	Inductance change within ± 5% Without mechanical damage	-25°C, (30 mins) -> room temp. (5 mins) -> 125°C, (30 mins) -> room temp. (5 mins) 100 cycles
Heat Resistance	Inductance change within ± 5% Without mechanical damage	Apply IDC current @ 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

# PACKING FOR SMD

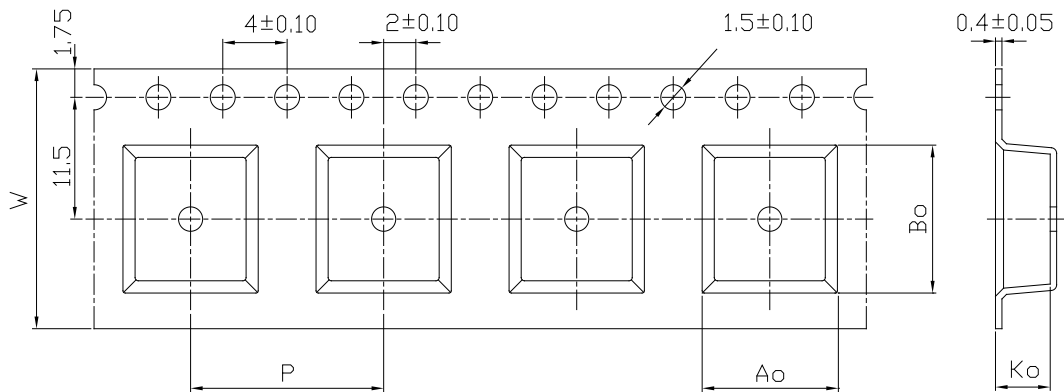
**RoHS  
COMPLIANT**

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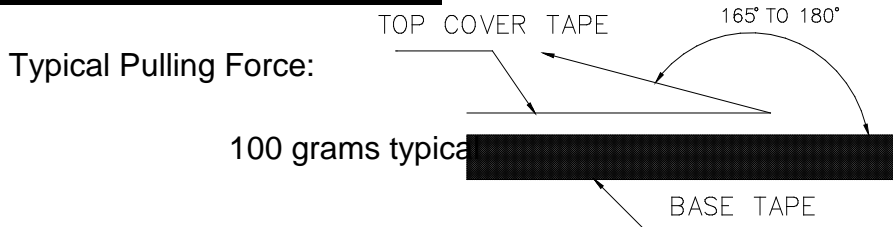
**CARRIERTAPEING REEL & CARRIER MATERIALS (PAPER PLASTICS) UNIT : (mm)**



A	B	Ao	Bo	Ko
2000	12.5	5.7 ± 0.1	5.9 ± 0.1	3.6 ± 0.1



W	P
12	8



<b>ITEM P/N</b>	<b>PSPMAA0503-2R2M-ANP</b>	<b>TEST INSTRUMENT</b>	<b>Zentech-3305 / Zentech502BC</b>
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**TEST DATA**

SPEC No.	<b>A</b> (mm)	<b>B</b> (mm)	<b>C</b> (mm)	<b>D</b> (mm)	<b>E</b> (mm)			<b>DCR</b> Max( mΩ )	<b>INDUCTANCE</b>	
	5.2 ± 0.3	5.4 ± 0.3	3.0 MAX	2.2 ± 0.3	1.2 ± 0.2			29	L(0) ± 20%	7.5 A
1	5.24	5.62	2.54	2.25	1.32			25.5	2.16	PASS
2	5.21	5.64	2.63	2.23	1.31			25.8	2.09	PASS
3	5.21	5.64	2.51	2.24	1.25			26.1	2.31	PASS
4	5.21	5.62	2.55	2.24	1.29			25.5	2.28	PASS
5	5.22	5.64	2.60	2.23	1.28			26.4	2.33	PASS
6	5.24	5.63	2.58	2.25	1.30			25.3	2.09	PASS
7	5.24	5.62	2.64	2.23	1.24			25.8	2.11	PASS
8	5.22	5.62	2.61	2.23	1.29			25.7	2.17	PASS
9	5.21	5.64	2.58	2.24	1.25			25.3	2.29	PASS
10	5.21	5.64	2.54	2.25	1.22			25.3	2.14	PASS
$\bar{X}$	5.22	5.63	2.58	2.24	1.28			25.67	2.20	
R	0.03	0.02	0.13	0.02	0.10	0.00		1.10	0.24	

© All test Data is referenced to 25°C ambient

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