

SPECIFICATION FOR APPROVAL

CUSTOMER	荣业佳
CUS. CODE	
CUS. MODEL	
HJ-Tech CODE	3N0401BK-094
PRO. NAME	RF ANTENNA COMPONENT
SPECIFICATION DESCRIPTION	WiFi BUILT IN ANTENNA, OD1.13 BLACK, P1 PORT MHF-1-PLUG, P2 PORT FPC, L=35mm
DATE	2024/9/10

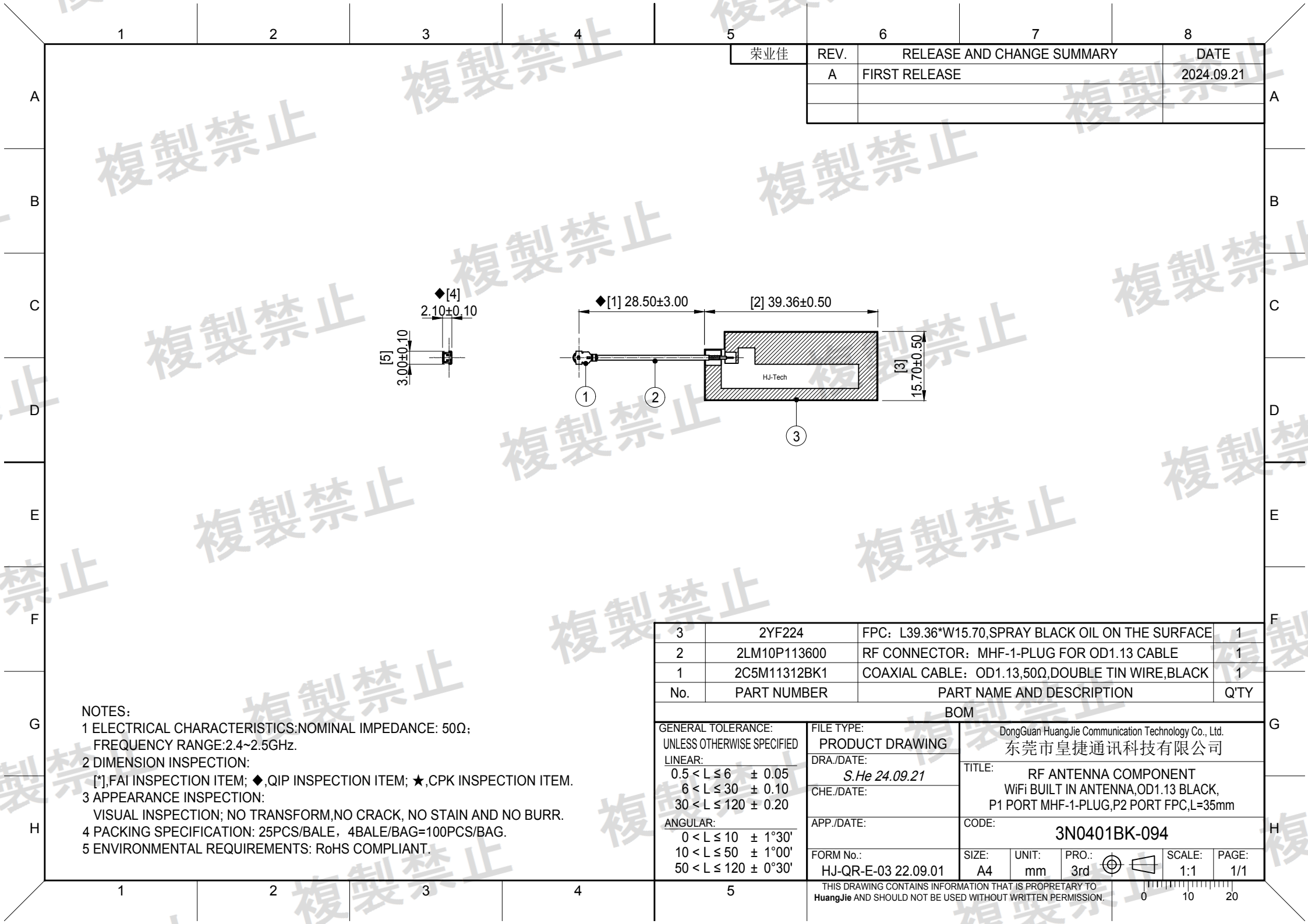
SUPPLIER		
PREPARED	CHECKER	APPROVER
S. He	XIU HE	LFY

CUSTOMER		
TRANSECTOR	CHECKER	APPROVER

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

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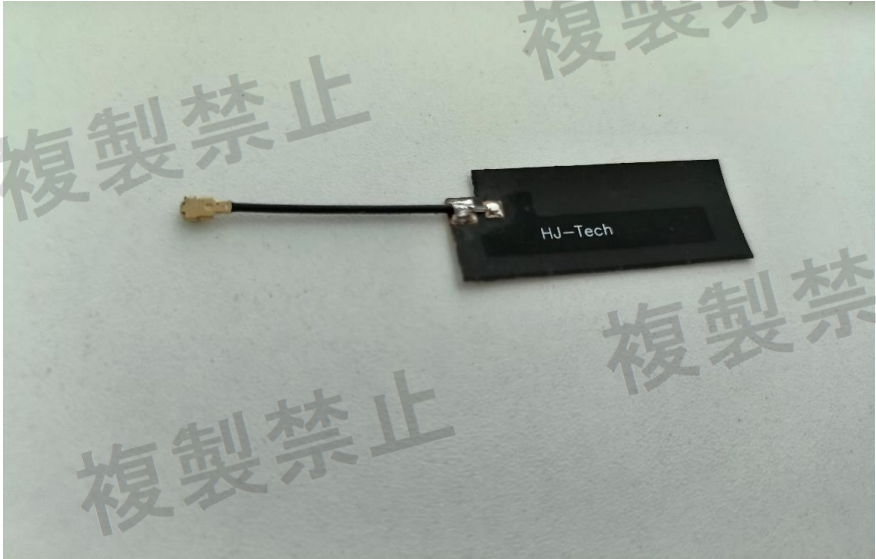
REV.	RELEASE AND CHANGE SUMMARY	DATE
A	FIRST RELEASE	2024.09.21

3	2YF224	FPC: L39.36*W15.70, SPRAY BLACK OIL ON THE SURFACE	1
2	2LM10P113600	RF CONNECTOR: MHF-1-PLUG FOR OD1.13 CABLE	1
1	2C5M11312BK1	COAXIAL CABLE: OD1.13, 50Ω, DOUBLE TIN WIRE, 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 24.09.21 CHE./DATE: APP./DATE:	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 MHF-1-PLUG, P2 PORT FPC, L=35mm CODE: 3N0401BK-094
FORM No.: HJ-QR-E-03 22.09.01		SIZE: A4 UNIT: mm PRO.: 3rd	SCALE: 1:1 PAGE: 1/1

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P/N : 3N0401BK-094

DESCRIPTION : WiFi BUILT IN ANTENNA,OD1.13 BLACK,P1 PORT MHF-1-PLUG,P2 PORT
N : FPC,L=35mm



ELECTRICAL PERFORMANCE

1	NOMINAL IMPEDANCE :	50Ω
2	FREQUENCY RANGE :	2.4~2.5GHz;
3	VSWR :	2.0 MAX.
4	GAIN :	1.71dBi
5	POLARIZATION MODE :	VERTICAL
6	RADIATION DIRECTION :	OMNIDIRECTIONAL

MECHANICAL PROPERTIES

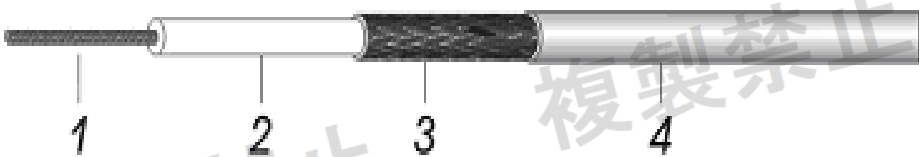
1	ANTENNA SIZE :	L67.86*15.70mm
2	ANTENNA HOUSING :	BLACK
2	ANTENNA CONNECTOR :	MHF-1-PLUG

ENVIRONMENTAL SPECIFICATION

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

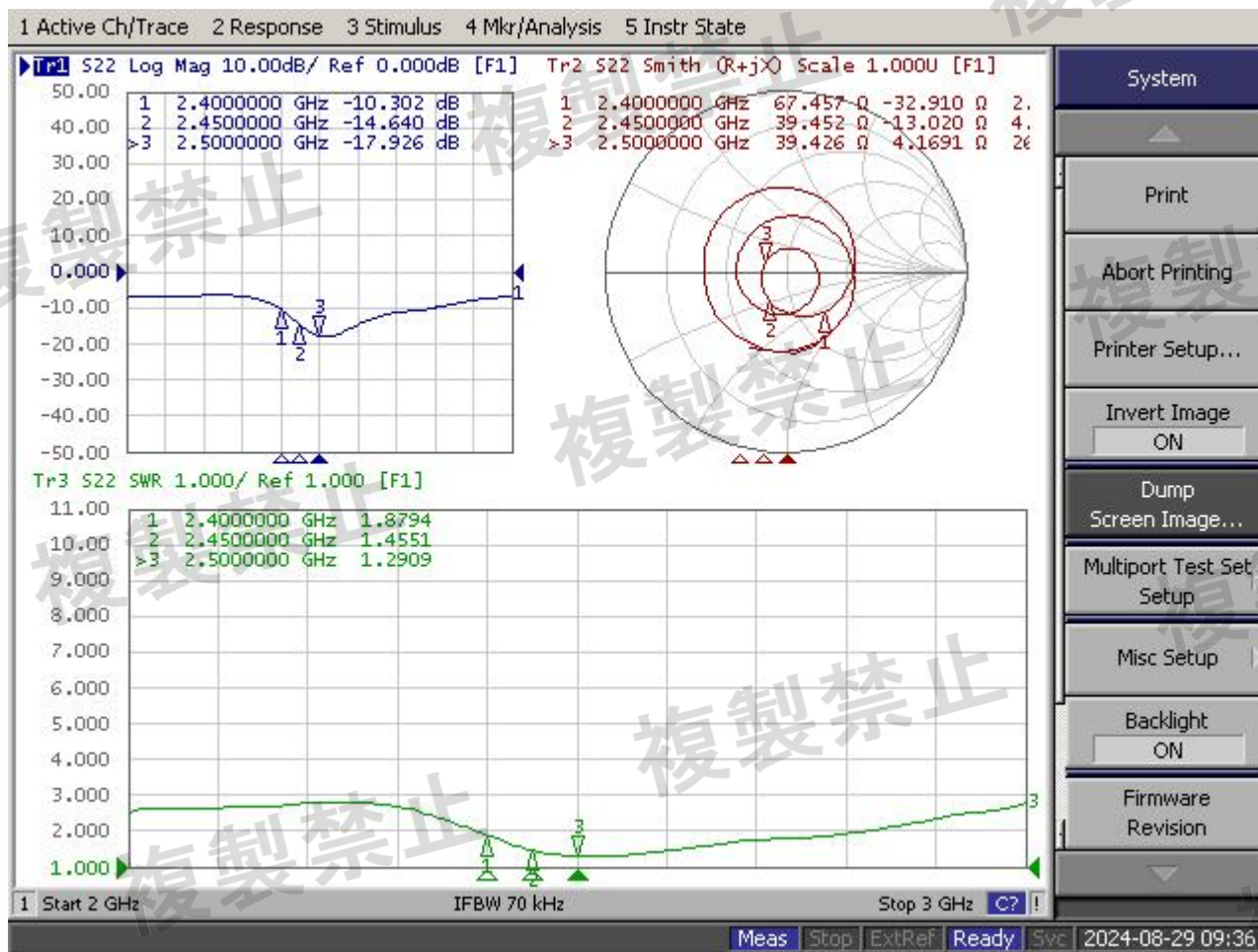
DURABILITY SPECIFICATION

1	DURABILITY :	MHF PLUG: 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		



Network Analyzer Test Report





Microwave darkroom test report

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
Efficiency (dBi)	-5.32	-5.32	-5.26	-5.21	-5.14	-5.09	-5.06	-4.99	-4.86	-4.81	-4.73
Gain (dBi)	1.55	1.44	1.60	1.71	1.66	1.70	1.48	1.25	1.16	0.83	0.71
Efficiency (%)	34.36	34.40	34.77	35.15	35.60	35.96	36.16	36.69	37.68	33.02	33.67
Directivity (dB)	6.88	6.75	6.87	6.91	6.80	6.79	6.54	6.24	6.02	5.64	5.44
Peak Gain Position (Theta)	68.00	68.00	68.00	68.00	68.00	69.00	69.00	69.00	69.00	69.00	70.00
Peak Gain Position (Phi)	62.00	61.00	61.00	60.00	59.00	58.00	58.00	57.00	56.00	56.00	54.00
Efficiency ThetaPol (%)	21.44	21.40	21.54	21.61	21.70	21.78	21.85	22.20	22.98	23.40	24.05
Efficiency PhiPol (%)	7.93	8.00	8.23	8.53	8.90	9.18	9.32	9.50	9.70	9.62	9.62
Upper Hem. Efficiency (%)	20.11	19.97	20.29	20.61	20.66	21.04	20.98	20.97	21.47	16.14	16.30
Lower Hem. Efficiency (%)	14.25	14.43	14.48	14.53	14.94	14.92	15.18	15.72	16.21	16.87	17.36

