specification

Customer :	昊一源
Customer P/N:	
Part Name:	DIRECT CONNECTED EXTERNAL ANTENNA
HJ P/N:	3D6701BK00-001
Spec Description :	DUAL BAND ANTENNA,G67 BLACK,DOUBLE COPPER TUBE,RP-SMA PLUG+047 CABLE,L=112mm
Prepared Date:	2024/2/19

Signature			
Customer		Supplier	
Confirmed by		Prepared by	S.He
Approved by		Checked by	XIU HE
		Approved by	LIU FU YONG

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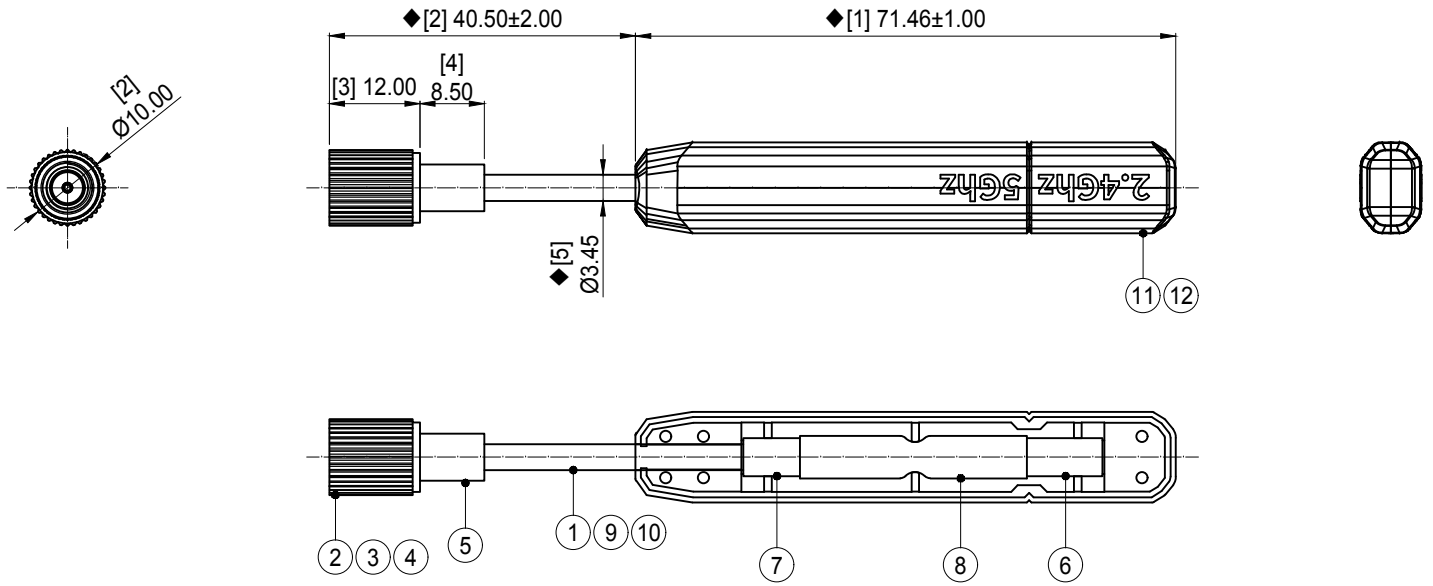
DONGGUAN HUANGJIE COMMUNICATION TECHNOLOGY CO., LTD.

东莞市皇捷通讯科技有限公司

CONTENTS

H431	REV.	RELEASE AND CHANGE SUMMARY	DATE
	X1	INITIAL DESIGN AND FIRST RELEASE	2024.01.29



NOTES：

1 ASSEMBLY REQUIREMENTS：THE ANTENNA SHELL ADOPTS ULTRASONIC TECHNOLOGY.

2 ELECTRICAL SPECIFICATION：100% TESTING USING A VECTOR NETWORK ANALYZER.
CHARACTERISTIC IMPEDANCE: 50Ω；OPERATING FREQUENCY:2.4GHz-2.5GHz,
5.15GHz-5.85GHz；VSWR: 2.0 MAX.。

3 DIMENSION INSPECTION:
[*],FAI INSPECTION ITEM; ◆,QIP INSPECTION ITEM; ★,CPK INSPECTION ITEM.

4 APPEARANCE INSPECTION:
VISUAL INSPECTION; NO TRANSFORM,NO CRACK, NO STAIN AND NO BURR.

5 PACKING SPECIFICATION: 50/BAG.。

6 ENVIRONMENTAL REQUIREMENTS: RoHS COMPLIANT.

BOM

No.	PART NUMBER	PART NAME AND DESCRIPTION	Q'TY
12	2SBKG6701	HOUSING：L71.46*W12.00,WITHOUT PILLARS,BLACK	1
11	2SBKG6700	HOUSING：L71.46*W12.00,THERE ARE PILLARS,BLACK	1
10	2TA032BK0-050	H.S. TUBE：Ø3.20*L50.00,SBRS-3XGF,BLACK	1
9	2TA020BK0-045	H.S. TUBE：Ø2.00*L45.00,125H2,BLACK	1
8	2TA050BK0-030	H.S. TUBE：Ø5.00*L30.00,125H2,BLACK	1
7	2YG239	COPPER TUBE：Ø5.00*L20.50*Ø1.35,BRASS	1
6	2YG009	COPPER TUBE：Ø5.00*L23.00*Ø0.60,BRASS	1
5	2YM023	SR：PVC,45P,BLACK	1
4	2LC15PF901-4	SMA HOUSING：Ø10.00*L12.00,POM,BLACK	1
3	2LC15PF901-5	SMA PIN：Ø1.50*L7.80,BRASS,Au-PLATED	1
2	2LC15PF901-2	SMA PLUG：Ø8.50*L15.10,BRASS,Ni-PLATED	1
1	2C5R04711BK1	COAXIAL CABLE：047,50Ω,OD1.60,BLUE	1

GENERAL TOLERANCE:
UNLESS OTHERWISE SPECIFIED
LINEAR:
0.5 < L ≤ 6 ± 0.05
6 < L ≤ 30 ± 0.10
30 < L ≤ 120 ± 0.20
ANGULAR:
0 < L ≤ 10 ± 1°30'
10 < L ≤ 50 ± 1°00'
50 < L ≤ 120 ± 0°30'

FILE TYPE: PRODUCT DRAWING
DRA./DATE: *S.He 24.01.29*
CHE./DATE:
APP./DATE:
FILE FORM: HJ-QR-E-03 22.09.01

Dongguan HUANGJIE Communication Technology Co., Ltd.
东莞市皇捷通讯科技有限公司

TITLE: RF ANTENNA COMPONENTS
DUAL BAND ANTENNA,G67 BLACK,DOUBLE
COPPER TUBE,RP-SMA PLUG+047 CABLE,L=112mm

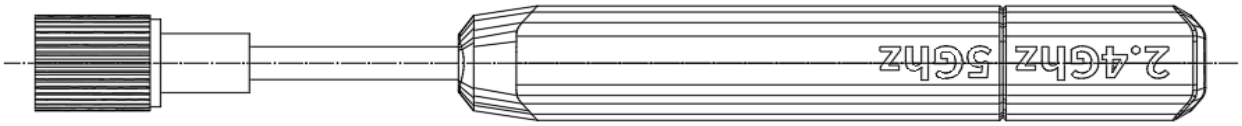
CODE: 3D6701BK00-001

SIZE:	UNIT:	PRO.:	SCALE:	PAGE:
A4	mm	3rd	1:1	1/1

0 10 20

P/N： 3D6701BK00-001

DESCRIPTION： DUAL BAND ANTENNA,G67 BLACK,DOUBLE COPPER TUBE,RP-SMA PLUG+047 CABLE,L=112mm



ELECTRICAL PERFORMANCE

1	NOMINAL IMPEDANCE：	50Ω
2	FREQUENCY RANGE：	2.4~2.5GHz; 5.15~5.85GHz
3	VSWR：	2.4~2.5GHz @ 2.0 MAX.; 5.15~5.85GHz @ 2.0 MAX.
4	GAIN：	2.4~2.5GHz @ 3.78dBi ; 5.15~5.25GHz @ 3.77dBi ; 5.7-5.85GHz@3.32dBi
5	POLARIZATION MODE：	VERTICAL
6	RADIATION DIRECTION：	OMNIDIRECTIONAL

MECHANICAL PROPERTIES

1	ANTENNA SIZE：	OD10*112mm
2	ANTENNA HOUSING：	BLACK
2	ANTENNA CONNECTOR：	RP-SMA PLUG

ENVIRONMENTAL SPECIFICATION

1	OPERATION TEMPERATURE：	-40C° 至 +60C°
2	CORROSION：	SALT WATER DENSITY:(5±1)%,TEMPERATUR:(35±3)°C,48HRS.
3	STORAGE ENVIRONMENT:	TEMPERATURE: -40C° ~ +85C°; HUMIDITY: 20% ~ 75%
4	MEMORY CYCLE：	AT LEAST 6 MONTHS IF CONDITIONS ARE MET.
5	ENVIRONMENTAL：	RoHS COMPLIANT.

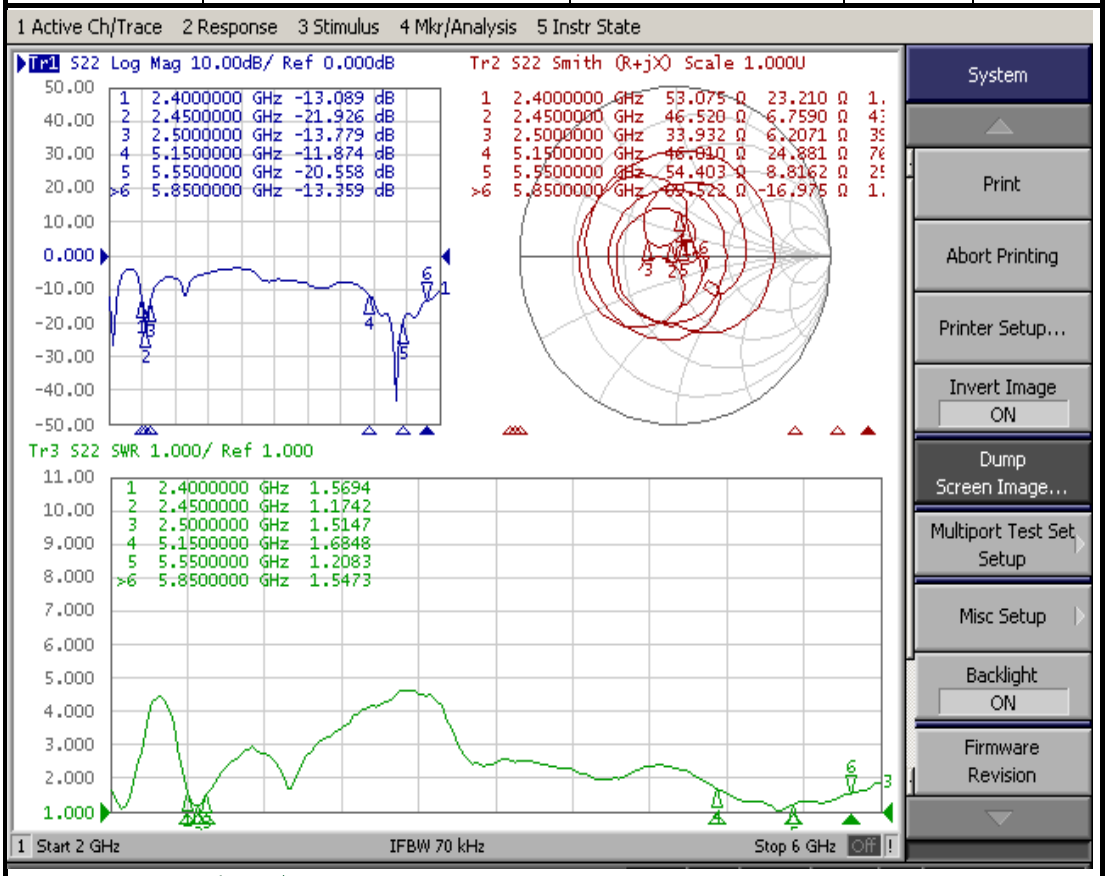
DURABILITY SPECIFICATION

1	DURABILITY：	RP-SMA PLUG: 500 CYCLES
2	SERVICE LIFE：	UNDER THE ABOVE ELECTRICAL, MECHANICAL, AND ENVIRONMENTAL PERFORMANCE CONDITIONS, THE SERVICE LIFE IS 10 YEARS

Antenna Electrical Characteristic Test Report

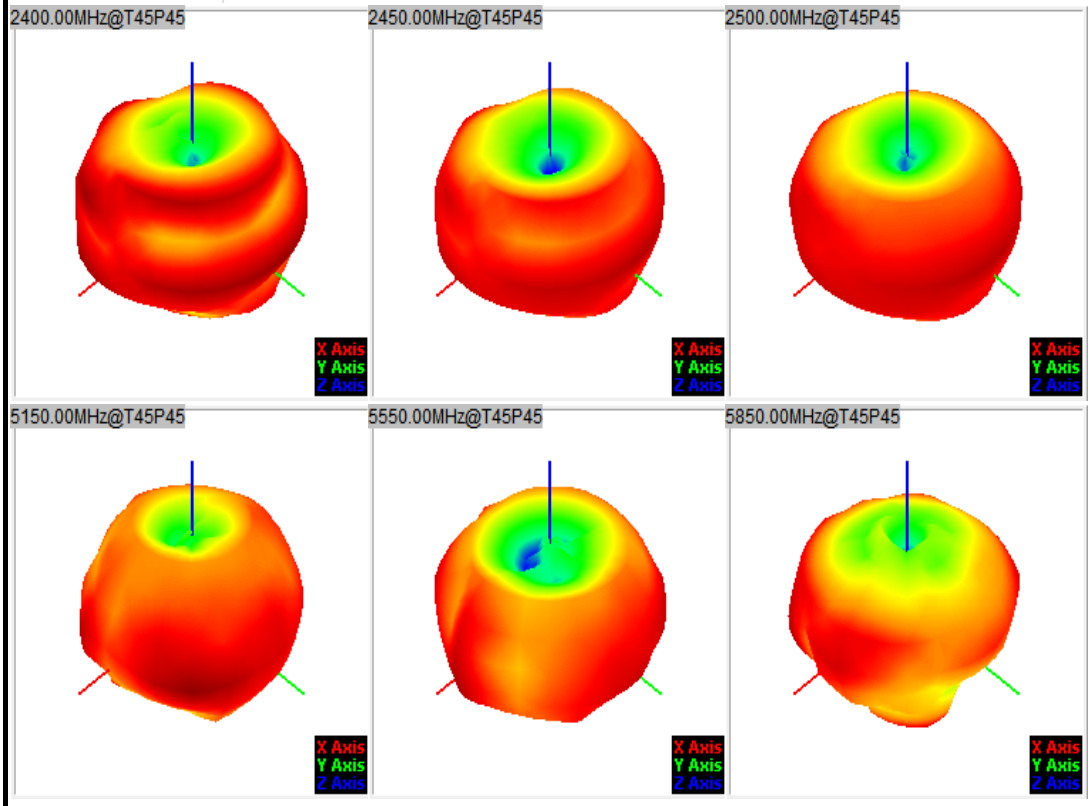
Document number:HJ-QR-Q-22 Rev:A0

Part Number:	3D6701BK00-001	Item	Spec	Judge
Part Name:	DUAL BAND ANTENNA,GU7 BLACK,DOUBLE COPPER TUBE,RP-SMA PLUG+047 CABLE L=112mm	VSWR	≤2.0	pass
Test Equipment	Network analyzer/ microwave darkroom	Characteristic impedance	50Ω	pass
Quantity	5pcs			
Test Date	2024/2/19			



Frequency ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0	5150.0	5200.0	5250.0
Point Values														
Ant. Port Input Pwr. (dBm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot. Rad. Pwr. (dBm)	-1.10	-1.03	-1.03	-0.63	-0.53	-0.80	-1.03	-1.07	-0.69	-0.64	-0.77	-1.22	-1.24	-1.43
Peak EIRP (dBm)	2.96	3.24	3.24	3.70	3.78	3.52	3.20	3.07	3.33	3.32	3.10	3.77	3.55	2.88
Directivity (dBi)	4.06	4.26	4.27	4.34	4.31	4.32	4.23	4.13	4.02	3.96	3.87	4.98	4.78	4.31
Efficiency (dB)	-1.10	-1.03	-1.03	-0.63	-0.53	-0.80	-1.03	-1.07	-0.69	-0.64	-0.77	-1.22	-1.24	-1.43
Efficiency (%)	77.70	79.00	78.90	86.40	88.40	83.20	78.90	78.20	85.30	86.20	83.70	75.60	75.20	71.90
Gain (dBi)	2.96	3.24	3.24	3.70	3.78	3.52	3.20	3.07	3.33	3.32	3.10	3.77	3.55	2.88
NHPRP ±Pi/4 (dBm)	-2.25	-2.05	-1.97	-1.49	-1.33	-1.53	-1.71	-1.70	-1.30	-1.22	-1.33	-2.30	-2.30	-2.40
NHPRP ±Pi/6 (dBm)	-3.41	-3.15	-3.02	-2.51	-2.31	-2.48	-2.64	-2.60	-2.19	-2.10	-2.21	-3.45	-3.38	-3.42
NHPRP ±Pi/8 (dBm)	-4.19	-3.92	-3.79	-3.26	-3.06	-3.22	-3.37	-3.33	-2.92	-2.84	-2.96	-4.21	-4.08	-4.07
Upper Hem. PRP (dBm)	-3.47	-3.29	-3.25	-2.79	-2.70	-2.98	-3.24	-3.28	-2.91	-2.81	-2.91	-3.23	-3.38	-3.85
Lower Hem. PRP (dBm)	-4.85	-4.94	-5.00	-4.70	-4.59	-4.84	-5.01	-5.05	-4.67	-4.70	-4.88	-5.51	-5.33	-5.13
Upper Hem. PRP (%)	44.96	46.90	47.32	52.54	53.65	50.38	47.38	46.96	51.18	52.34	51.16	47.50	45.93	41.20
Lower Hem. PRP (%)	32.71	32.06	31.59	33.86	34.76	32.80	31.52	31.26	34.09	33.90	32.51	28.09	29.28	30.71

FEITUKEJI														
Frequency ID	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**
Frequency (MHz)	**5200.0**	**5250.0**	**5300.0**	**5350.0**	**5400.0**	**5450.0**	**5500.0**	**5550.0**	**5600.0**	**5650.0**	**5700.0**	**5750.0**	**5800.0**	**5850.0**
Point Values														
Ant. Port Input Pwr. (dBm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot. Rad. Pwr. (dBm)	**-1.24**	**-1.43**	**-1.60**	**-1.45**	**-1.56**	**-1.39**	**-1.27**	**-1.65**	**-1.71**	**-1.34**	**-1.12**	**-1.51**	**-1.59**	**-1.71**
Peak EIRP (dBm)	**3.55**	**2.88**	**2.78**	**2.62**	**2.64**	**3.42**	**3.28**	**2.80**	**2.85**	**3.15**	**3.24**	**3.08**	**3.16**	**3.32**
Directivity (dBi)	4.78	4.31	3.89	4.07	4.20	4.81	4.55	4.44	4.56	4.49	4.36	4.59	4.75	5.02
Efficiency (dB)	**-1.24**	**-1.43**	**-1.60**	**-1.45**	**-1.56**	**-1.39**	**-1.27**	**-1.65**	**-1.71**	**-1.34**	**-1.12**	**-1.51**	**-1.59**	**-1.71**
Efficiency (%)	**75.20**	**71.90**	**69.10**	**71.60**	**69.90**	**72.60**	**74.70**	**68.50**	**67.40**	**73.50**	**77.30**	**70.60**	**69.40**	**67.50**
Gain (dBi)	3.55	2.88	2.78	2.62	2.64	3.42	3.28	2.80	2.85	3.15	3.24	3.08	3.16	3.32
NHPRP ±Pi/4 (dBm)	-2.30	-2.40	-2.51	-2.27	-2.34	-2.11	-1.93	-2.27	-2.33	-1.95	-1.74	-2.11	-2.16	-2.34
NHPRP ±Pi/6 (dBm)	-3.38	-3.42	-3.54	-3.26	-3.34	-3.02	[illegible]	-3.16	-3.23	-2.86	-2.67	-3.03	-3.06	-3.31
NHPRP ±Pi/8 (dBm)	-4.08	-4.07	-4.17	-3.86	-3.99	-3.61	-3.45	-3.76	-3.85	-3.52	-3.37	-3.72	-3.77	-4.11
Upper Hem. PRP (dBm)	-3.38	-3.85	-4.10	-4.09	-4.18	-4.14	-4.00	-4.37	-4.40	-3.97	-3.70	-4.12	-4.12	-4.25
Lower Hem. PRP (dBm)	-5.33	-5.13	-5.19	-4.86	-5.00	-4.68	-4.58	-4.96	-5.07	-4.77	-4.61	-4.96	-5.13	-5.24
Upper Hem. PRP (%)	45.93	41.20	38.89	38.95	38.22	38.59	39.85	36.58	36.28	40.12	42.67	38.75	38.72	37.61
Lower Hem. PRP (%)	29.28	30.71	30.24	32.67	31.65	34.03	34.81	31.88	31.13	33.35	34.60	31.88	30.66	29.91



Checker: XIU HE **Tester: S.He**