

样品承认书

APPROVAL SHEET

客户名称 Customer Name	Shenzhen Hollyland Technology Co.,Ltd						
昊一源料号/项目 PN/Project	3001240187						
供应商名称 Supplier Name	DONGGUAN HUANGJIE COMMUNICATION TECHNOLOGY CO., LTD.						
供应商物料名称 Supplier Material Name	Direct-connect external antenna _2.4~2.5GHz/5.15~5.85GHz_2.4GHz@3.78dBi_5GHz@3.77dBi_SMA male connector (gold-plated)_vertical_black_HuaJie Communication_OD10*112mm_Bulk_optimized with rubber heat shrink tubing_RoHS						
供应商物料型号 Supplier Material Type	3D6701BK00-001						
产品环保要求 Environment Requirement	.RoHS + REACH + HF: Compliant with all the control items stipulated in Haoyiyuan's "Hazardous Substance Limitation Standards"						
送样日期 Delivery Date	2024.09.27						
承认书版本 Rev	A						
Supplier	工程 Engineer	制造 Manufacture	品质 Quality	批准 Approve			
地址 Address : No. 3, Taihe Road, Daliuling Industrial Zone, Quantang Village, Liabu Town, Dongguan City							
电话 Telephone : 0769-83328111							
传真 Fax : 0769-83327688							
Hollyland	结构 MD	硬件 HW	包装 Pack	软件 SW	ID	采购 purchase	SQE

东莞市皇捷通讯科技有限公司

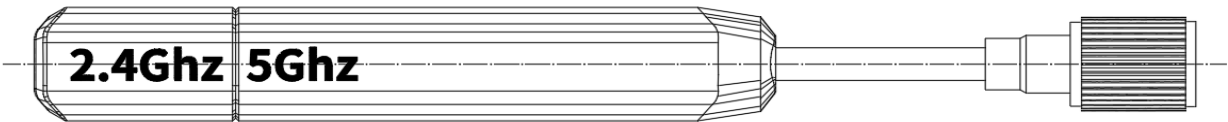
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Product part number : 3D6701BK00-001

Product Name and Specifications :

Dual-band direct-connect external antenna, G67 black, copper tube + copper tube structure, SMA male connector + 047 wire, product length L = 112mm



behaviour of electricity

1	characteristic impedance :	50Ω
2	operating frequency:	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:	vertical
6	directivity:	omnibearing

mechanical property

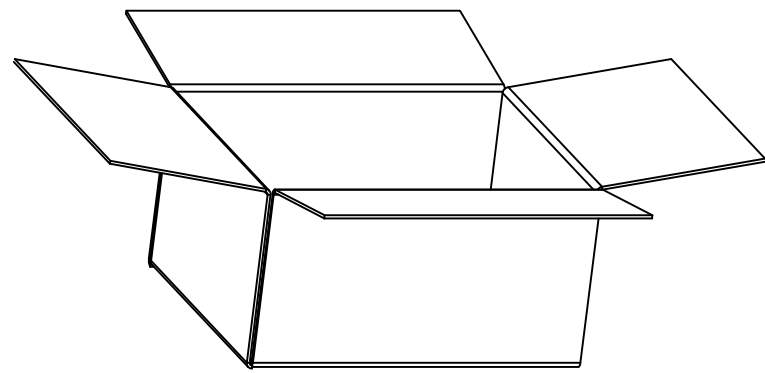
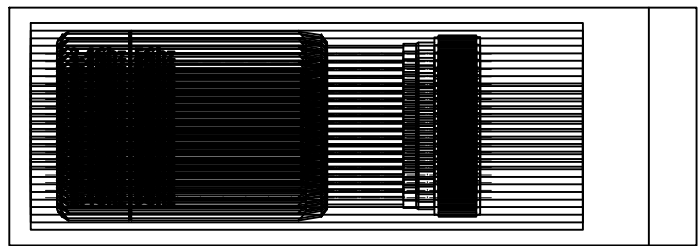
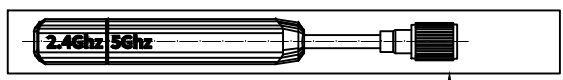
1	Antenna size	OD10*112mm
2	Antenna housing	Black
2	Antenna connector	RP-SMA PLUG

environmental performance

1	operating frequency:	-40℃ 至 +60℃
2	salt spray test :	48 hours, without any adverse effects such as oxidation corrosion or damage
3	storage environment:	Temperature: -40℃ to +60℃; Humidity: 20% to 75%
4	storage cycle :	Under the above-mentioned storage environment conditions, the optimal storage period is 6 months.
5	environmental protection standard :	Compliant with the requirements of the EU RoHS Directive

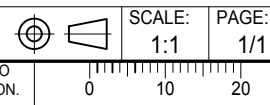
endurance quality

1	mechanical endurance :	RP-SMA PLUG: 500次
2	service life :	Under the conditions of meeting the above electrical performance, mechanical properties and environmental performance, the service life is 10 years.
3	warranty period :	Under the conditions of meeting the above electrical performance, mechanical properties and environmental performance, the warranty period is 3 years.



- 1. 50PCS/BAG.
- 2. 800PCS/BOX.
- 3. LABEL THE MATERIALS PROPERLY.
- 4. PUT IN CARDBOARD: 2PCS/BOX.
- 5. SEAL THE BOX IN AN "工" SHAPE.

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: PACKAGE DRAWING	Dongguan HUANGJIE Communication Technology Co., Ltd. 东莞市皇捷通讯科技有限公司			
	DRA./DATE: S.He 24.03.09	TITLE: FINISHED PRODUCT PACKAGING SPECIFICATIONS			
	CHE./DATE:	CODE: 3D6701BK00-001			
	APP./DATE:	SIZE: A4	UNIT: mm	PRO.: 3rd	SCALE: 1:1
FILE FORM: HJ-QR-E-03 22.09.01		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO HUANGJIE AND SHOULDN'T BE USED WITHOUT WRITTEN PERMISSION.		PAGE: 1/1	

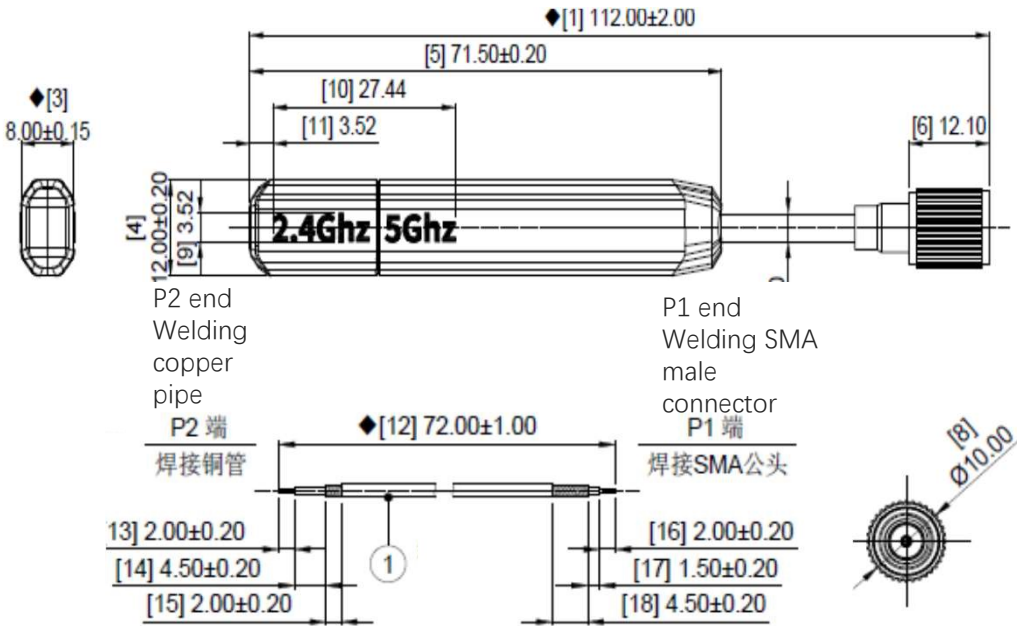


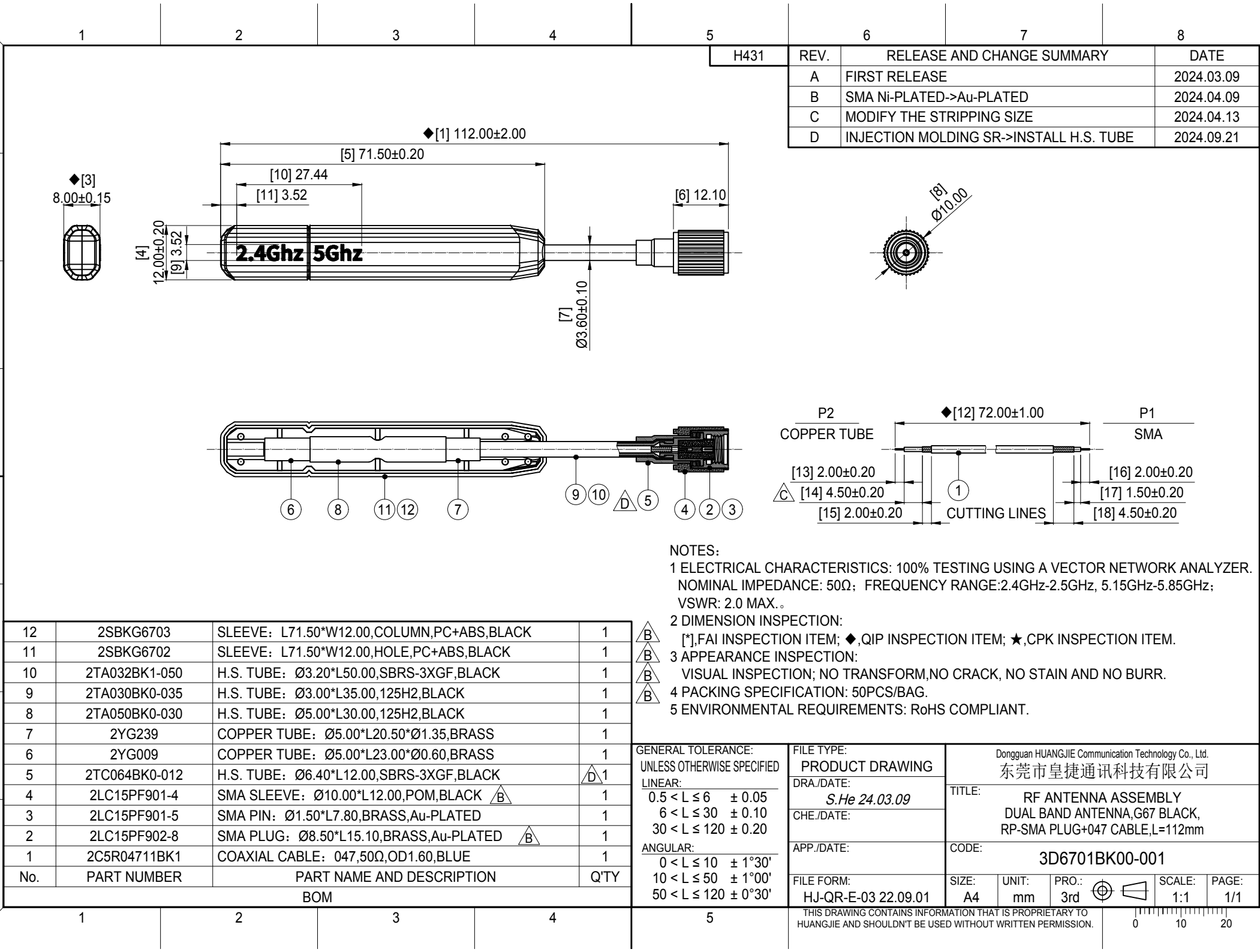
Antenna
type

External Antenna

Unit

mm





东莞市皇捷通讯科技有限公司 DONGGUAN HUANGJIE COMMUNICATION TECHNOLOGY CO., LTD.			BOM			HJ CODE	3D6701BK00-001	CUSTOM CODE		
						TITLE	RF ANTENNA ASSEMBLY DUAL BAND ANTENNA,G67 BLACK,RP-SMA PLUG+047 CABLE,L=112mm			
No.	PART NUMBER	PART NAME AND DESCRIPTION						UNIT	DOSAGE	BASE NUMBER
1	2C5R04711BK1	COAXIAL CABLE: 047,50Ω,OD1.60,BLUE						M	0.072	1
2	2LC15PF902-8	SMA PLUG: Ø8.50*L15.10,BRASS,Au-PLATED						PCS	1	1
3	2LC15PF901-5	SMA PIN: Ø1.50*L7.80,BRASS,Au-PLATED						PCS	1	1
4	2LC15PF901-4	SMA SLEEVE: Ø10.00*L12.00,POM,BLACK						PCS	1	1
5	2TC064BK0-012	H.S. TUBE: Ø6.40*L12.00,SBRS-3XGF,BLACK						PCS	1	1
6	2YG009	COPPER TUBE: Ø5.00*L23.00*Ø0.60,BRASS						PCS	1	1
7	2YG239	COPPER TUBE: Ø5.00*L20.50*Ø1.35,BRASS						PCS	1	1
8	2TA050BK0-030	H.S. TUBE: Ø5.00*L30.00,125H2,BLACK						PCS	1	1
9	2TA030BK0-035	H.S. TUBE: Ø3.00*L35.00,125H2,BLACK						PCS	1	1
10	2TA032BK1-050	H.S. TUBE: Ø3.20*L50.00,SBRS-3XGF,BLACK						PCS	1	1
11	2SBKG6702	SLEEVE: L71.50*W12.00,HOLE,PC+ABS,BLACK						PCS	1	1
12	2SBKG6703	SLEEVE: L71.50*W12.00,COLUMN,PC+ABS,BLACK						PCS	1	1
REVISION HISTORY							ENG./DATE	S.He	2024.09.21	
							CHE./DATE			
							APP./DATE			
	CHANGE ORDER NUMBER	REV.	RELEASE AND CHANGE SUMMARY			DRAFTER				

NOTE: THE SIGNATURE AND SEAL OF THE ISSUING SEAL ARE CONSIDERED EFFECTIVE

CHANGE ORDER NUMBER:QN-EE-34 REV. : B-0

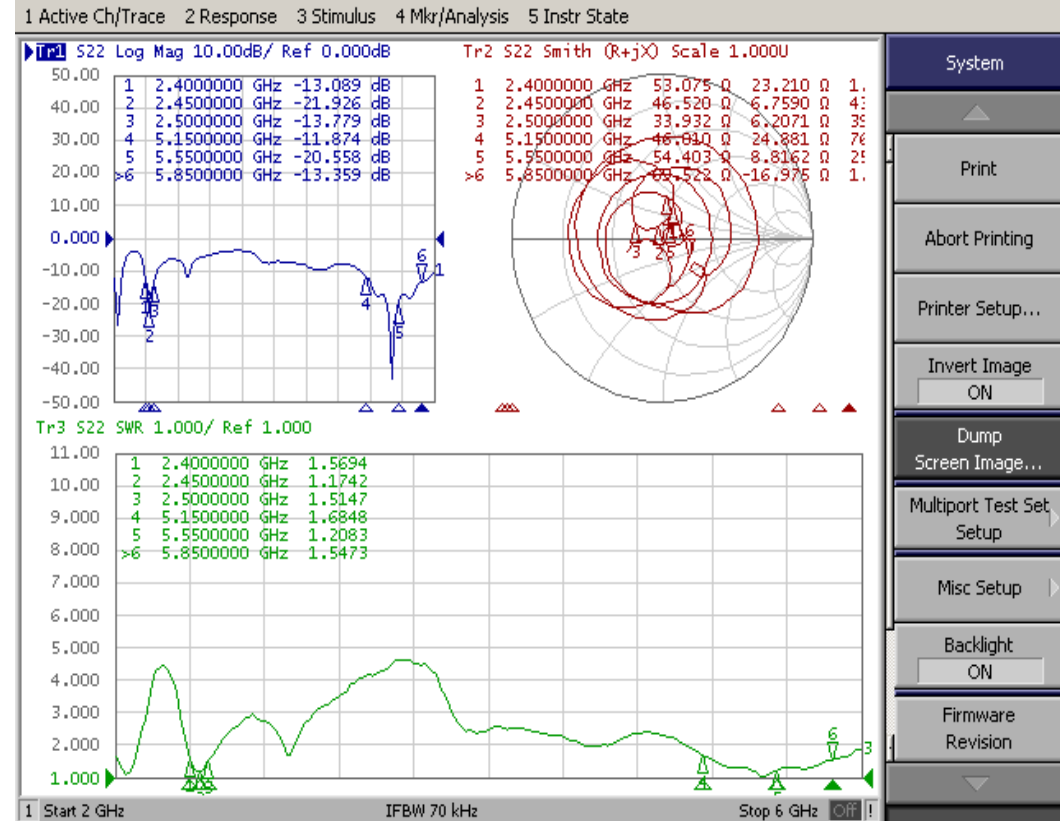


天线电气特性测试报告

Antenna Electrical Characteristic Test Report

文件编号:HJ-QR-Q-22 Rev:A0

产品料号 Part Number:	3D6701BK00-001	测试项目 Item	规格 Spec	结果判定 Judge
产品名称 Part Name:	双频直连式外置天线,G67黑色,铜管+铜管结构,SMA公头母针+047线,产品长L=112mm	VSWR 驻波比	≤2.0	pass
测试设备 Test Equipment	网络分析仪/微波暗室	Characteristic impedance 特性阻抗	50Ω	pass
数量 Quantity	5pcs			
测试日期 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

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	-3.16	-3.23	-2.86	-2.67	-3.03	-3.06	-3.31	-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

