SUNLEI

Halogen-Free

FOR APPROVAL

樣品承認書

客戶名稱
CUSTOMER

產品名稱
PRODUCT **SMD MOLDING POWER INDUCTOR**

產品型號
PART NO. **SPD252010-SERIES-MYX**

客戶型號
PART NO.

承認印 APPROVED BY	發行單位 ISSUE BY
0	昕磊科技 承認書發行章 工程部 昕磊科技有限公司

日期
DATE **2024/10/21**

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RECORD OF REVISION

CUSTOMER:		**PART NO.:**	SPD252010-SERIES-MYX
DESCRIPTION:	SMD MOLDING POWER INDUCTOR	**CUSTOMER P/N:**	

REV	DESCRIPTION ITEMS BE CHANGED OVER, (FROM / T0)	DATE	MADE BY	CHOKE BY
A1	INITIAL	2024/10/21	Yan	Aiji li

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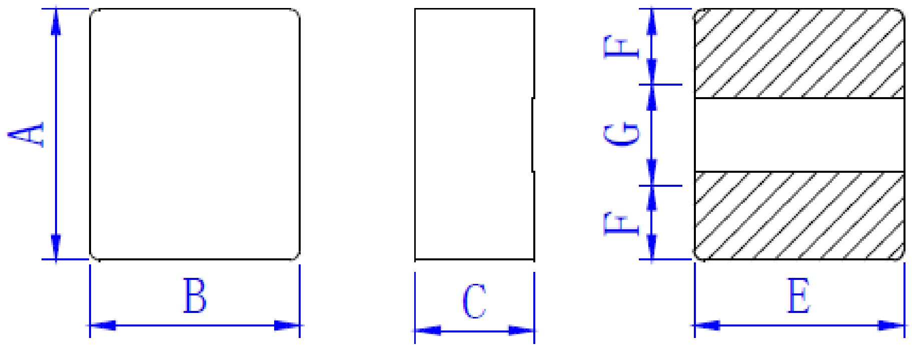
APPROVED	CHECKED	DRAWN
Andy 2024/10/21	Aiji 2024/10/21	Yan 2024/10/21

SPECIFICATION FOR APPROVAL

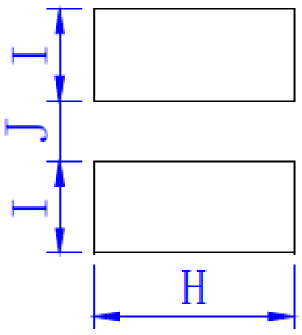
CUSTOMER:		**PART NO.:**	SPD252010-SERIES-MYX
DESCRIPTION:	SMD MOLDING POWER INDUCTOR	**CUSTOMER P/N:**	

1.CONFIGURATION DIMENSIONS(UNIT:mm)

100% Lead-Free



A	**2.5±0.2**
B	**2.0±0.2**
C	**1.0MAX**
E	**2.0TYP**
F	**0.9TYP**
G	**0.7TYP**
H	**2.1TYP**
I	**1.0TYP**
J	**0.6TYP**



RECOMMENDED LAND PATTERNS

2. ELECTRICAL CHARACTERISTICS

Part Number	L(uH)	DCR(mΩ)		Isat(A)		Irms(A)	
		TYP	MAX	TYP	MAX	TYP	MAX
SPD252010-R24M-MYX	0.24±20%	12.0	17.5	8.50	7.80	6.70	6.40
SPD252010-R33M-MYX	0.33±20%	13.0	19.0	7.60	7.20	6.50	6.20
SPD252010-R47M-MYX	0.47±20%	15.0	22.0	6.90	6.50	6.10	5.60
SPD252010-R68M-MYX	0.68±20%	22.9	27.0	5.90	5.50	5.60	5.00
SPD252010-1R0M-MYX	1.0±20%	25.7	30.0	5.30	4.80	4.50	4.10
SPD252010-1R5M-MYX	1.5±20%	42.8	55.0	4.30	3.90	3.40	3.00
SPD252010-2R2M-MYX	2.2±20%	62.6	70.0	3.30	3.00	2.40	2.10
SPD252010-3R3M-MYX	3.3±20%	86.0	100.0	2.80	2.50	2.50	2.00
SPD252010-4R7M-MYX	4.7±20%	145.0	160.0	2.60	2.00	2.00	1.60
SPD252010-100M-MYX	10.0±20%	500.0	560.0	1.55	1.40	1.05	0.95

NOTE:

1. L, Test Frequency: 1MHz/1V

2. Operating Temperature Range: -55℃～+125℃(Including self-heating)

3. Irms:DC current (A) that will cause an approximate △T of 40 ℃

4. Isat:DC current (A) that will cause L0 to drop approximately 30%

5.All test data is referenced to 25 ℃ ambient

6. The part temperature (ambient + temp rise) should not exceed 125 under ℃ the worst case operating conditions. Circuit design, component placement, PCB trace size and thickness, airflow and other cooling provision all affect the part temperature. Part temperature should be verified in the end application.

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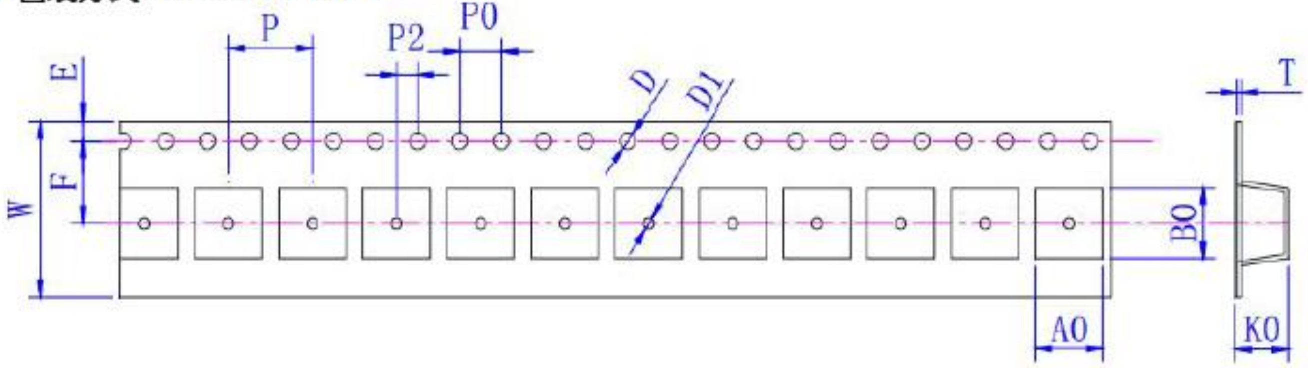
PACKAGING

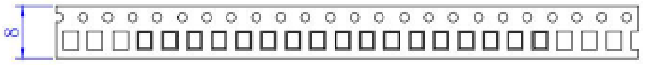
CUSTOMER:		**PART NO.:**	SPD252010-SERIES-MYX
DESCRIPTION:	Multilayer Chip Inductor	**CUSTOMER P/N:**	

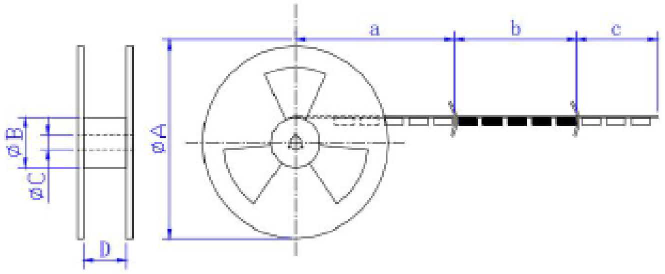
1.包装方式PACKAGE TYPE：



尺寸（mm）											
W ±0.3	A0 ±0.1	B0 ±0.1	D +0.1	D1 Min	E ±0.1	F ±0.1	K0 ±0.1	P0 ±0.3	P2 ±0.3	P ±0.3	T 0.05
8	2.2	2.7	1.5	1	1.75	3.5	1.15	4	2	4	0.25

2. 卷盘尺寸Dimension of Reel





尺寸（mm）						
A Typ	B Typ	C Typ	D Typ	a	b	c
178	58	13	8.4	空带	装元件	印带

产品系列	每卷包装数量	内盒包装数量	外箱包装数量
SPD252010	3000pcs/盘	15000pcs/箱	150000pcs/箱

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可靠性测试CLIMATIC TEST

CUSTOMER:		**PART NO.:**	SPD252010-SERIES-MYX
DESCRIPTION:	SMD MOLDING POWER INDUCTOR	**CUSTOMER P/N:**	

可靠性测试 MECHANICAL PERFORMANCE TEST

Solderability	90% or more of electrode area shall be coated by new solde.	Dip pads in flux . Solder Composition: Sn/Ag3.0/Cu0.5(Pb-Free). Solder Temperature: 245±5℃. Immersion Time: (5±1) s.
Resistance to Soldering Heat	No visible mechanical damage. Inductance change: Within ±10%.	Dip pads in flux. Solder Composition: Sn/Ag3.0/Cu0.5(Pb-Free). Solder Temperature: 260±5℃. Immersion Time: 10±1sec
Adhesion of teral electrode	Strong bond between the pad and the core, without come off PCB.	Inductors shall be subjected to (260±5)℃ for (20±5)s Soldering in the base whit 0.3mm solder. And then aplombelectrode way plus tax 10 N for (10±1) seconds.
High temperature	No case deformation or change in appearance. Inductance change: Within ±10%	Temperature: 125±2℃. Time : 1000 hours. Measurement at 24±4 hours after test conclusion.
Low temperature	No visible mechanical damage. Inductance change: Within ±10%	Temperature: -40±2℃. Time : 1000 hours. Measurement at 24±4 hours after test conclusion.

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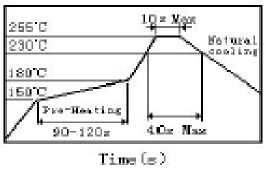
DESCRIPTION:	SMD MOLDING POWER INDUCTOR	**CUSTOMER P/N:**	

测试项目 TEST ITEMS	**规格要求 SPECIFICATIONS**	**测试条件/方法 TEST CONDITIONS / TEST METHODS**
Thermal shock	No visible mechanical damage. Inductance change: Within ±10%	The test sample shall be placed at (-55±3)℃ and (125±3)℃ for (30±3) , different temperature conversion time is 2~3 utes. The temperature cycle shall be repeated 32 cycles. Placed at room temperature for 2 hours, within 48±4 hours of testing.
Temperature characteristic	Inductance change Pc-b,Pc-d: Within ±10%	a：+20 ℃ （30~45） → b: -40 ℃ （30~45） → c: +20 ℃ （30~45） → d: +125 ℃ （30~45） → e: +20 ℃ （30~45） $P_{c\text{-}b}=\frac{L_b-L_c}{L_c}\times100\%$; $P_{c\text{-}d}=\frac{L_d-L_c}{L_c}\times100\%$
Static Humidity	No visible mechanical damage. Inductance change: Within ±10%	Inductors shall be subjected to (95±3)%RH . at(60±2)℃ for (1000±4) h. Placed at room temperature for 2 hours, within 48 hours of testing.
Life	No visible mechanical damage. Inductance change: Within ±10%	Inductors shall be store at (85±2)℃ for (1000±4) hours with Irms applied. Placed at room temperature for 2 hours, within 48 hours of testing

推荐回流焊接曲线 Reflow Soldering Profile



注意事项Points For Attention

1、产品安装最佳保质期限：出厂日起180天内；

2、取出使用后剩余未用产品，务必使用封口胶带密封，避免焊盘氧化影响焊接；

3、任何水渍、汗渍或粉尘等与焊盘接触均会影响焊锡性，切勿裸手直接接触产品焊盘，避免影响焊接；

4、本产品会因工作条件变化而变化，当您需要在其他应用中使用本产品时，请重新测试；

5、超限的电压、电流或温度均会对产品造成不可逆的损伤，可能造成产品功能衰减甚至失效；

6、本产品不适用于潮湿、阴暗及强腐蚀性环境。

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