

Dongguan Qiaomu Electronic Technology Co.,Ltd

SPECIFICATION FOR APPROVAL

Customer name: Shenzhen Leksell Security Technology Co., Ltd

Customer part name: N/A

Customer material No.: N/A

Material name: Camera WIFI antenna

Qiaomu part No.:

Date: 2023-03-4

Version: X1

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Product Number: DF5DBI82564/5-40

1. Revision History

Revision	Date	Change Notification	Description
1.0	2023-03-4	First Edition	

Product Number: DF5DBI82564/5-40

2. Specification

Sample Photo	
A. Electrical Characteristics	
Frequency	2400 ~ 2500 MHz
S.W.R.	<= 2.0
Antenna Gain	4.87dBi@2450MHz
Polarization	Linear
Impedance	50 Ohm
B. Material & Mechanical Characteristics	
Material of Radiator	
Material of Plastic	Body: ABS Hinge: ABS Base: PC+PBT
Cable Type	1.13mm black
Connector Type	I-pex
C. Environmental	
Operation Temperature	- 40 °C ~ + 65 °C
Storage Temperature	- 40 °C ~ + 80 °C

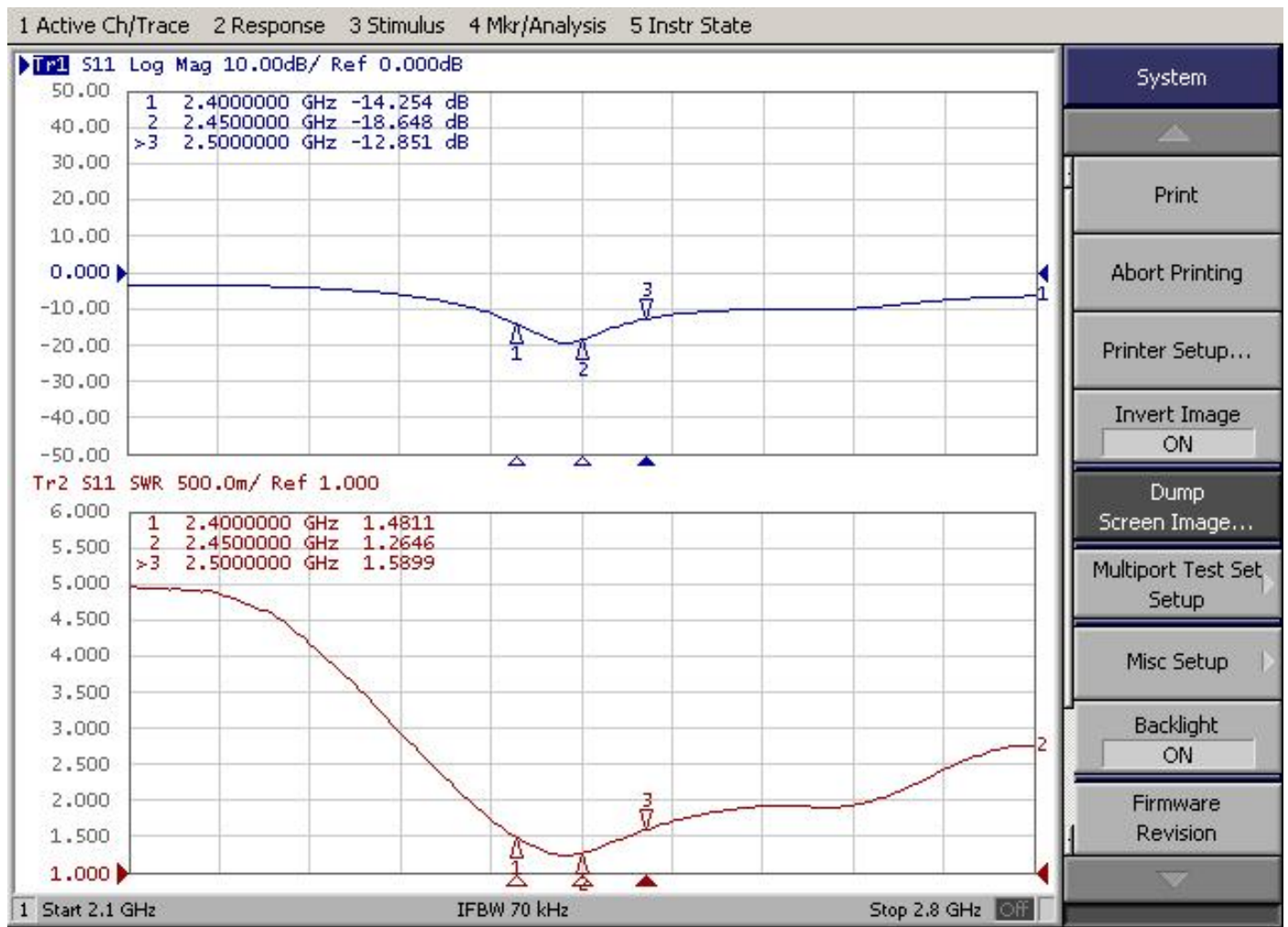
3. Characteristics and Reliability Test

Test Items		Test Condition and Procedure	Requirement	Result
C1	V.S.W.R.	Set DUT on Network Analyzer; make individual calibration to test	Directive DUT specification	PASS
C2	Insertion Loss	Set DUT on Network Analyzer; make individual	Directive DUT specification	N/A
C3	Antenna Gain	Set DUT on Antenna Chamber; make individual calibration to test	Directive DUT specification	PASS
C4	Voltage Breakdown	Test voltage should be applied between insulated portions, or between ground as specified.	Max Voltage ≥ 500 V or directive material specification ≥ 500 V	N/A
C5	Insulation Resistance	Set Voltage: 500 ± 50 V; between the insulated portions, or between ground as specified.	Resistance ≥ 500 M ohm or directive material specification ≥ 500 M ohm	N/A
C6	Contact Resistance	Air Temp: 26°C ; measured with test equipment	Directive material specification	N/A
M1	Vibration	GB / T2423.48-2008 Amplitude: 0.03 inch (1.5mm); Freq: 20 to 80 to 20 Hz 3 directions; 2 hours for each direction	1. No Visual Damage 2. Frequency Tol. $\leq 5\%$	PASS
M2	Random Drop	GB / T2423.8-1995 Single: Height: 1.0 Meter; 3 directions; 1 time for each direction	1. No parts separated、fracture 2. Frequency Tol. $\leq 5\%$	PASS
		Packing: Height: 0.76 Meter; 1 corner, 3 edges, 6 surface		PASS
		Antenna+Machine: Height: 0.76 Meter; 1 corner, 3 edges, 6 surface.		N/A
M3	Solderability	GB / T2423.28-2005	Tin evenly on full	N/A

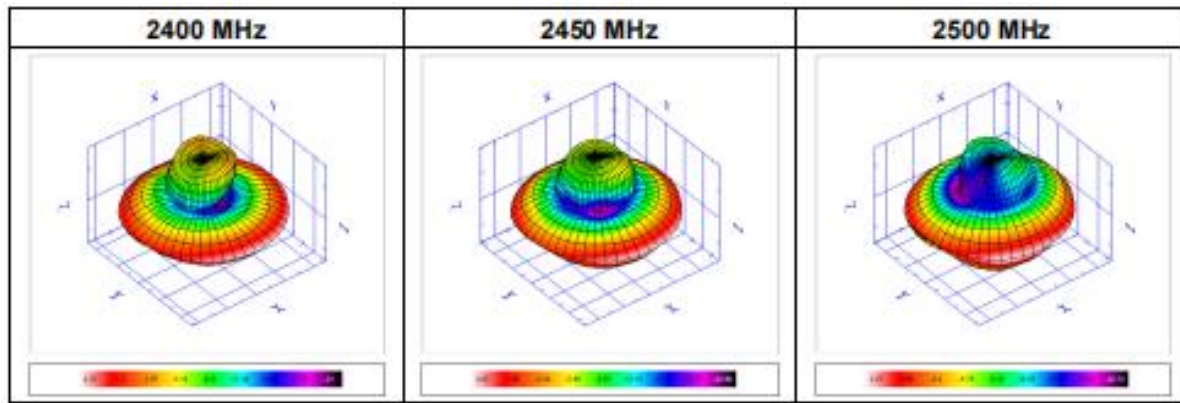
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		Temp: 260±5°C;Duration: 5 seconds		
M4 P	ull Test	Holding with individual specification; force applied to axis of terminal .	Directive DUT specification Frequency Tol.≤5%	PASS
M5 T	o rque Test	Holding with individual specification; applied clockwise and counterclockwise to the axis of terminal	Directive DUT specification Frequency Tol.≤ 5%	N/A
M6 D	imension	Inspection of dimension, color, material, package, surface process.	Directive DUT specification	PASS
E1 W	aterproof	With Reference to IEC 60529 // IP Code Definition	Directive DUT specification	N/A
E2	Salt Spray	GB / T 2423.17-2008 Temp: 35°C; RH: ≥ 95%; NaCl solution: ≥ 5%;Time: 24H	No Visual Damage Frequency Tol.≤5%	PASS
E3 T	emperature and Humidity Chamber	GB / T 2423.3-2006 Temp: 80°C / 12 H; -40°C / 12H RH: ≥ 90 %; Time: 24H	After 2 Hours Recovery No Visual Damage Frequency Tol.≤5%	PASS
E4 T h	ermal Shock	GB / T 2423.22 - 2008 40°C (30 minutes) to + 80°C (30 minutes); Cycles: 24	After 2 Hours Recovery No Visual Damage Frequency Tol.≤5%	PASS
E5 A	ging test	GB / T 2423.2 - 2008 Temp: 80°C; Time: 24 hours	After 2 Hours Recovery No Visual Damage Frequency Tol.≤5%	PASS
E6 H	igh Temp.	Temp. 270±10°C; Times: 120 seconds	No Visual Damage	N/A
R1	RoHS	With Reference to IEC 62321:2008 with flow chart	Directive RoHS 2011/65/EU	PASS
R2	PFOS	With Reference to USA EPA 3550C:1996 by LC/MS	Directive RoHS 2006/122/EC	PASS

4. Antenna - S Parameter Test Data



5. Antenna - Radiation Pattern Test Data

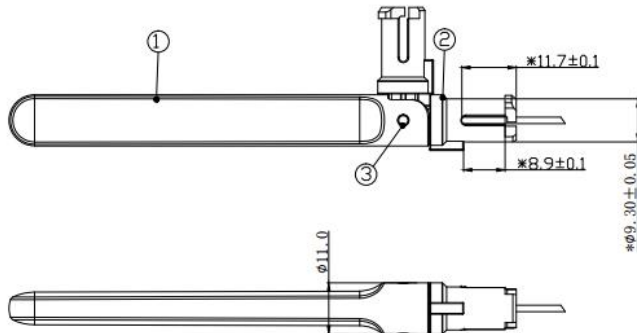


Frequency	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
TRP (dBm)	-1.64	-1.45	-1.31	-1.44	-1.45	-1.21	-1.65	-1.51	-1.53	-1.63	-1.56
Peak EIRP (dBm)	4.37	4.64	4.72	4.37	4.64	4.87	4.6	4.63	4.29	4.3	4.37
NHPRP +/- 45 (degree)	-2.06	-1.8	-1.7	-1.8	-1.79	-1.57	-1.95	-1.78	-1.81	-1.87	-1.8
NHPRP +/- 30 (degree)	-2.27	-2.03	-1.88	-2.04	-2	-1.75	-2.19	-1.97	-2.01	-2.12	-1.97
E-Theta Peak Gain (dBi)	-18.09	-15.22	-15.93	-15.27	-13.52	-13.63	-16.36	-15.62	-15.33	-15.22	-15.08
E-Phi Peak Gain (dBi)	4.34	4.63	4.71	4.35	4.64	4.85	4.58	4.61	4.26	4.3	4.34
E-Total Peak Gain (dBi)	4.37	4.64	4.72	4.37	4.64	4.87	4.6	4.63	4.29	4.3	4.37

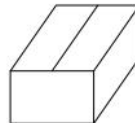
RoHS

Technical drawing of the assembled device. The drawing shows a side view of the assembly. Key dimensions and features are labeled:

- A vertical dimension of 70 is shown on the left side.
- A horizontal dimension of $\varnothing 90.5 \pm 2$ is indicated for the main body.
- A horizontal dimension of 109.2 ± 3 is indicated for the main body length.
- A horizontal dimension of $220 \pm 5 \text{ mm}$ is indicated for the total length.
- Callout 5 points to the internal thread of the main body.
- Callout 4 points to the end of the main body.
- Callout 6 points to the end of the cable.



Packing:100PCS/Bags



2000PCS/Boxes

1.ELECTRICAL PROPERTIES:

- 1.1 Frequency Range.....2.4-2.5GHz
1.2 Impedance.....50 Ohm Nominal
1.3 VSWR.....2.0(Max)
1.4 Gain:2.5±0.5dBi

2. These Products are in conformity with ROHS 2.0 ;

3. With "*" for the key size.

CUSTOMER'S SIGNATURE

XXX.	±2.0	APPROVED
XX.	±1.0	
X.	±0.5	CHECKED
.X	±0.3	
.XX	±0.2	DRAWING
		

CUSTOMER:	
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PART NO

PART NAME:	2.4G WIFI Duck tongue antenna black line
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Q	M	P/NO:
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REV	UNIT	FILE
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REV	UNIT	FILE
X1	mm	SHEE

X1	PM	SHEET	171
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