

SPECIFICATION FOR APPROVAL

CUSTOMER	荣业佳
CUS. CODE	
CUS. MODEL	
HJ-Tech CODE	3N0401BK-085
PRO. NAME	RF ANTENNA COMPONENT
SPECIFICATION DESCRIPTION	WiFi BUILT IN ANTENNA, OD1.13 BLACK, P1 PORT FPC, P2 PORT MHF-1-PLUG, L=95mm
DATE	2025/10/10

SUPPLIER		
PREPARED	CHECKER	APPROVER
S. He	XIU HE	LFY

CUSTOMER		
TRANSCTOR	CHECKER	APPROVER

Address: Quantang Daxiandi Industrial Zone, Liaobu Town, Dongguan City, Guangdong Province

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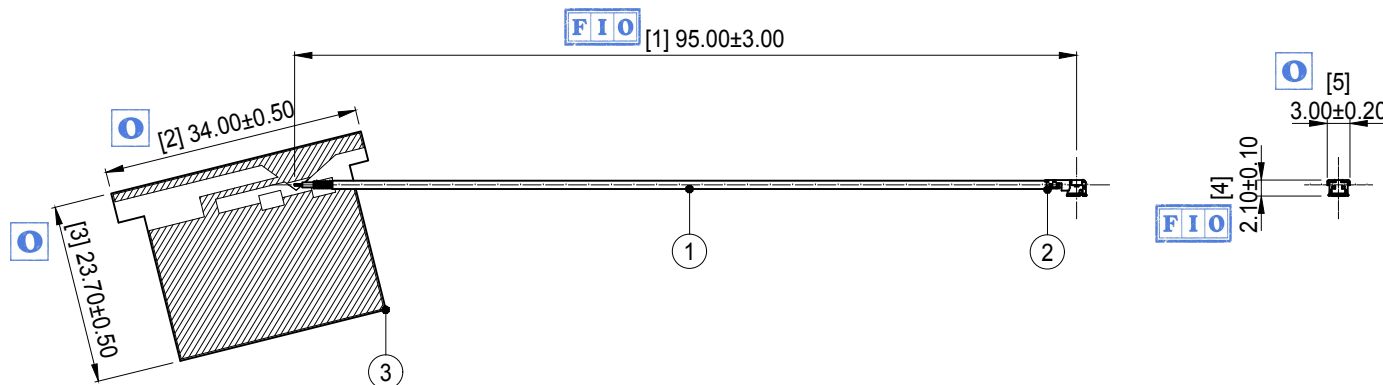
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2025.10.11
HJG

量产图

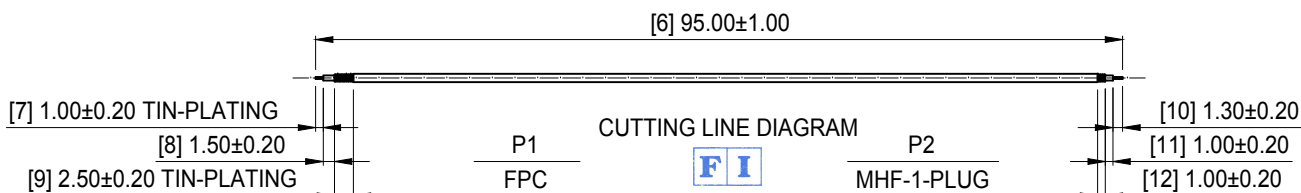
荣业佳

REV.	RELEASE AND CHANGE SUMMARY	DATE
A	INITIAL RELEASE	2024.01.03
B	CABLE GRAY -> BLACK	2025.10.11

P1



P2



NOTES:

- ELECTRICAL CHARACTERISTICS: NOMINAL IMPEDANCE: 50Ω;
FREQUENCY RANGE: 2.4~2.5GHz.
- DIMENSION INSPECTION:
[F], FAI; [I], INSPECTION; [O], SHIPMENT INSPECTION; [Cpk], [SPC], STATISTICAL CONTROL PROJECT.
- APPEARANCE INSPECTION:
VISUAL INSPECTION; NO TRANSFORM, NO CRACK, NO STAIN AND NO BURR.
- PACKING SPECIFICATION: 50PCS/BALE, 2BALE/BAG=100PCS/BAG.
- ENVIRONMENTAL REQUIREMENTS: RoHS COMPLIANT.

3	2YF136	FPC: L34.00*W23.70, BLACK	1
2	2LM10P113210	RF: MHF-1-PLUG FOR OD1.13 CABLE	1
1	2C5M11312BK1	COAXIAL CABLE: OD1.13, 50Ω, BLACK	1
No.	PART NUMBER	PART NAME AND DESCRIPTION	Q'TY

BOM

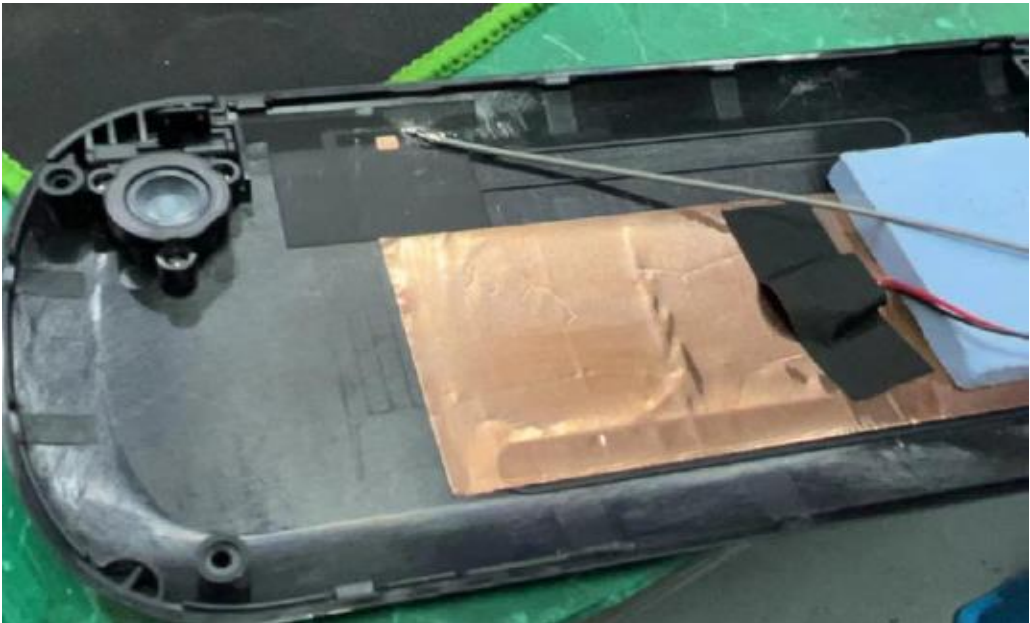
GENERAL TOLERANCE: UNLESS OTHERWISE SPECIFIED LINEAR: 0.5 < L ≤ 6 ± 0.05 6 < L ≤ 30 ± 0.10 30 < L ≤ 120 ± 0.20 ANGULAR: 0 < L ≤ 10 ± 1°30' 10 < L ≤ 50 ± 1°00' 50 < L ≤ 120 ± 0°30'		FILE TYPE: PRODUCT DRAWING DRA./DATE: S.He 24.01.03 CHE./DATE: 何修明 APP./DATE: 刘福勇	DongGuan HuangJie Communication Technology Co., Ltd. 东莞市皇捷通讯科技有限公司 TITLE: RF ANTENNA COMPONENT WiFi BUILT IN ANTENNA, OD1.13 BLACK, P1 PORT FPC, P2 PORT MHF-1-PLUG, L=95mm CODE: 3N0401BK-085	
FORM No.: HJ-QR-E-03 22.09.01	SIZE: A4	UNIT: mm	PRO.: 3rd	SCALE: 1:1

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO
HuangJie AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION.

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P/N : 3N0401BK-085

DESCRIPTION : WiFi BUILT IN ANTENNA,OD1.13 BLACK,P1 PORT FPC,P2 PORT MHF-1-PLUG,L=95mm



ELECTRICAL PERFORMANCE

1	NOMINAL IMPEDANCE :	50Ω
2	FREQUENCY RANGE :	2.4~2.5GHz;
3	VSWR :	2.0 MAX.(WHOLE MACHINE TESTING)
4	GAIN :	2.93dBi
5	POLARIZATION MODE :	VERTICAL
6	RADIATION DIRECTION :	OMNIDIRECTIONAL

MECHANICAL PROPERTIES

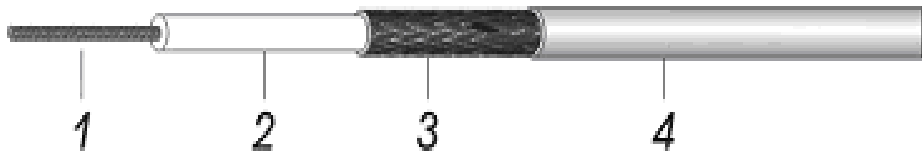
1	ANTENNA SIZE :	L34.00*23.70mm
2	ANTENNA HOUSING :	BLACK
2	ANTENNA CONNECTOR :	MHF-1-PLUG

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.

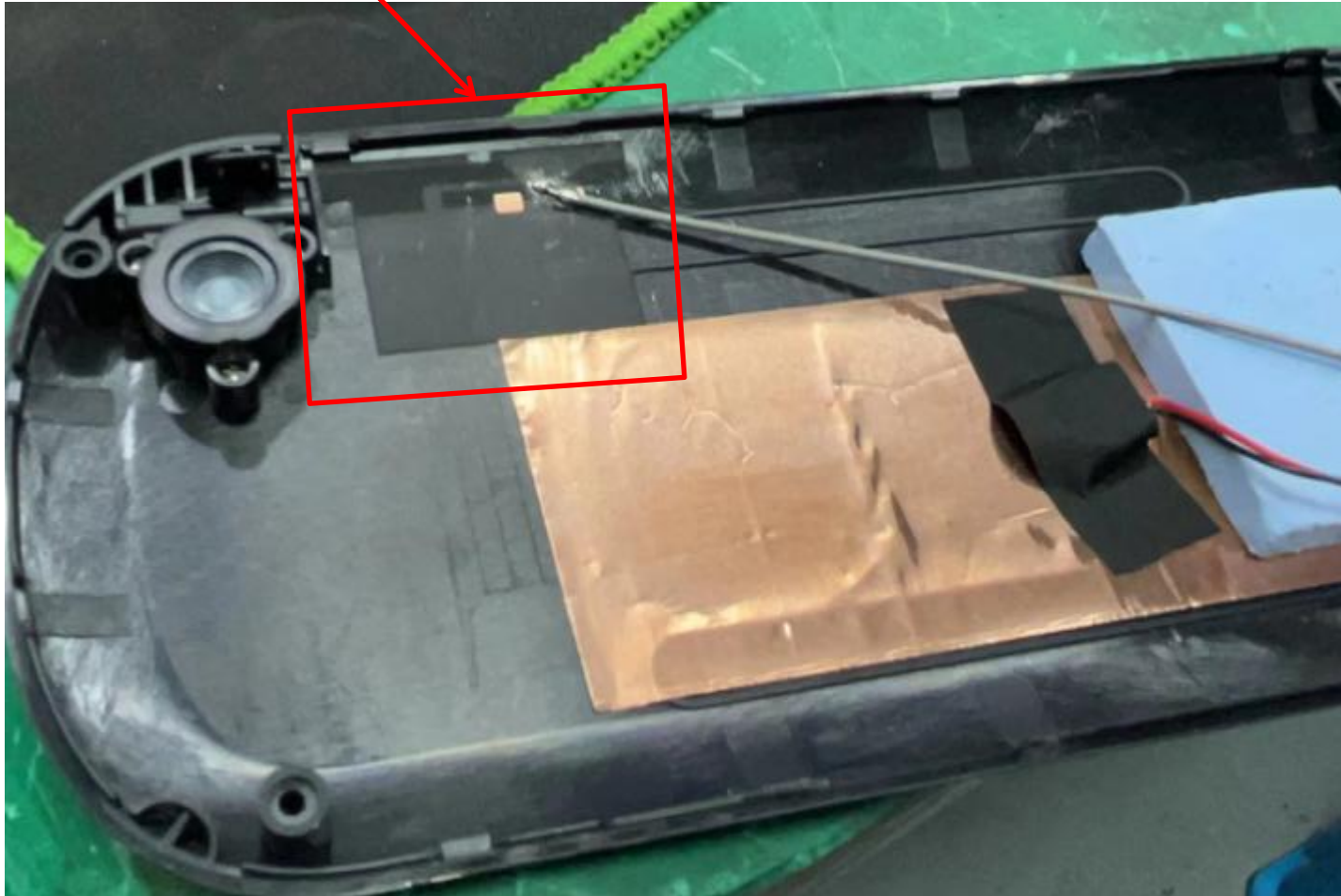
DURABILITY SPECIFICATION

1	DURABILITY :	MHF PLGU: 30 CYCLES
2	SERVICE LIFE :	UNDER THE ABOVE ELECTRICAL, MECHANICAL, AND ENVIRONMENTAL PERFORMANCE CONDITIONS, THE SERVICE LIFE IS 10 YEARS

Type	RF-1.13/50	P/N	2C5M11312BK1 (Black)	
Structure drawing				
Structure characteristics				
Structure	Item		Standard value	
①Inner conductor	Material		Tinned copper wire	
	Makeup:total / O.D. of every wire(mm)		7/0.08	
	(Intertwist)NOM.O.D.(mm)		0.24±0.02	
②Insulation	Material		FEP	
	Color		Natural	
	NOM.O.D.(mm)		0.7±0.03	
③Outer conductor	Material		Tinned copper wire	
	Makeup:total / O.D. of every wire(mm)		16/4/0.05	
	NOM.O.D.(mm)		0.92±0.05	
	覆盖率(%) Coverage ratio(%)		90±5	
④Jacket	材料 Material		FEP	
	Color		Black	
	NOM.O.D.(mm)		1.13±0.05	
Electrical characteristics				
Item	Standard value	Item	Frequency	Standard value Unit:dB/m
Capacitance(pF/m)	98	Attenuation	1GHz	≤2. 32
Velocity(%)	70		2GHz	≤3. 27
Impedance(Ω)	50±3		3GHz	≤4. 01
Standing wave ratio	≤1.4@0~6GHz		4GHz	≤4. 64
Max.operating voltage(V)	1000		5GHz	≤5. 17
Max.operating frequency(GHz)	6		6GHz	≤5. 70
Dependability				
Item		Unit	Standard value	
Min.bending radius static		mm	4	
Min.bending radius repeated		mm	—	
Operating temperature		℃	-55~+150	

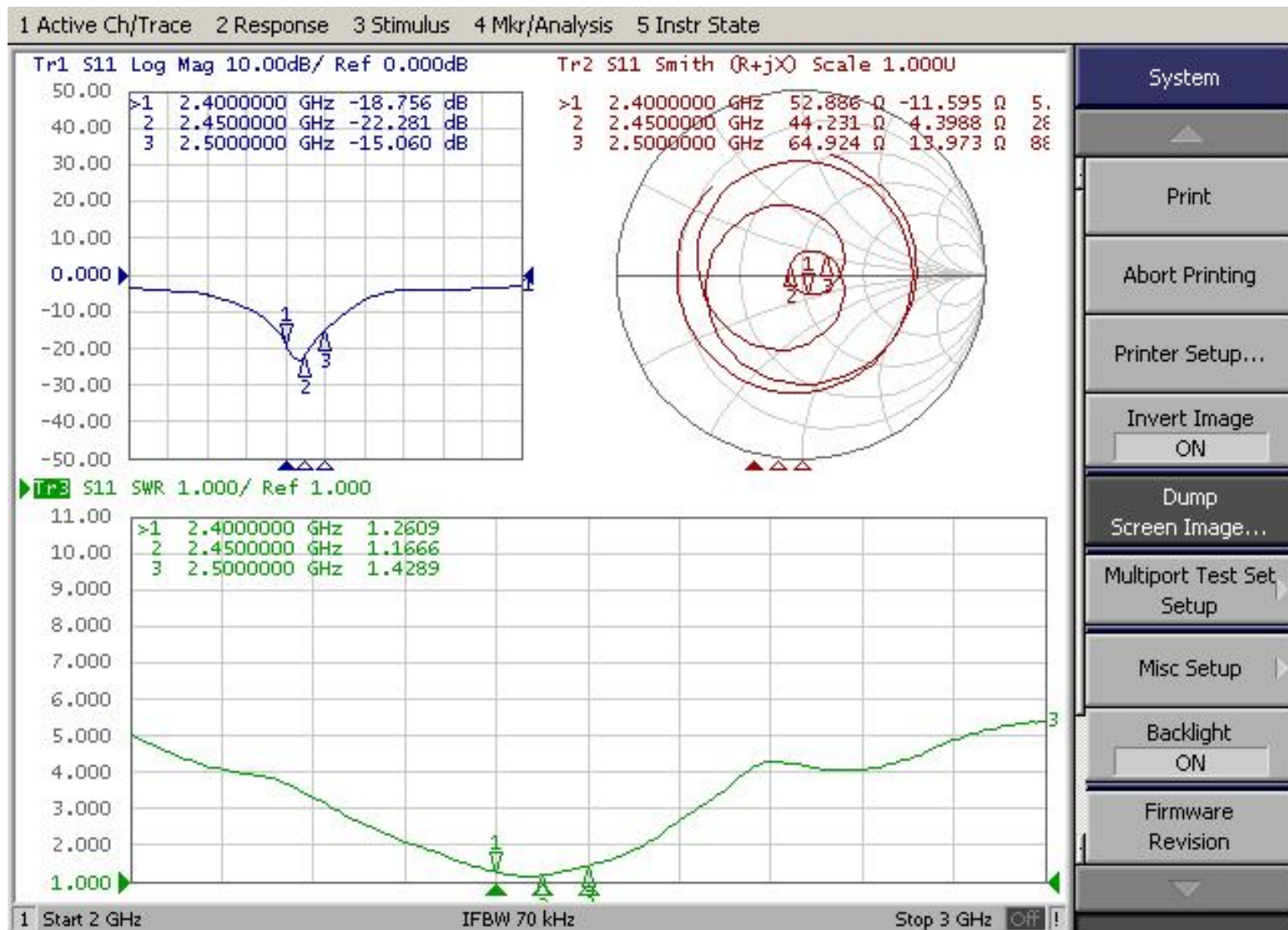
Antenna location map-FPC

3N0401BK-085
(RF2312016)





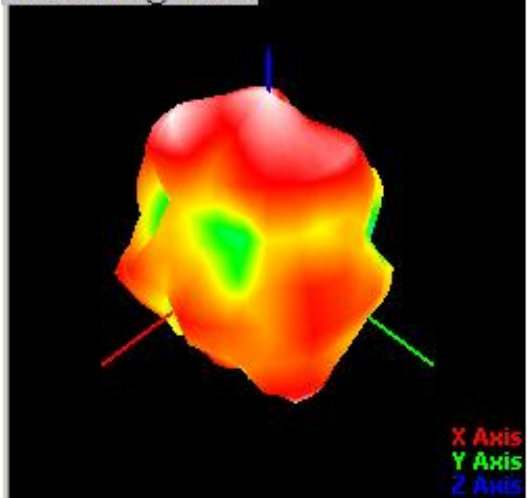
Network analysis tester



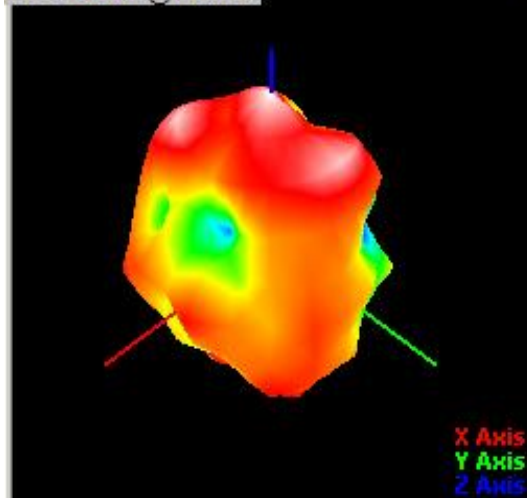
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Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Point Values											
Ant. Port Input Pwr. (dBm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot. Rad. Pwr. (dBm)	-3.07	-3.05	-2.90	-2.67	-2.39	-2.43	-2.25	-2.18	-2.27	-2.41	-2.43
Peak EIRP (dBm)	2.55	2.45	2.53	2.71	2.93	2.76	2.71	2.53	2.26	1.91	1.78
Directivity (dBi)	7.63	7.50	7.43	7.38	7.32	7.19	6.96	6.71	6.53	6.33	6.21
Efficiency (dB)	-3.07	-3.05	-2.90	-2.67	-2.39	-2.43	-2.25	-2.18	-2.27	-2.41	-2.43
Efficiency (%)	57.30	57.50	58.30	59.10	61.70	63.10	59.60	60.50	59.30	57.40	57.10
Gain (dBi)	2.55	2.45	2.53	2.71	2.93	2.76	2.71	2.53	2.26	1.91	1.78

2400.00MHz@T45P45



2450.00MHz@T45P45



2500.00MHz@T45P45

