

客戶名稱：
CUSTOMER

Documnet No.: ENS000176400

Approval Sheet Rev.: A0

Spec. Rev. P1

承認書

APPROVAL SHEET

產品品名/Product Model No. : WA-P-LB-02-996

客戶料號/Customer No. : KXWIFPLB1PA02

案名/Model Name: ButterflyMX.M12.1

發行日期/ Issue Date : 2023/4/27

承認日期/ Approved Date :

Approved by customer: (signing or stamping here)



佳邦科技股份有限公司
INPAQ TECHNOLOGY CO., LTD.

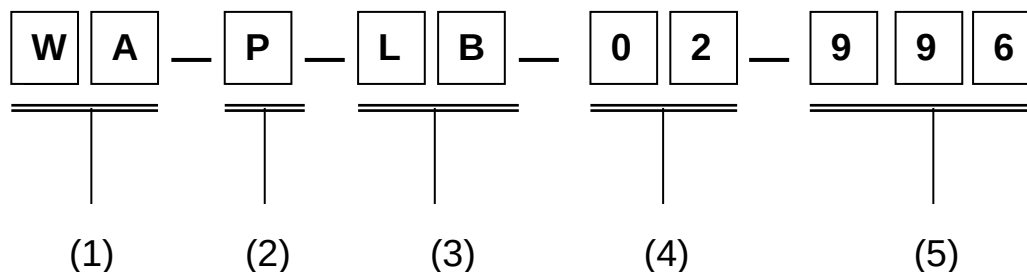
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Embedded Dual-Band Antenna for WA-P-LB-02-996

1. Explanation of part number :



- (1) Product Type : Wireless Antenna
 (2) Material : PCB
 (3) Frequency : 2400-2500 、 5150-5850 MHz
 (4) Coaxial Cable Type : Black Cable
 (5) Suffix : 996

2. Electrical Specification :

Those specifications were specially defined for **ButterflyMX.M12.1** model **Dual-Band Antenna**, and all characteristics were measured under the model's handset testing jig.

2-1. Frequency Band	MHz
WiFi	2400-2500 、 5150-5850 MHz

2-2. Impedance :

50 ohm nominal

2-3. Matching circuit :

None

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=N/A X.X=N/A X.XX=N/A

ANGLES=N/A HOLEDIA=N/A



INPAQ TECHNOLOGY CO., LTD.

SCALE : N/A

UNIT : mm

DRAWN BY : 廖偉廷

CHECKED BY : 鄭榮謀

DESIGNED BY : 黃健育

APPROVED BY : 謝立庭

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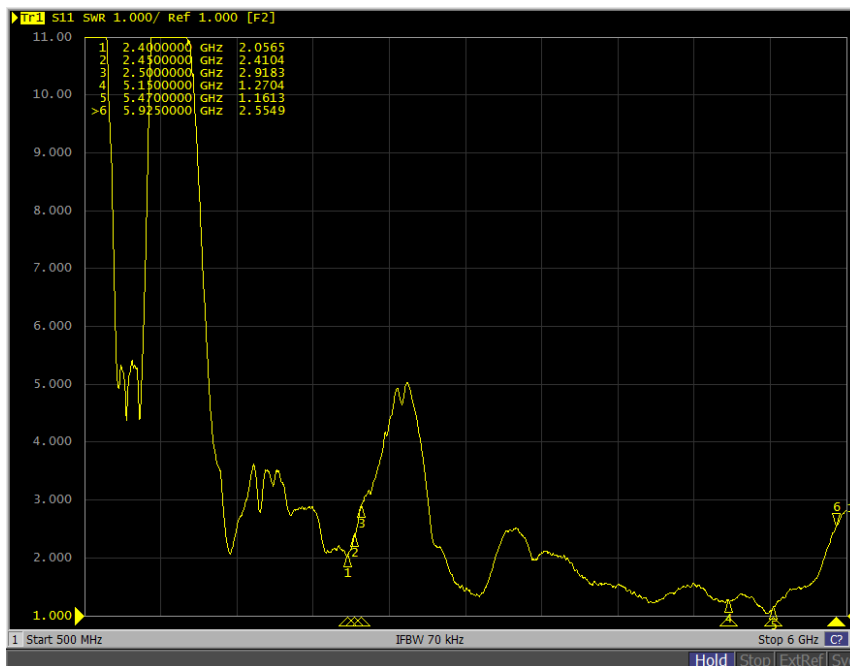
TITLE : Embedded Dual-Band Antenna for
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2-4. VSWR :



2-5. Efficiency :

Frequency (MHz)	Efficiency (%)	Peak Gain (dBi)
2400	38.3	3.61
2450	36.62	3.97
2500	33.59	4.35
5150	55.29	7.77
5250	50.55	7.58
5350	53.25	8.31
5450	49.51	8.14
5600	50.59	8.47
5750	51.91	7.06
5850	48.09	5.83

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=N/A X.X=N/A X.XX=N/A

ANGLES=N/A HOLEDIA=N/A



INPAQ TECHNOLOGY CO., LTD.

SCALE : N/A

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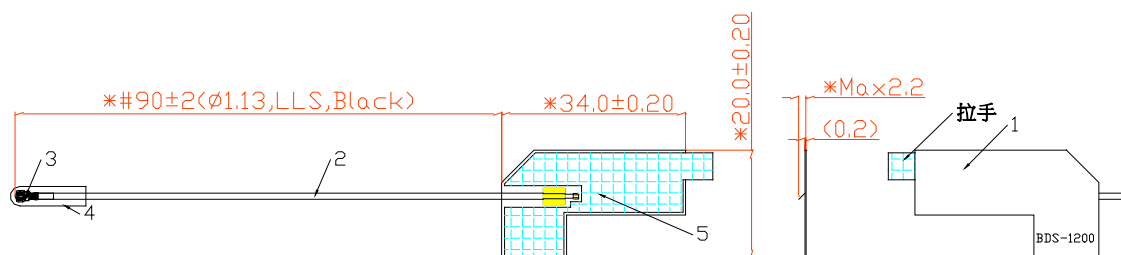
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3. Antenna Drawing :

The appearance of the antenna is according to drawing Figure . 3-1-1



NOTE:

1. 工程圖上“*”號為重點尺寸標註指示
Mark “*” are the key dimensions.
2. 工程圖上“#”號為Cpk量測尺寸標註指示
Mark “#” are CPK dimensions.

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Figure 3-1-1.

ITEM	DESCRIPTION	MATERIAL SPECIFICATION	QUANTITY	UNIT
1	PCB	34x20x0.2mm	1	PCS
2	Cable	1.13,LLS,Black	1	PCS
3	Connector	I-PEX MHF I-PEX Equivalent(compatible)	1	PCS
4	Tube	OD1.9*20mm	1	PCS
5	Adhesive	33*19*0.15mm	1	PCS

UNLESS OTHER SPECIFIED TOLERANCES ON :
 X=N/A X.X=N/A X.XX=N/A
 ANGLES=N/A HOLEDIA=N/A



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WA-P-LB-02-996

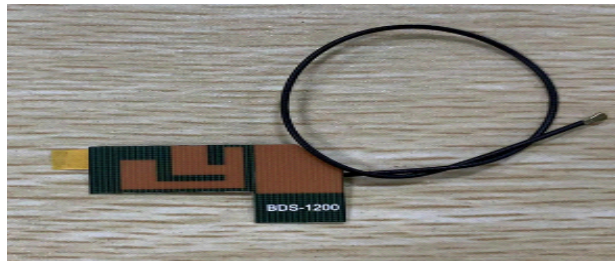
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Reliability Testing Report

Product Model: Verification DPNA5094 WA-P-LB-01-315 (WA-P-LB-02-996) Reliability test of product



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Test item list

ITEMS	PAGE
高温高湿试验	2
冷热冲击试验	3
PAD 拉力测试	4

Date: 2023-2-26

高温高湿试验

Product Type :	WA-P-LB-01-315		
Lot No. :	N/A	Sample Size :	5 pcs
Judgment Criteria :	外观无异常; 电性符合规格;		
Test Condition :	85±2℃, 90±2%RH, 24hrs;		
Equipment :	恒温恒湿机		

Result :

编号	Before test				After test			
	2.60GHz	3.40GHz	4.10GHz	6.50GHz	2.60GHz	3.40GHz	4.10GHz	6.50GHz
	<2.5	<2.5	<3.5	<3.5	<2.5	<2.5	<3.5	<3.5
1	1.78	1.73	1.74	1.78	1.69	1.77	1.69	1.77
2	1.77	1.88	1.38	1.52	1.55	1.81	1.77	1.69
3	1.80	1.83	1.45	1.66	1.67	1.63	1.63	1.77
4	1.60	1.78	1.71	1.55	1.88	1.75	1.77	1.61
5	1.73	2.01	1.78	1.73	1.79	1.77	1.69	1.77

Judgment : OK
Inspector : 王紅麗
Approver : 吉金娟

冷热冲击试验

Product Type :	WA-P-LB-01-315		
Lot No. :	N/A	Sample Size :	5 pcs
Judgment Criteria :	外观无异常; 电性符合规格;		
Test Condition :	-40℃, 0.5 hrs<- (5mins) -> 85℃, 0.5 hrs; 测试 50 cycles;		
Equipment :	冷热冲击机		

Result :

编号	Before test				After test			
	2.60GHz	3.40GHz	4.10GHz	6.50GHz	2.60GHz	3.40GHz	4.10GHz	6.50GHz
	<2.5	<2.5	<3.5	<3.5	<2.5	<2.5	<3.5	<3.5
6	1.72	1.73	1.52	1.58	1.69	2.11	1.71	1.55
7	1.79	1.81	1.45	1.66	1.59	2.15	1.69	1.67
8	1.75	1.66	1.70	1.58	1.77	1.95	1.83	1.55
9	1.81	1.80	1.73	1.59	1.69	1.66	1.59	1.95
10	1.66	1.76	1.42	1.52	1.81	1.77	1.69	1.75

Judgment : OK

Inspector : 王紅麗

Approver : 吉金娟

PAD 拉力试验

Product Type :	WA-P-LB-01-315		
Lot No. :	N/A	Sample Size :	5pcs
Judgment Criteria :	PAD 点>1.0 kgf ;		
Test Condition :	PAD 点>1.0 kgf ;		
Equipment :	数显拉力器		

Result :

试验前..																	
试验后..	 <table border="1"> <thead> <tr> <th>编号</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th></tr> </thead> <tbody> <tr> <td>PAD拉力$\geq$1.0kg/f</td><td>4.24</td><td>3.98</td><td>4.46</td><td>4.03</td><td>4.15</td></tr> </tbody> </table>					编号	1	2	3	4	5	PAD拉力 $\geq$ 1.0kg/f	4.24	3.98	4.46	4.03	4.15
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PAD拉力 $\geq$ 1.0kg/f	4.24	3.98	4.46	4.03	4.15												

Judgment : OK

Inspector : 王紅麗

Approver : 吉金娟