



Shenzhen Shuodian Electronic Technology Co.,Ltd
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SPECIFICATION

for

GH-ZD-L-V1.2 Gamepad antenna

Customer No.

Product No.

RFECA3216060A1T

Author: XiaofengZeng Review: Liming

Release Date: 2025.9.15

ShenZhen Shuodian Electronic Technology Co., Ltd

Room 201, Building 2, Nantaiyun Chuanggu Park, Tangwei Community, Fenghuang Street,
Guangming District, Shenzhen City, Guangdong Province

E-mail: sz_shuodian@163.com

Tel: 0755-86006322

Fax: 0755-86006323

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1. Bilateral Confirmation page

1.1 Customer signature

Customer:

Seapartment/post	Sign	Date
Hardware Engineer/RD		
Mechanical/MD		
Project Manager/PM		
Commercial/Puchasing		
Checker		

1.2 Signature of ShuoDian Technology company

Seapartment/post	Sign	Date
Antenna Engineer/RD	何世东	2025-9-15
Mechanical/MD	丁涛	2025-9-15
Project Manager/PM	李鸣	2025-9-15
QA	李秀	2025-9-15
Checker	李鸣	2025-9-15



2. General

2.1 Scope of application

This specification is only applicable to Gamepad antenna

2.2 Operating temperature range

Temperature range of this product: -20 ~ +65 °C

2.3 Storage temperature range:

This product is stored at - 30 ~ + 75 °C

3. General product specifications

NO.	ITEMS	DETAILS
1	Type	Gamepad
2	Operating Frequency Band	2400-2500MHz
3	VSWR	≤ 3.1
4	Gain	0.5dBi
5	Radiation Efficiency	$\geq 35\%$
6	Impedance	50Ω
7	Antenna Type	Dipole
8	Entity Picture	



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Matching circuit

Hand-drawn matching circuit diagram showing an IC connected to an ANT through a series of components: C27 (8.2NH), L3 (0.5PF), and C89 (1.8PF). There are also two shunt components: L4 (marked with an 'X') connected to ground after the IC, and C27 (8.2NH) connected to ground after the first series capacitor C27.

Element	Value
L4	N/C
C27	8.2NH
L3	0.5PF
C89	1.8PF

4. Specification Detials

4.1 Mechanical Properties

4.11 Product Composition:

4.12 Apperance

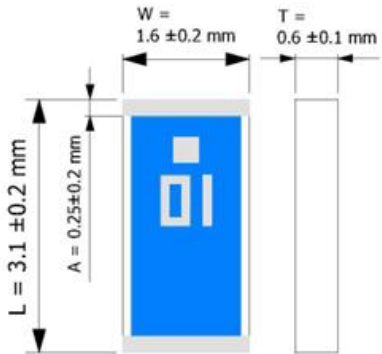
Good appearance without scars 、dirts、protuberances, etc.

4.13 Antenna Picture and Structure Dimension



Product drawings:

DIMENSIONS

Figure	Symbol	Dimension (mm)
	L	3.10 ± 0.20
	W	1.60 ± 0.20
	T	0.60 ± 0.10
	A	0.25 ± 0.20

4.2 Electric Performance

4.21 Test condition

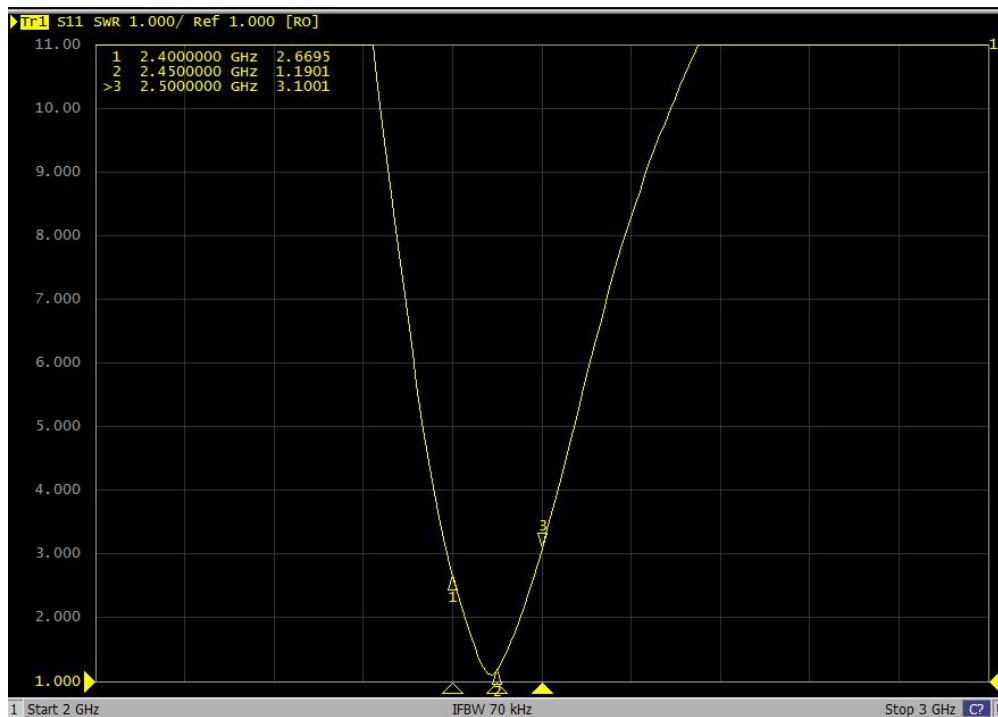
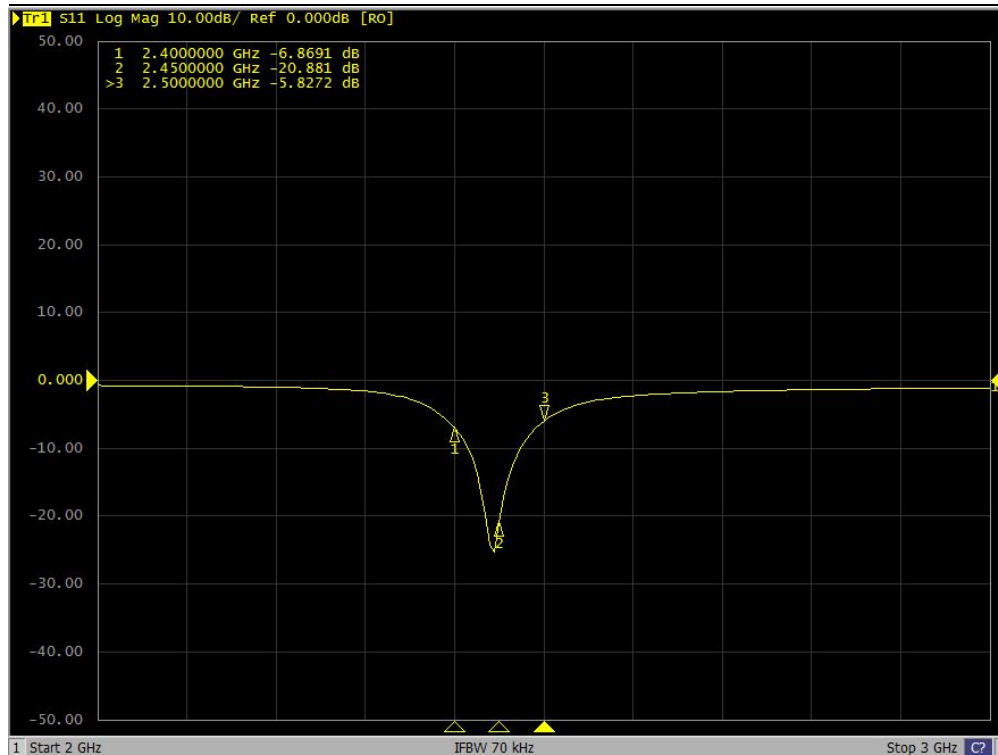
Environment:	Equipment:
Temperature: $10^{\circ}\text{C} \text{---} +30^{\circ}\text{C}$	Network Analyzer: KEYSIGHT E5071C
Humidity: $\leq 80\%$ ($+40^{\circ}\text{C}$)	Multi-probe microwave anechoic
Atmospher: $750\text{mmkg} \pm 30\text{mmkg}$	chamber



4. 22 Test Data for Electrical Performance:

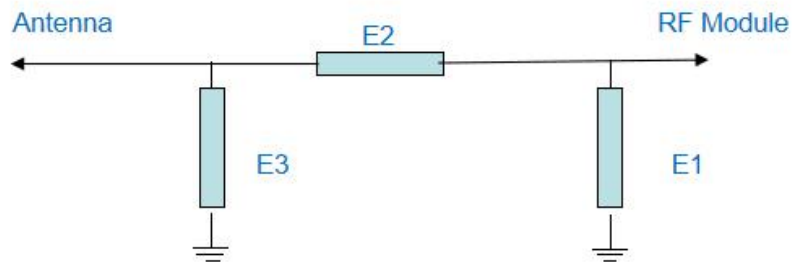
4.22.1 S11 of the Antenna:

Marker (MHZ)	2400	2450	2500
Returnloss	-6.86	-20.88	-5.82
VSWR	2.66	1.19	3.10

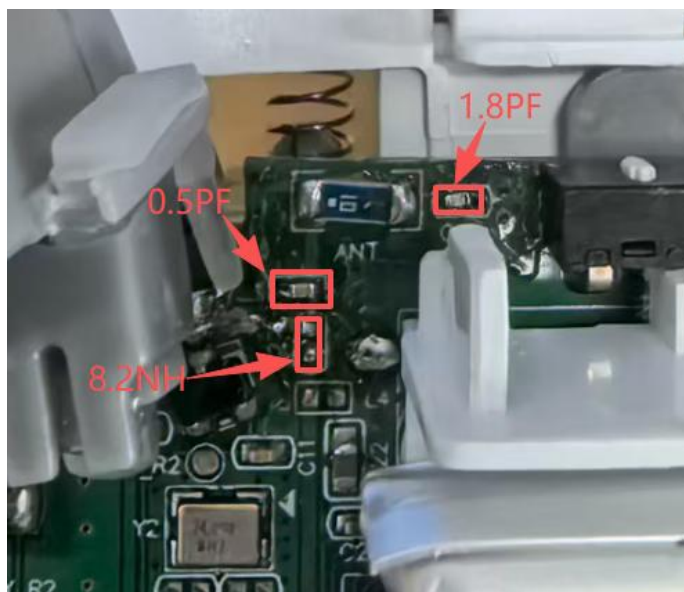




Matching circuit:



Element	Value
E1	NC
E2	8.2NH
E3	0.5PF





4. 22. 2 Passive gain、 efficiency and Radiation Pattern:

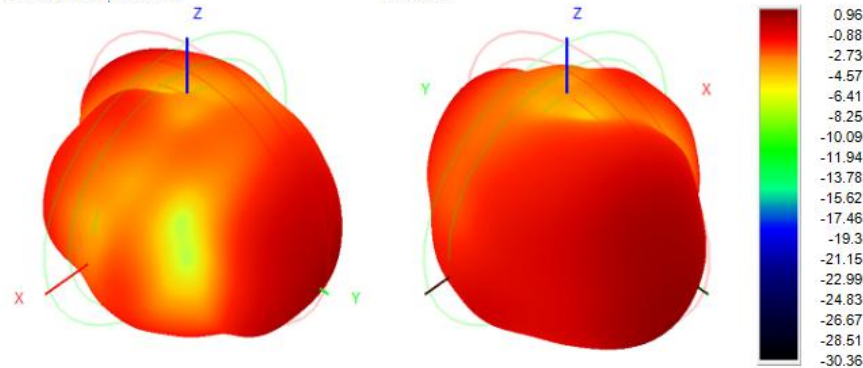
Frequency (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Gain (dBi)	-0.33	0.11	0.39	0.67	0.88	0.96	0.93	0.74	0.32	0.05	-0.29
Efficiency (%)	26.62	30.73	34.23	37.62	40.25	41.20	40.51	38.42	34.68	31.79	28.54

Radiation Pattern

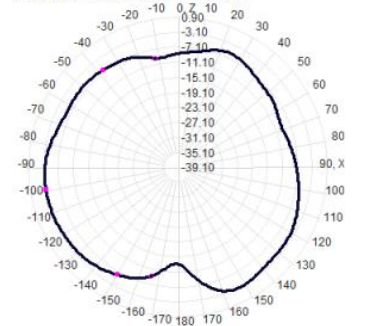
2450MHz:

2450.0MHz H+V, Eff: 41.2%

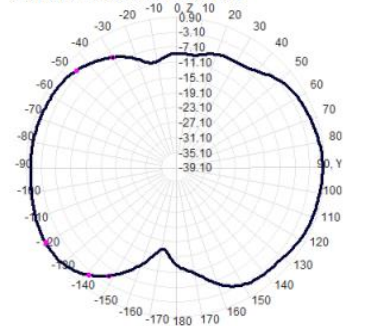
Back View



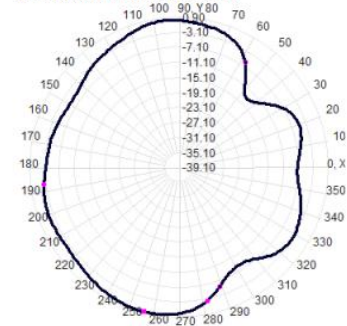
2450.0MHz Total(E1-XZ), Max=-3.27dBi



2450.0MHz Total(E2-YZ), Max= 0.90dBi



Total(H-XY), Max= 0.30dBi, CirD=13.71



5. Product Packaging

Carpet tray: 2000 PCS per tray.