

SPECIFICATION FOR APPROVAL



ITEM P/N	PSPMAA0503-1R0M-ANP	TEST INSTRUMENT	Zentech-3305 / Zentech502BC
PRODUCT	SMD Inductor	TEST FREQUENCY	100 kHz / 1.0V

CUSTOMER :

CUSTOMER P/N :

DESCRIPTION : SMD INDUCTOR

P/N : PSPMAA0503-1R0M-ANP

REVISION NO. : Version: 2.0

DATE : 2017/5/9

NOTES : STANDARD

DOCUMENTED	
APPROVED	Kevin
CHECKED	Ben
PREPARED	Peter

CUSTOMER APPROVAL

company seals



Version: 2.0

SPECIFICATION FOR APPROVAL

RoHS
COMPLIANT

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Version	REVISION ITEM	BEFORE REVISION	AFTER REVISION	DATE
1.0	First Version			2016/3/11
2.0	First Version	PSPFE-0503-1R0M	PSPMAA0503-1R0M-ANP	2017/4/19



PROD TECHNOLOGY CO., LTD.



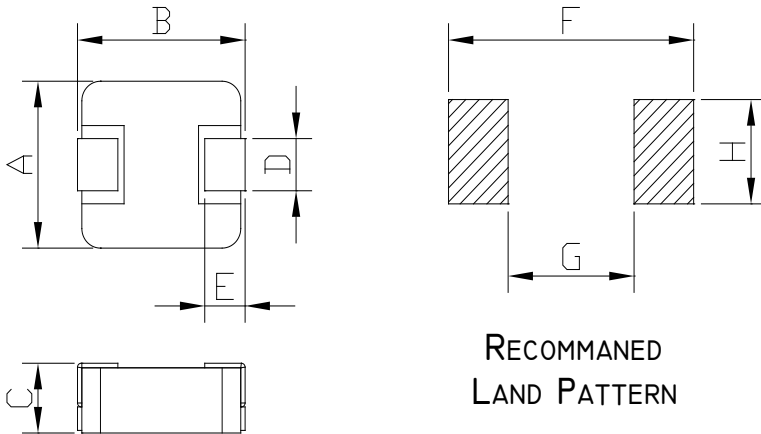
E-LIVEN TECHNOLOGY CO., LTD.
NO.28 HO-CHENG RD, BADE CITY, TAOYUAN, TAIWAN

COIL SPECIFICATION

RoHS
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PACKING DIMENSIONS (mm)



0503-1R0M	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

P S P M A A	0 5 0 3	-	1 R 0 M	-	A N P
<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) (Idc)	Typical Saturation DC Current (A) (Isat)		
	Lo (μH)	TOLERANCE				
PSPMAA050 3-1R0M-ANP	1.0	±20%	7	11	13	14

- ⊙ 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.

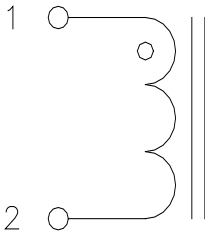
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CHARACTERISTICS

**RoHS
COMPLIANT**

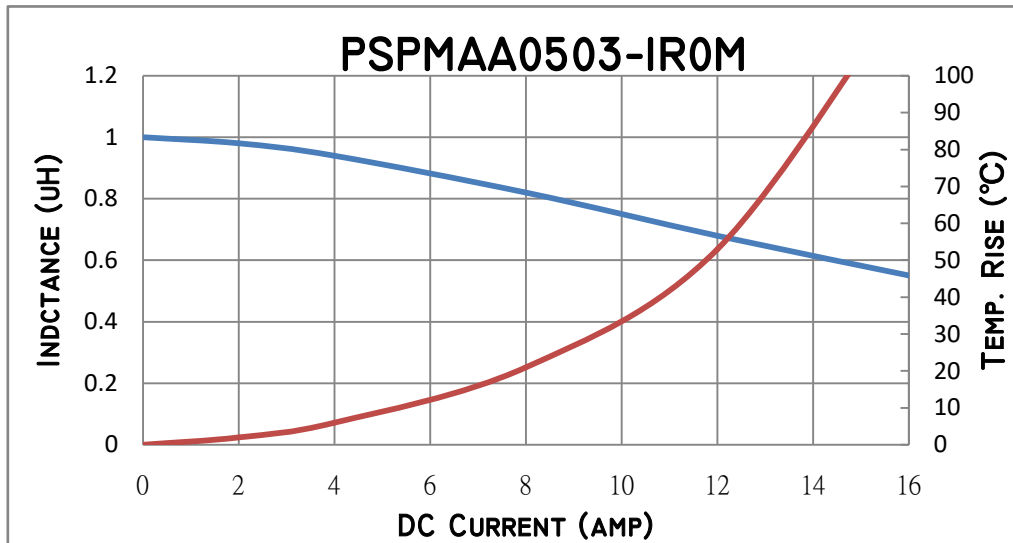
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CONNECTIONS



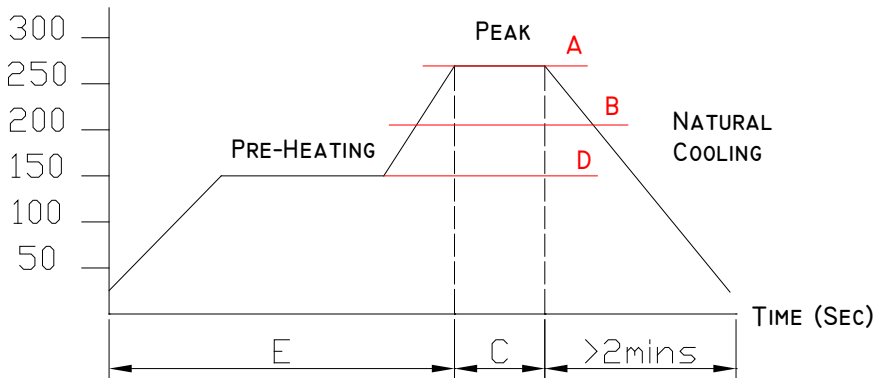
- ⊙ Inductor Contents ONE (1) Set(s) of Coil
- ⊙ DC/AC Current Shall Be Introduced By Any One of Two Pads

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

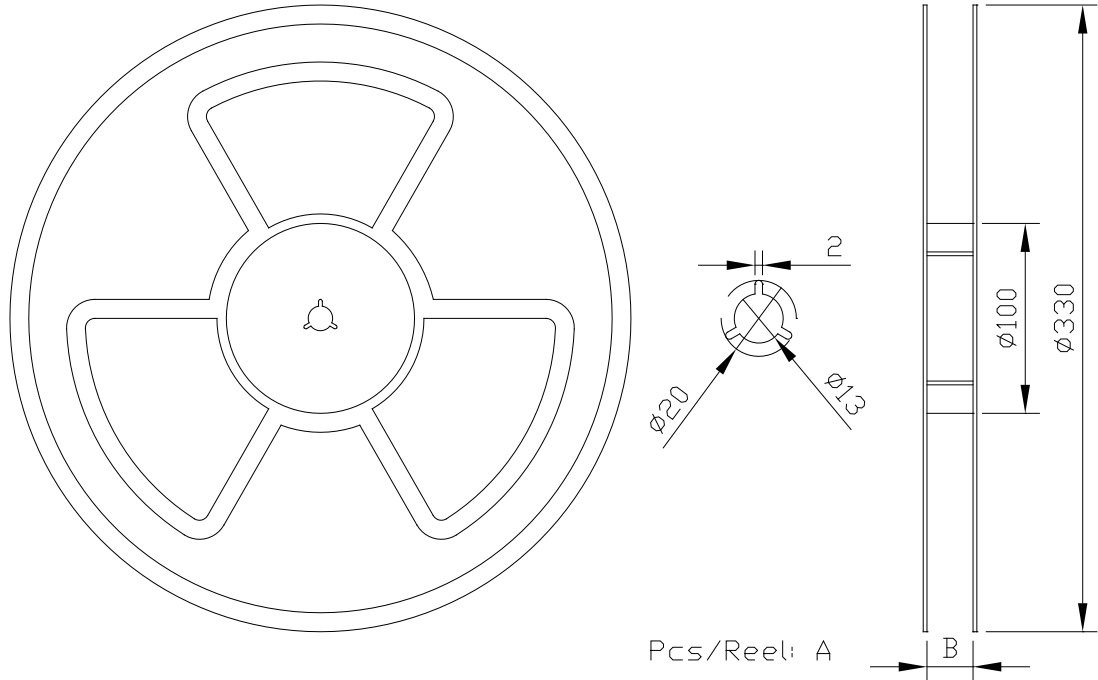
TEST	Specification & Requirement	Method Used
Thermal Shock	Inductance change within ± 5% Without mechanical damage	-25°C, (30 mins) -> room temp. (5 mins) -> 125°C, (30 mins) -> room temp. (5 mins) 100 cycles
Heat Resistance	Inductance change within ± 5% Without mechanical damage	Apply IDC current @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

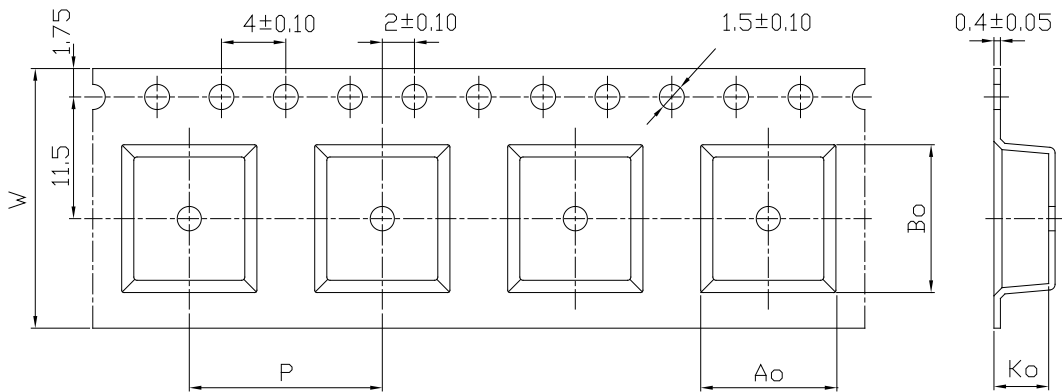
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CARRIERTAPEING REEL & CARRIER MATERIALS (PAPER PLASTICS) UNIT : (mm)



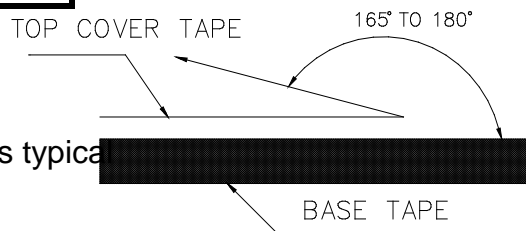
A	B	Ao	Bo	Ko
2000	12.5	5.7 ± 0.1	5.9 ± 0.1	3.6 ± 0.1



W	P
12	8

Typical Pulling Force:

100 grams typical



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TEST DATA

No.	SPEC	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)			DCR Max(mΩ)	INDUCTANCE	
		5.2 ± 0.3	5.4 ± 0.3	3.0 MAX	2.2 ± 0.3	1.2 ± 0.2			L(0) ± 20%	11 A	70% L(0) TYP.
1		5.24	5.62	2.54	2.25	1.32			13.5	0.95	PASS
2		5.21	5.64	2.63	2.23	1.31			13.2	1.02	PASS
3		5.21	5.64	2.51	2.24	1.25			13.5	0.96	PASS
4		5.21	5.62	2.55	2.24	1.29			13.2	0.99	PASS
5		5.22	5.64	2.60	2.23	1.28			13.4	1.07	PASS
6		5.24	5.63	2.58	2.25	1.30			13.1	0.99	PASS
7		5.24	5.62	2.64	2.23	1.24			13.2	0.94	PASS
8		5.22	5.62	2.61	2.23	1.29			13.3	0.97	PASS
9		5.21	5.64	2.58	2.24	1.25			13.2	1.02	PASS
10		5.21	5.64	2.54	2.25	1.22			13.3	0.92	PASS
\bar{X}		5.22	5.63	2.58	2.24	1.28			13.29	0.98	
R		0.03	0.02	0.13	0.02	0.10	0.00		0.40	0.15	

© All test Data is referenced to 25°C ambient

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