

# 产品承认书

## Specification For Approved

版本: REV.A00

客户名称/Customer name:

N/A

客户品名/Customer name:

N/A

客户型号/Customer Model number:

N/A

客户料号/Customer material number:

N/A

巨维品名/JW name:

Molding power inductors

巨维型号/JW Model number:

MHS252010A Series

巨维料号/JW Material number:

N/A

巨维签署/JW Signed			客户承认/Customer Approval		
制定 Prepared By	审核 Checked By	批准 Approved By	确认 Confirm By	审核 Checked By	承认 Approved By
唐秀玲	王瑞琳	欧奇林			
2024.8.22	2024.8.22	2024.8.22			

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JS-RD-SPEC-001/A0

# 深圳市巨维科技有限公司

Shenzhen Ju Wei Technology Co., Ltd

客户名称 Customer	N/A	品名 Name	Molding power inductors	版本 Ver.	A00
客户型号 Model No.	N/A	料号 Material No.	N/A	日期 Date	2024.8.22
客户料号 Customer No.	N/A	型号 Model No.	MHS252010A Series	发行号 Release No.	JS-S-24082201

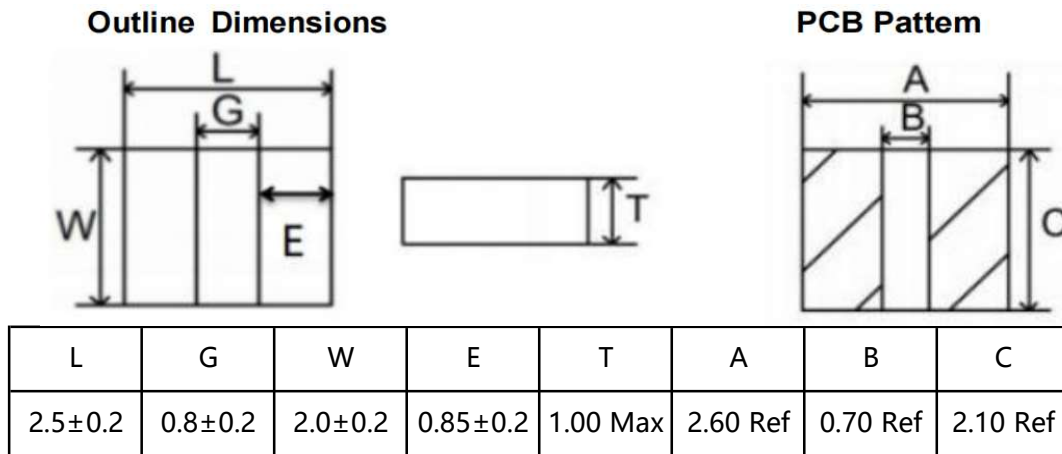
## 变更履历/Modify Record

版本 Ver.	变更内容/Change content	日期 Date	制定 Prepared By	审核 Checked By
A00	新发行/New release	2024.8.22	唐秀玲	王瑞琳

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1. 产品形状尺寸(单位:毫米)/Product Shape size(Unit:mm):



2. 品名型号命名指南/Nomenclature guidelines for product models:

J - MHS    252010    A - 2R2    M - X  
①                    ②                    ③                    ④                    ⑤                    ⑥                    ⑦

①	公司名称代码/Company name code
J	巨晟电子代码/JUSHENG electronic code
②	产品系列代码/Product family code
MHS	成型功率电感/Molding power inductors
③	产品外形尺寸(毫米)/Product dimension(mm)
252010	长2.5*宽2.0*高1.0毫米/Length2.5 *Width2.0 *Height1.0mm
④	外观形状区分代码, 请参考产品形状尺寸页面
A	Appearance shape distinguishes the code ,Please refer to the product shape and size page
⑤	电感量标识(亨利)/Inductance identification(H)
2R2	R22(0.22μH) , 2R2(2.2μH) , 100(10μH) , 221(220μH) , 202(2000μH)
⑥	电感容差字母代码/Inductance tolerance letter code
M	J±5% , K±10% , L±15% , M±20% , P±25% , N±30%
⑦	内部管理代码/Internal management code
X	无代码为常规产品, 其它请咨询/No code regular product, other please consult

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**3. 耐高温等级/Temperature resistance class:**

工作温度: -55°C ~ +125°C(含自温升)

Operating Temperature : -55°C ~ +125°C(Including self - temperature rise)

**4. 电气性能表/Electrical Characteristics List:**

NO.	Part Number	Inductance (uH)	DCR (mΩ)		Isat (A)		Irms (A)	
			Max.	Typ.	Max.	Typ.	Max.	Typ.
1	J-MHS252010A-R22M	0.22	17.0	12.0	7.9	8.6	6.5	6.8
2	J-MHS252010A-R24M	0.24	17.5	12.0	7.8	8.5	6.4	6.7
3	J-MHS252010A-R33M	0.33	19.0	13.0	7.2	7.6	6.2	6.5
4	J-MHS252010A-R47M	0.47	22.0	15.0	6.5	6.9	5.6	6.1
5	J-MHS252010A-R68M	0.68	27.0	23.0	5.5	5.9	5.0	5.6
6	J-MHS252010A-1R0M	1.0	30.0	25.0	4.8	5.3	4.1	4.5
7	J-MHS252010A-1R5M	1.5	55.0	45.0	3.9	4.3	3.0	3.4
8	J-MHS252010A-2R2M	2.2	70.0	62.0	3.0	3.3	2.1	2.4
9	J-MHS252010A-3R3M	3.3	100.0	86.0	2.5	2.8	2.1	2.5
10	J-MHS252010A-4R7M	4.7	180.0	160.0	2.0	2.6	1.6	2.0
11	J-MHS252010A-6R8M	6.8	320.0	270.0	1.9	2.4	1.4	1.6
12	J-MHS252010A-100M	10.0	560.0	500.0	1.4	1.55	0.95	1.05
13	J-MHS252010A-220M	22.0	1300.0	1100.0	0.9	1.1	0.6	0.85

Test remarks:

1.All test data is referenced to 25 °C ambient.

2.Test Condition:1MHz, 1.0Vrms.

3.Irms:DC current (A) that will cause an approximate ΔT of 40 °C.

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

5.The rated current as listed is either the saturation current or the heating current depending on which value is lower.

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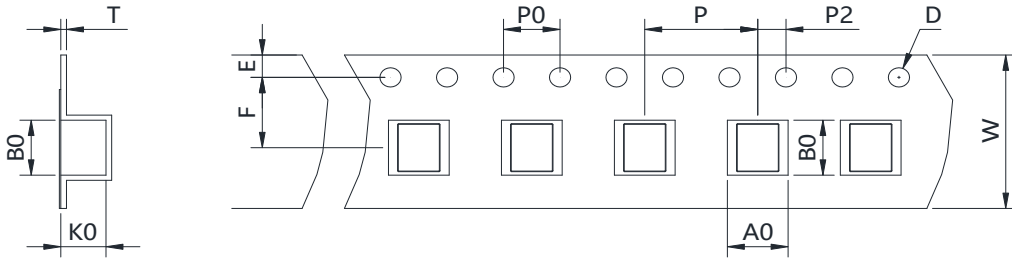
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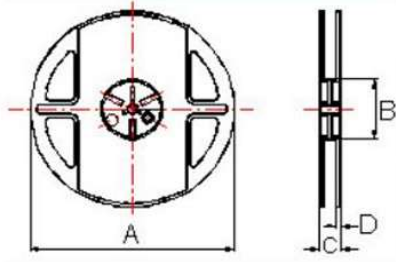
5. 包装/PACKAGE :

(1) Tape Dimensions(Unit:mm)



Part No.	W	A0	B0	K0	D	F	E	P	P0	P2	T
MHS252010A	8.0 ±0.3	2.45 ±0.1	2.8 ±0.1	1.2 ±0.1	1.5 ±0.1	3.5 ±0.1	1.75 ±0.1	4.0 ±0.1	4.0 ±0.1	2.0 ±0.1	0.25 ±0.05

(2) Reel Dimensions (Unit:mm)



Item	A	B	C	D
Dimension	178.0 ±2.0	60.0 ±2.0	13.0 ±2.0	1.5 ±1.0

(3) Packaging Quantity (Unit:Pcs)

P/N	Chip/Reel
MHS252010A	3000

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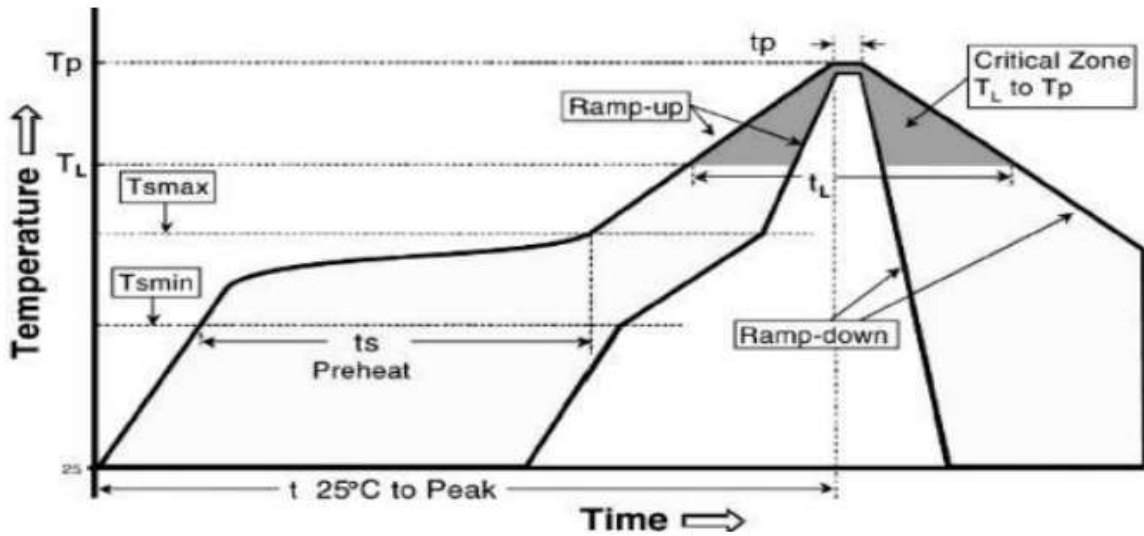
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6. 建议回流焊温度曲线/Reflow temperature profile is recommended:



Profile Feature	Lead (Pb)-Free solder
Preheat:	
Temperature Min ( $T_{smin}$ )	150°C
Temperature Max ( $T_{smax}$ )	200°C
Time ( $T_{smin}$ to $T_{smax}$ ) ( $t_s$ )	60 - 120 seconds
Average ramp-up rate: ( $T_{smax}$ to $T_p$ )	3°C / second max.
Time maintained above :	
Temperature ( $T_L$ )	217°C
Time ( $t_L$ )	60- 150 seconds
Peak Temperature ( $T_p$ )	260°C
Time within $\begin{matrix} +0 \\ -5 \end{matrix}$ °C of actual peak Temperature ( $t_p$ ) <sup>2</sup>	10 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8minutes max.

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### 7. 可靠性测试/Reliability Test:

Item	Specification and Requirement	Test Method								
Solderability	1. No case deformation or change in appearance 2. New solder coverage More than 90%	1. Preheat: 155°C ± 5°C , 60S ± 2S 2. Tin: lead-free. 3. Temperature: 245°C ± 5°C , flux 3.0S ± 0.5S.								
Mechanical shock	1. No case deformation or change in appearance 2. $\Delta L/Lo \leq \pm 10\%$	1. Acceleration: 100G 2. Pulse time: 6ms 3. 3 times in each positive and negative direction of 3 mutual perpendicular directions								
Mechanical vibration	1. No case deformation or change in appearance 2. $\Delta L/Lo \leq \pm 10\%$	1. The test samples shall be soldered to the board. Then it shall be submitted to below test conditions. <table border="1" style="margin: 10px auto;"> <tr> <td>Fre. Range</td> <td>10~55Hz</td> </tr> <tr> <td>Total Amplitude</td> <td>1.5mm</td> </tr> <tr> <td>Sweeping Method</td> <td>10Hz to 55Hz to 10Hz</td> </tr> <tr> <td>Time</td> <td>For 2 hours on each X, Y, Z axis.</td> </tr> </table> 2. Recovery: At least 2 hours of recovery under the standard condition after the test, followed by the measurement within 24 ± 2 hours.	Fre. Range	10~55Hz	Total Amplitude	1.5mm	Sweeping Method	10Hz to 55Hz to 10Hz	Time	For 2 hours on each X, Y, Z axis.
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Total Amplitude	1.5mm									
Sweeping Method	10Hz to 55Hz to 10Hz									
Time	For 2 hours on each X, Y, Z axis.									
Thermal Shock	Inductance change: Within ± 10% Without distinct damage in appearance	1. First -55°C for 30 minutes, last 125°C for 30 minutes as 1 cycle. Go through 1000 cycles. 2. Max transfer time is 2 minutes. 3. Measured at room temperature after placing for 24 ± 2 hours								
Humidity Resistance	Inductance change: Within ± 10% Without distinct damage in appearance	1. Reflow 2 times, 2. 85°C, 85%RH, 1000 hours 3. Measured at room temperature after placing for 24 ± 2 hours								
Low temperature storage	Inductance change: Within ± 10% Without distinct damage in appearance	1. Temperature: -55 ± 2°C 2. Time: 1000 hours 3. Measured at room temperature after placing for 24 ± 2 hours								

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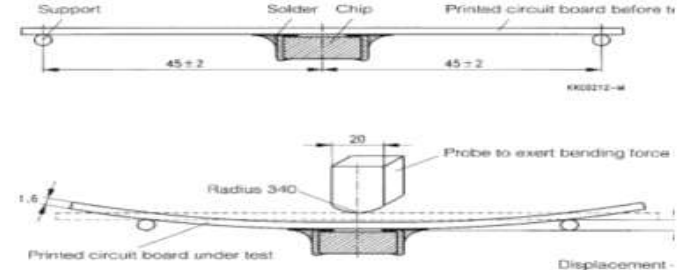
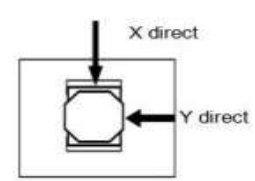
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7. 可靠性测试/Reliability Test:

High temperature storage	Inductance change: Within $\pm 10\%$ Without distinct damage in appearance	<ol style="list-style-type: none"> <li>1. Temperature: <math>+125 \pm 2^\circ\text{C}</math></li> <li>2. Time: 1000 hours</li> <li>3. Measured at room temperature after placing for <math>24 \pm 2</math> hours</li> </ol>
Board Flex	Inductance change: Within $\pm 10\%$ Without distinct damage in appearance	<ol style="list-style-type: none"> <li>1. Run through IR reflow for 2 times;</li> <li>2. Place the 100mm X 40mm board into a fixture similar to the one shown in below Figure with the component facing down</li> <li>3. The apparatus shall consist of mechanical means to apply a force which will bend the board (D) x = 2 mm minimum.</li> <li>4. The duration of the applied forces shall be <math>60 \pm 5</math> sec. The force is to be applied only once to the board.</li> </ol> 
Terminal Strength	No removal or split of the termination or other defects shall occur.	<ol style="list-style-type: none"> <li>1. The test samples shall be soldered to the board</li> <li>2. Push the product vertically from the side of the sample using the thrust tester.</li> <li>3. Automotive electronics: 17.7N, <math>60\text{S} \pm 1\text{s}</math>, X, Y direct.</li> </ol> 

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