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

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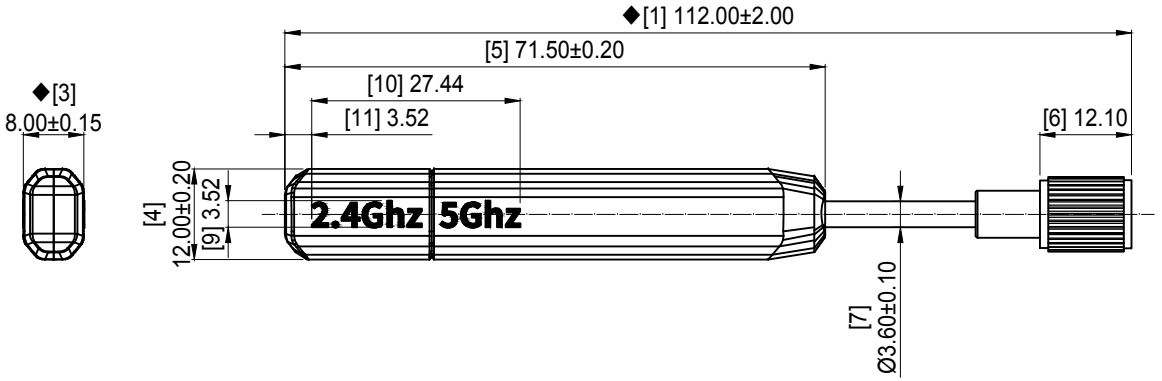
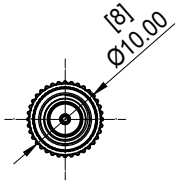
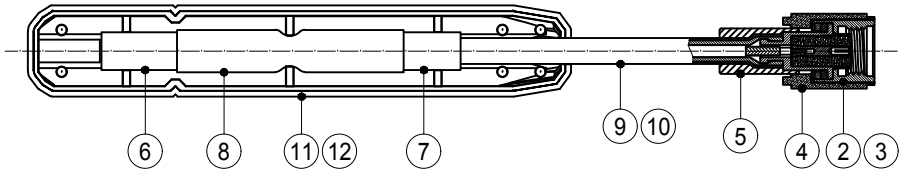
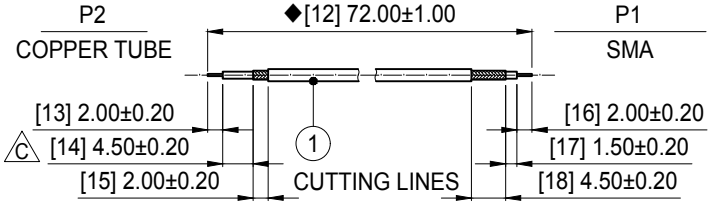
H431	REV.	RELEASE AND CHANGE SUMMARY	DATE
	A	FIRST RELEASE	2024.03.09
	B	SMA Ni-PLATED->Au-PLATED	2024.04.09
	C	MODIFY THE STRIPPING SIZE	2024.04.13









NOTES:
1 ELECTRICAL CHARACTERISTICS: 100% TESTING USING A VECTOR NETWORK ANALYZER.
NOMINAL IMPEDANCE: 50Ω; FREQUENCY RANGE:2.4GHz-2.5GHz, 5.15GHz-5.85GHz;
VSWR: 2.0 MAX.。
2 DIMENSION INSPECTION:
[*],FAI INSPECTION ITEM; ◆,QIP INSPECTION ITEM; ★,CPK INSPECTION ITEM.
3 APPEARANCE INSPECTION:
VISUAL INSPECTION; NO TRANSFORM,NO CRACK, NO STAIN AND NO BURR.
4 PACKING SPECIFICATION: 50PCS/BAG.
5 ENVIRONMENTAL REQUIREMENTS: RoHS COMPLIANT.

No.	PART NUMBER	PART NAME AND DESCRIPTION	Q'TY
12	2SBKG6703	SLEEVE：L71.50*W12.00,COLUMN,PC+ABS,BLACK	1
11	2SBKG6702	SLEEVE：L71.50*W12.00,HOLE,PC+ABS,BLACK	1
10	2TA032BK1-050	H.S. TUBE：Ø3.20*L50.00,SBRS-3XGF,BLACK	1
9	2TA030BK0-035	H.S. TUBE：Ø3.00*L35.00,125H2,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 SLEEVE：Ø10.00*L12.00,POM,BLACK △B	1
3	2LC15PF901-5	SMA PIN：Ø1.50*L7.80,BRASS,Au-PLATED	1
2	2LC15PF902-8	SMA PLUG：Ø8.50*L15.10,BRASS,Au-PLATED △B	1
1	2C5R04711BK1	COAXIAL CABLE：047,50Ω,OD1.60,BLUE	1

BOM

△B △B △B △B

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 24.03.09
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 ASSEMBLY
DUAL BAND ANTENNA,G67 BLACK,
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 ; 5.15~5.85GHz @ 3.77dBi
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.

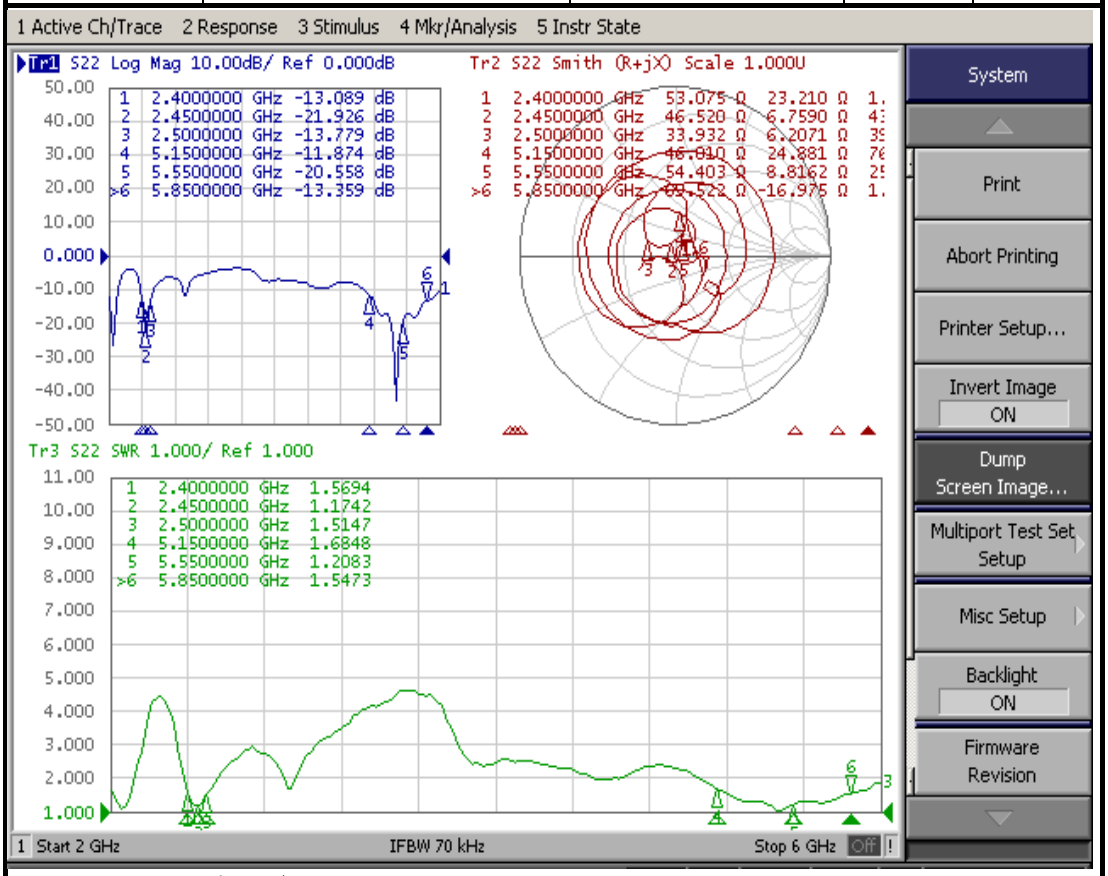
DURABILITY SPECIFICATION

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

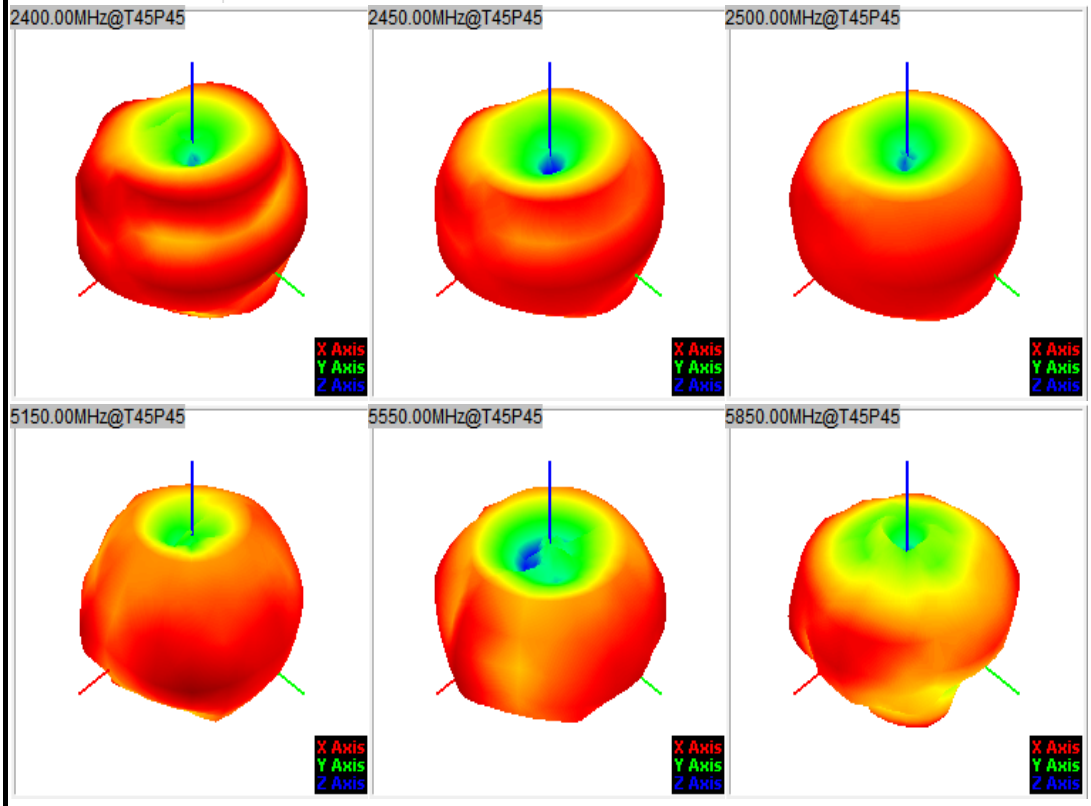
Document number:HJ-QR-Q-22 Rev:A0

Part Number:	3D6701BK00-001	Item	Spec	Judge
Part Name:	DUAL BAND ANTENNA,G67 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**