

ITEM P/N	PSPMAF0515-1R0M-CGF-AP	TEST INSTRUMENT	Zentech-3305 / Zentech502BC
PRODUCT	SMD Inductor	TEST FREQUENCY	100 kHz / 1.0V

**CUSTOMER :****CUSTOMER P/N :****DESCRIPTION :** SMD INDUCTOR**P/N :** PSPMAF0515-1R0M-CGF-AP**REVISION NO. :** Version: 1.0**DATE :** 2016-1-13**NOTES :** STANDARD

DOCUMENTED	
APPROVED	Kevin
CHECKED	Peter
PREPARED	Ben

**CUSTOMER APPROVAL**

company seals

Version: 1.0

# SPECIFICATION FOR APPROVAL



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Version	REVISION ITEM	BEFORE REVISION	AFTER REVISION	DATE
1.0	First Version			2016-1-13

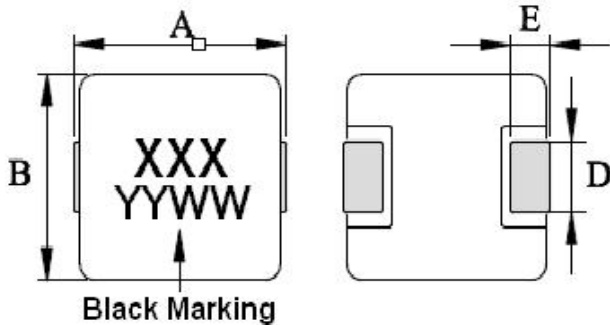


**PROD TECHNOLOGY CO., LTD.**



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

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**PACKING DIMENSIONS (mm)**

0515	Dimensions
A	5.7±0.5
B	5.2±0.3
C	1.3±0.2
D	2.5±0.3
E	1.0±0.5

**EXPLANATION OF PART NUMBERS**

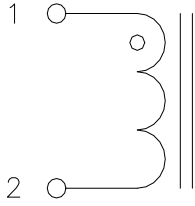
<b>P</b>	<b>S</b>	<b>P</b>	<b>M</b>	<b>A</b>	<b>F</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>5</b>	-	<b>1</b>	<b>R</b>	<b>0</b>	<b>M</b>	-	<b>C</b>	<b>G</b>	<b>F</b>	-	<b>A</b>	<b>P</b>
<u>Serial Codes</u>						<u>Size</u>					<u>Inductance</u>				<u>Description</u>						

**ELECTRICAL CHARACTERISTICS**

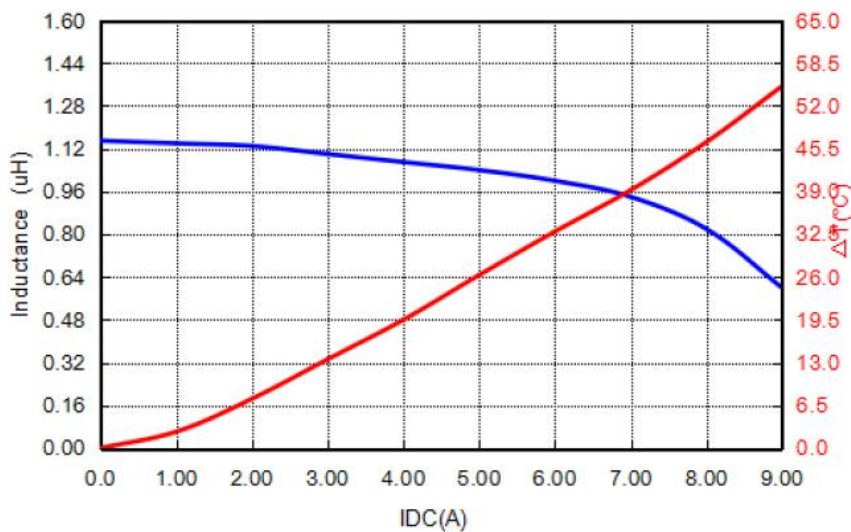
ITEM P/N	@ 26 °C Ambient Temperature				DCR mΩ @ 25°C MAX
	INDUCTANCE		Typical Heat Rating DC Current (A) (I <sub>dc</sub> )	Typical Saturation DC Current (A) (I <sub>sat</sub> )	
	Lo (μH)	TOLERANCE			
PSPMAF051 5-1R0M- CGF-AP	1.00	±20%	7	8.5	24.0

- ⊙ 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 20%
- ⊙ 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.

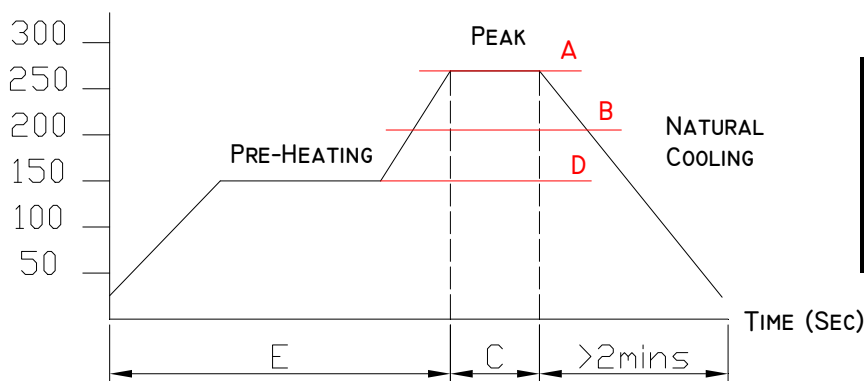
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**CONNECTIONS**

- ⊙ 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)



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<b>PRODUCT</b>	<b>SMD Inductor</b>	<b>TEST FREQUENCY</b>	<b>100 kHz / 1.0V</b>

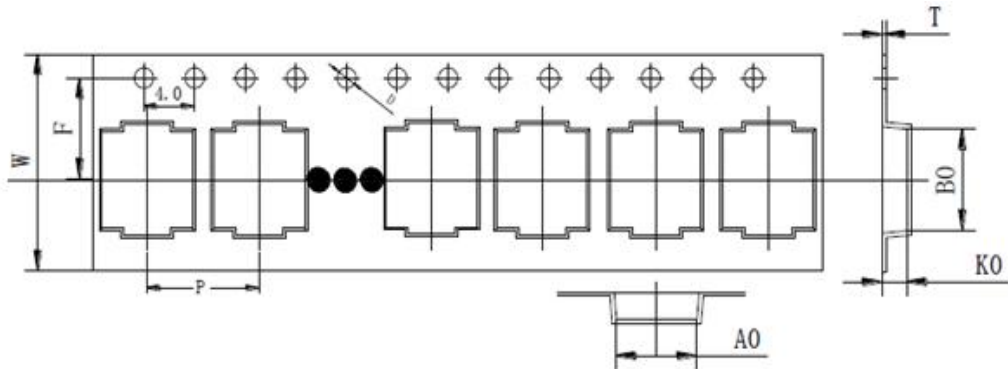
**MECHANICAL RELIABILITY**

<b>TEST</b>	<b>Specification &amp; Requirement</b>	<b>Method Used</b>
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/s <sup>2</sup> (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**

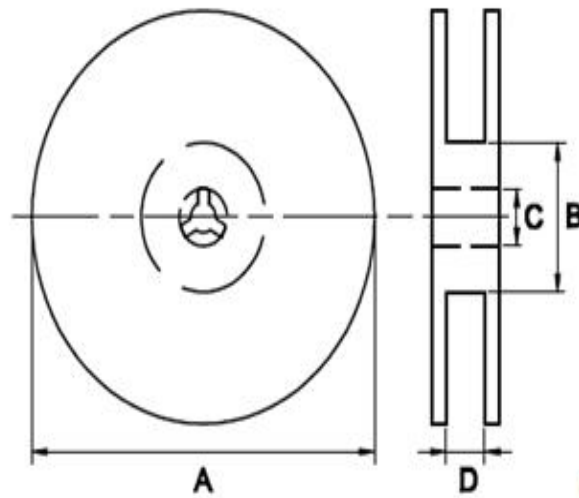
<b>TEST</b>	<b>Specification &amp; Requirement</b>	<b>Method Used</b>
Thermal Shock	Inductance change within ± 5% Without mechanical damage	-25°C, (30 mins) -> room temp. (5 mins) -> 125°C, (30 mins) -> room temp. (5 mins) 100 cycles
Heat Resistance	Inductance change within ± 5% Without mechanical damage	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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**CARRIETAPEING REEL & CARRIER MATERIALS (PAPER PLASTICS) UNIT : (mm)**

Unit: mm

Type	A <sub>0</sub>	B <sub>0</sub>	K <sub>0</sub>	P	F	W	D	t
0515	5.6±0.1	6.2±0.1	1.8±0.1	8±0.1	5.5±0.1	12±0.3	1.5±0.1	0.35±0.05



Unit: mm

Type	A	B	C	D
0515	330	100±2	13.0±0.5	12.4+2-0

Standard Quantity for Packaging: 3,500 pcs/Reel

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**TEST DATA**

SPEC No.	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	DCR Max( mΩ )	INDUCTANCE	
	5.7±0.5	5.2±0.3	1.3±0.2	2.5±0.3	1.0±0.5		L(0) ± 20%	8.5 A ≈70% L(0)
1	5.71	5.23	1.46	2.53	1.12	20.4	1.02	PASS
2	5.73	5.26	1.42	2.51	1.13	21.5	1.03	PASS
3	5.72	5.24	1.43	2.56	1.12	21.6	1.06	PASS
4	5.71	5.28	1.42	2.51	1.14	20.3	1.02	PASS
5	5.73	5.31	1.43	2.55	1.15	20.5	1.05	PASS
6	5.74	5.36	1.44	2.53	1.16	21.6	0.99	PASS
7	5.76	5.26	1.42	2.56	1.12	21.2	0.95	PASS
8	5.78	5.24	1.43	2.58	1.12	20.6	0.94	PASS
9	5.77	5.29	1.42	2.54	1.15	21.5	0.95	PASS
10	5.72	5.23	1.44	2.53	1.13	20.6	1.02	PASS
$\bar{X}$	5.74	5.27	1.43	2.54	1.13	20.98	1.00	
R	0.07	0.13	0.04	0.07	0.04	1.30	0.12	

© 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              |                  |

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NO. 28 HO-CHENG RD, BADE CITY, TAOYUAN, TAIWAN



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