

SOLUM CO., LTD. 귀중

## APPROVAL SHEET (승인원)

Date	2023.12.19
Part Name	3.03.1001003947
Customer Code	ML39A040024A
Description	2.4/5.8G PCB Antenna with IPEX, RF1.13 Gray Cable, L=212mm
ETC	Lead & Halogen Free PRODUCT

승인 유효기간

승인일로부터 단종, 대체 부품 승인시까지

구분	심사	입안	결정
협력업체			
	구매팀장 오수한	기술팀장 박준영	대표이사 최현영

신청회사명	(주) 와이낫	TEL.	070-4130-7799
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Shenzhen Feiyuxin Electronics Co., Ltd.

**Specification for Approval**

YNOT Co., Ltd (Solu-m)

Customer:

2.4/5.8G PCB Antenna with IPEX, RF1.13 Gray Cable, L=212mm

Part name

3.03.1001003947 (reserved)

Part No.

:

Customer Part No.

Customer Approval		
APPROVAL	CHIEF	SUPERVISOR

Manufacturer Recognition			
SALES	CHECK	CHIEF	DESIGN
<i>Effy</i>	<i>Mr. Li</i>	<i>Jerry</i>	<i>Ms. Zheng</i>
Date:2023-10-20		Date:2023-10-20	
THANKS FOR OFFERING US THE OPPORTUNITY TO SEND SAMPLES FOR APPROVEMENT. PLS KINDLY SIGN BACK THIS DOCUMENT TO US WHEN SAMPLES ARE APPROVED.			

**FEIYUXIN HEADQUARTER**

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TEL: 0755-89737230      FAX: 0755-89737181      Email: sales@fyxdz.com

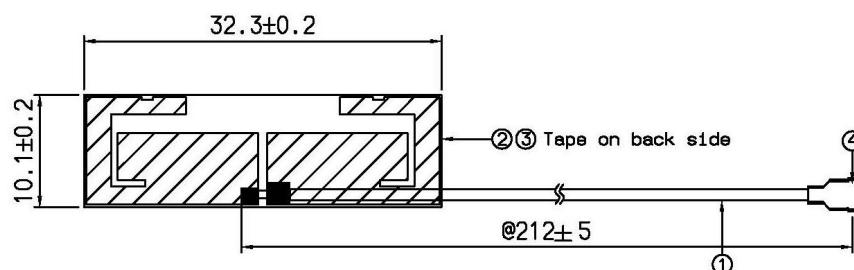
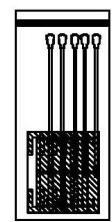
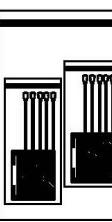
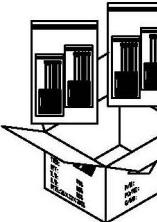
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## Modification Record

Revision	Date	Engineer	Modified Content
01	2023.10.20	Ms. Zheng	NEW

# Antenna Drawing

A	B	C	D	E	F	END PRODUCT DRAWING 成			
					REV	DATE	DESCRIPTION	ECN NO.	NAME
					A0	2023.09.27	新订图面	郑少娟	
									
<p>1 Remarks:</p> <ol style="list-style-type: none"> <li>1. No damage on antenna or cable cover;</li> <li>2. Finished products 100% test via network analyzer;</li> <li>3. Finished products 100% full inspection;</li> <li>4. RoHS compliant;</li> <li>5. @: key dimension.</li> </ol>									
工作频段(Frequency Range) 增益(Gain) 电压驻波比(VSWR) 极化方式(Polarization) 特性阻抗(Impedance)		2400~2500/5150~5850MHz 3dB1 compare with sample Linear 50 ohm		 50PCS/small bag can be adjusted according to the order		 500PCS/big bag can be adjusted according to the order		 4000PCS/Carton can be adjusted according to the order	
客户料号(CUSTOMER NO)									
⑦ 28*23*20CM		1/4000	Carton	角度 ANGLE PROJECTION  产品名称(PRODUCT NAME) IPEX-2.4G/5.8G PCB Antenna-RF1.13 Gray-L212MM					
⑥ 330*250*0.04MM		1/500	PE bag	公差 GENERAL TOLERANCE 100~200: ± 3.00 50~100: ± 2.00 25~50: ± 0.20 10~25: ± 0.10 1~10: ± 0.05					
⑤ 250*100*0.04MM		1/50	PE bag	产品料号(PRODUCT NO) 3.03.1001003947 单位(UNIT) 页数(PAGE) 1 OF 1 MM 比例(SIZE) A4 设计(D S ) 审核(CHK )					
④ 20278-112R-13-Plug		1	IPEX	公差 GENERAL TOLERANCE 100~200: ± 3.00 50~100: ± 2.00 25~50: ± 0.20 10~25: ± 0.10 1~10: ± 0.05					
③ Black foam-3M9080A		1	3M foam						
② 2.4G/5.8G-Black		1	PCB board						
① 1.13Grey-64-Tinned-FEP		1	Cable						
No. Description		Qty	Name	* Critical Dim # Major 核准(APPD)					

表单编号: FYX/E-QR-14A 版本: 第三版

## Product Specifications

### 1. Antenna Specs

<b>Product Name:</b> 2.4/5.8G PCB Antenna with RF1.13 Gray Cable	
<b>DESCRIPTION</b>	<b>VALUE</b>
<b>Frequency range</b>	2400-2500/5150~5850MHz
<b>Impedance</b>	50Ω
<b>V.S.W.R</b>	Compare with sample
<b>Gain</b>	3dBi
<b>Radiation</b>	Omni-directional
<b>Radiating element</b>	1/4 Wave Helical
<b>Polarization</b>	linear Vertical
<b>Admitted power</b>	5W
<b>Connector</b>	IPEX/U.FL
<b>Cable type</b>	RF1.13
<b>Operating temp</b>	-40°C~+70°C
<b>Storage temp</b>	-45°C~+75°C



## 2. Cable Specs

1.13 Structure



Item	Material	OD(mm)
1. Inner conductor	Tinned copper wire	7/0.08±0.02
2. Insulator	PE	0.66±0.02
3. Outer conductor	Tinned copper wire	0.88±0.05
4. Jacket	FEP	1.13±0.05

### Electrical performance

Capacitance(pF/m)	96±3
Impedance(ohm)	50
Rate(%)	66
Bending radius (mm)	≤7
Maximum operating voltage (VMS)	1000
Maximum operating frequency (MHz)	6000
Operating temperature range (°C)	-40 TO +80

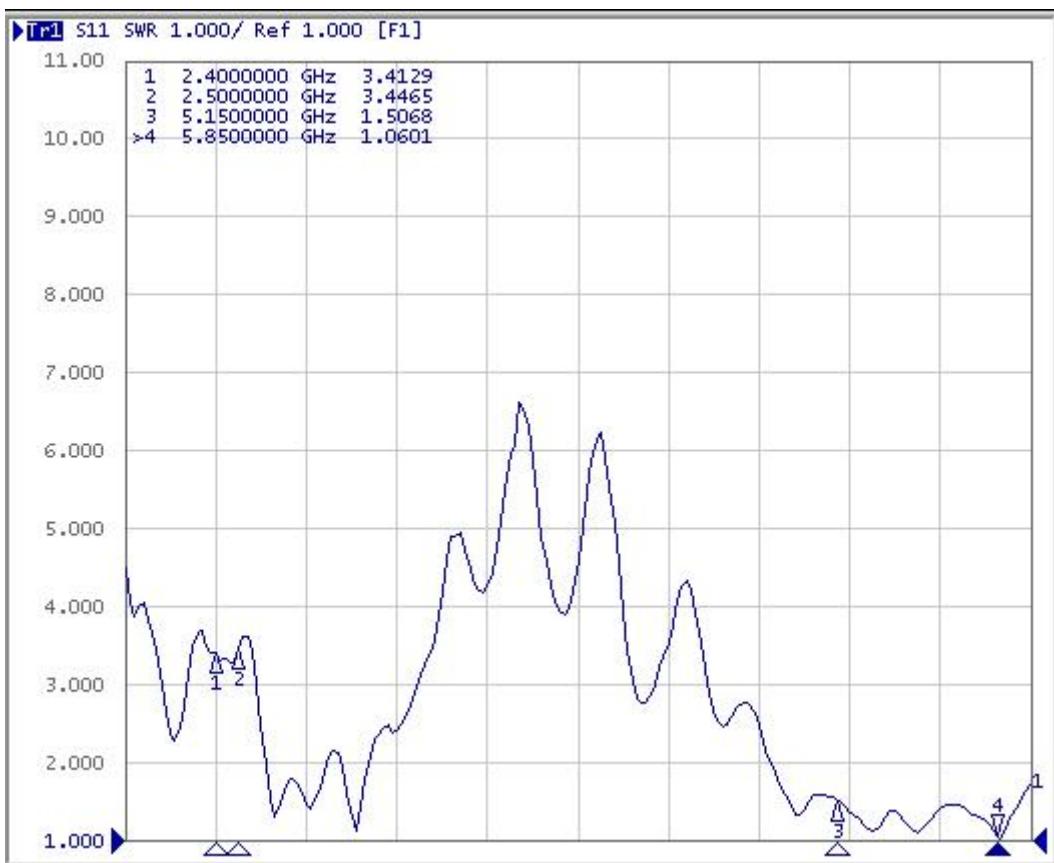
### Attenuation (typical)

Frequency MHz	Attenuation ( dB/m)
100	0.42
400	0.58
1000	2.20
2000	3.40
3000	4.20
4000	4.50
5000	5.20
6000	5.60

# Test Report

(Empty test without customer's device)

## 1. VSWR Test



## 2. Efficiency and Gain Test

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)
2400	56.08	-2.51	3.59	1.44
2410	52.47	-2.8	3.08	0.93
2420	47.27	-3.25	2.37	0.22
2430	47.83	-3.2	2.57	0.42
2440	47.09	-3.27	2.35	0.2
2450	51.95	-2.84	2.72	0.57
2460	52.99	-2.76	2.96	0.81
2470	46.17	-3.36	2.16	0.01
2480	49.42	-3.06	2.86	0.71
2490	43.37	-3.63	1.79	-0.36
2500	44.11	-3.55	2.12	-0.03

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)
5150	75.15	-1.24	2.8	0.65
5220	56.1	-2.51	1.84	-0.31
5290	60.66	-2.17	1.52	-0.63
5360	76.42	-1.17	2.94	0.79
5430	94.7	-0.24	4.47	2.32
5500	81.71	-0.88	2.83	0.68
5570	83.32	-0.79	2.75	0.6
5640	63.53	-1.97	2.3	0.15
5710	72.77	-1.38	3.61	1.46
5780	72.95	-1.37	3.04	0.89
5850	54.23	-2.66	1.73	-0.42



Shenzhen Feiyuxin Electronics Co., Ltd.

## Packing Information (Box & Label size format)

Carton Size: 28x23x20 cm

Label format as below

<b>Customer:</b> Y-NOT	
<b>PO:</b>	
<b>P/N:</b>	
<b>Description:</b>	
<b>Q'ty:</b>	<b>pcs</b>
<b>Date:</b>	

QC

/ PCB QC

FYX/Q-WI-1-0234

:A0

2023-8-22

**Remark** Flow chart symbol " -Connection, " "- Inspection, " "- Operation ↗ " "- Transfer ↘ " "- Document, " "- Storage

**Approved By:**

**Check By**

Prepared By

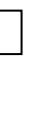
**QC**

/ PCB QC

FYX/Q-WI-1-0234

:A0

2023-8-22

Engineering Task				Control						Test Instrument	Record	Risk assessment
Control	Flow chart	Task	Standard OP	Item	Specification	Sampling / Testing	Responsibility		Inspection point			
4				/								BOM
5					/		/IPQC				IPQC	
6					/		/IPQC				IPQC	
7					/		/IPQC				IPQC	

 Remark Flow chart symbol " -Connection, " "- Inspection, " "- Operation  "- Transfer  "- Document, " "- Storage

Approved By:

Check By

Prepared By

**QC**

/ PCB QC

FYX/Q-WI-1-0234

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2023-8-22

Engineering Task				Control						Test Instrument	Record	Risk assessment
Control	Flow chart	Task	Standard OP	Item	Specification	Sampling / Testing	Responsibility		Inspection point			
8		PCB			/	/IPQC	:420 -450			IPQC	/	
9					/	/IPQC	---			IPQC		
10					/	/IPQC	---			IPQC	/	
11						FQC		PCB				

 Remark Flow chart symbol " -Connection, " "- Inspection, " "- Operation  "- Transfer  "- Document, " "- Storage

Approved By:

Check By

Prepared By



**QC**

/ PCB QC

FYX/Q-WI-1-0234

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2023-8-22

Engineering Task				Control						Test Instrument	Record	Risk assessment
Control	Flow chart	Task	Standard OP	Item	Specification	Sampling / Testing	Responsibility		Inspection point			
12	ok 	OQC			MIL-STD-105E AQL: MAJOR 0.4 MINOR 1.5 CR 0	OQC	---	, , , ,	/	OQC		
13							—					

 Remark Flow chart symbol " -Connection, " "- Inspection, " "- Operation  "- Transfer  "- Document, " "- Storage

Approved By:

Check By

Prepared By