



# 东莞市皇捷通讯科技有限公司

DONGGUAD HUANG JIE COMMUNI CAT ION TECHNOLOGY CO.,LTD.

3N0301BK-029

4GHz ISM Flexible Polymer

## Key Features

4 GHz ISM

824-960 MHz

1710-2170 MHz

2300-2690 MHz

Embedded Antenna

Wifi Antenna

High Performance

Ground Plane Independent

Self-Adhesive

Dimensions 65.7 x 13.1mm

ustomizable Cable and Connecto



## Description

3N0301BK-029 antenna is flexible high efficiency embedded solution covering 4GHz. Antenna can be easily mounted in most devices due to self-adhesive layer and small size. 3N0301BK-029 is omnidirectional, ground plane independent antenna. Cable and connector is upon request.

东莞市皇捷通讯科技有限公司

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## Antenna and electrical specifications

Parameters	4GHz ISM Flexible Polymer
Standards	
Band (MHz)	4GHz
Frequency (MHz)	824-960 MHz, 1710-2170 MHz, 2300-2690 MHz
Return Loss (dB)	-15.6
VSWR	<2.0
Efficiency (%)	40-60
Peak Gain (dBi)	1
Impedance (Ohm)	50
Polarisation	Linear
Radiation Pattern	Omni-Directional
Max. Input Power (W)	25
Connector Type	Most RF Connectors (U.FL Standard)
Cable Length	Any Cable Length (120mm Standard)
Cable Type	Other Cables Available (1.13mm Standard)

### Antenna Measurement Conditions:

Mounted 40x10x0.3 Cm ABS Plastic Plate

Measured in Certified CTIA 3DAnechoic Chamber

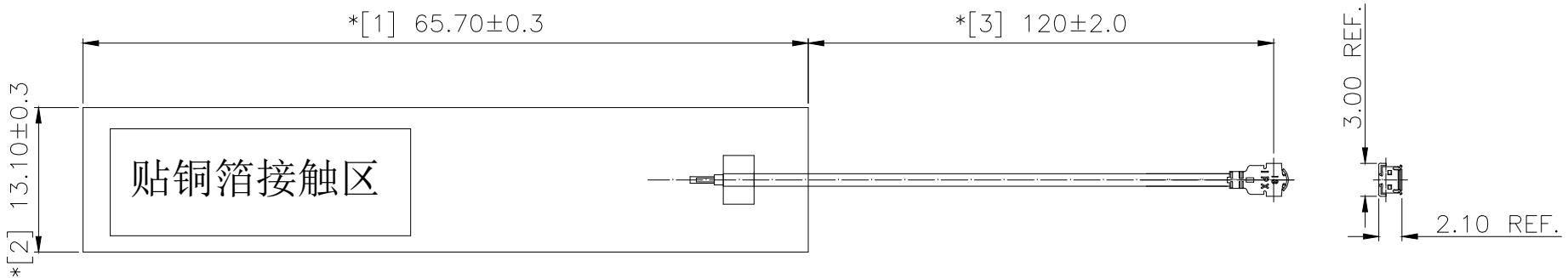


## Mechanical and environmental specifications

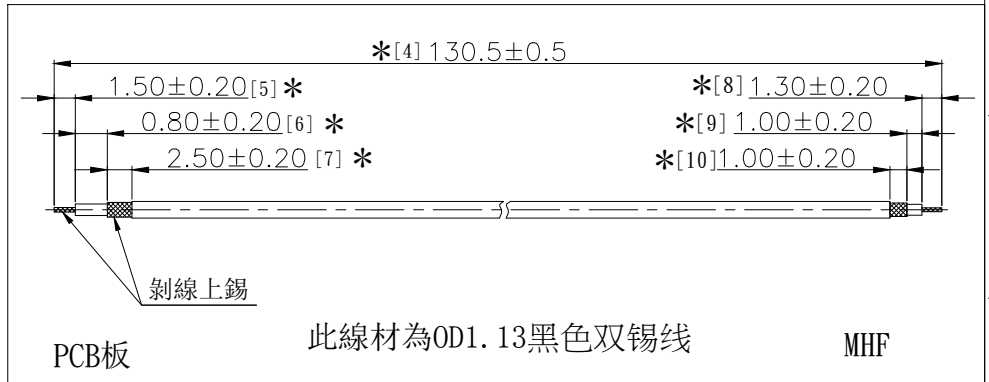
Specifications	3N0301BK-029
Mounting Type	Self-Adhesive
Dimensions (mm)	65.7 x 13.1mm
Adhesive Type	3M
Material	Flexible Polymer
Operating Temperature (C)	-40 to +85
Storage Temperature (C)	-40 to +85
Substance Compliance	RoHS

REV.	ECN NO.	LOCAS.	DESCRIPTION	DATE	DESIGN
A0			The first edition released	2019.04.05	Mark
A1			增加频段，增益说明	2019.04.23	Mark

# 天线使用效果差时，建议客户自行增加铜箔使用



- 备注:
- 特性阻抗: 50 OHM
  - 工作频率: 824~960MHz; 1710~2170MHz, 2300~2690MHz, VSWR详见规格书波形图
  - 增益<1dBi
  - 100% 比对波形测试
  - 端子拔出力测试: 最小1.2kgf.  
测试方法: 沿电缆中心轴, 以约25±3毫米/分钟的速度, 垂直将1.20kg砝码提高桌面即为合格。
  - 线材表面不能出现刮花, 剥线沾锡 不能有大头和破洞等等;
  - PCB板不能有假焊, 软板表面不能有刮花和锡渣等不良;
  - 包装规范: 20PCS/扎, 100PCS/袋;



3	2LM10P113210	I-PEX	镀金	1	皇捷自制
2	2YP061	PCB板	板, 漆贴 型号 背胶 表面喷黑	1	点成鑫
1	2C5M11312BK1	CABLE	OD1.13黑色双锡线, 130.5mm	1	凯博
NO	P/N	PART NAME	DESCRIPTION	Q'TY	SUPPLIER

客户代码: H421

DIM	TOL	DIM	TOL
X.	±2.0	X'	±4.0'
X.X	±1.0	X.X'	±3.0'
X.XX	±0.50	X.XX'	±2.0'
X.XXX	±0.2	X.XXX'	±1.0'

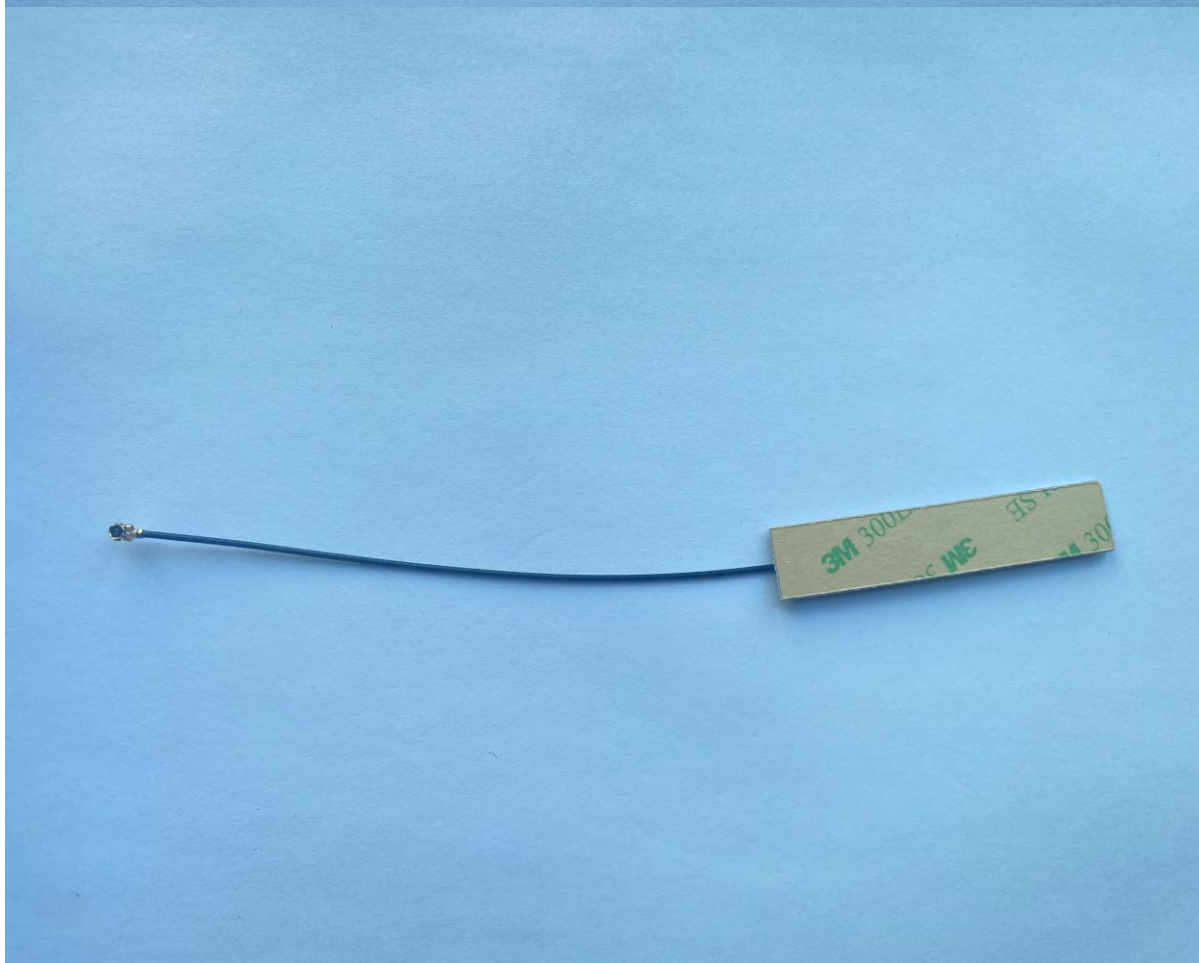
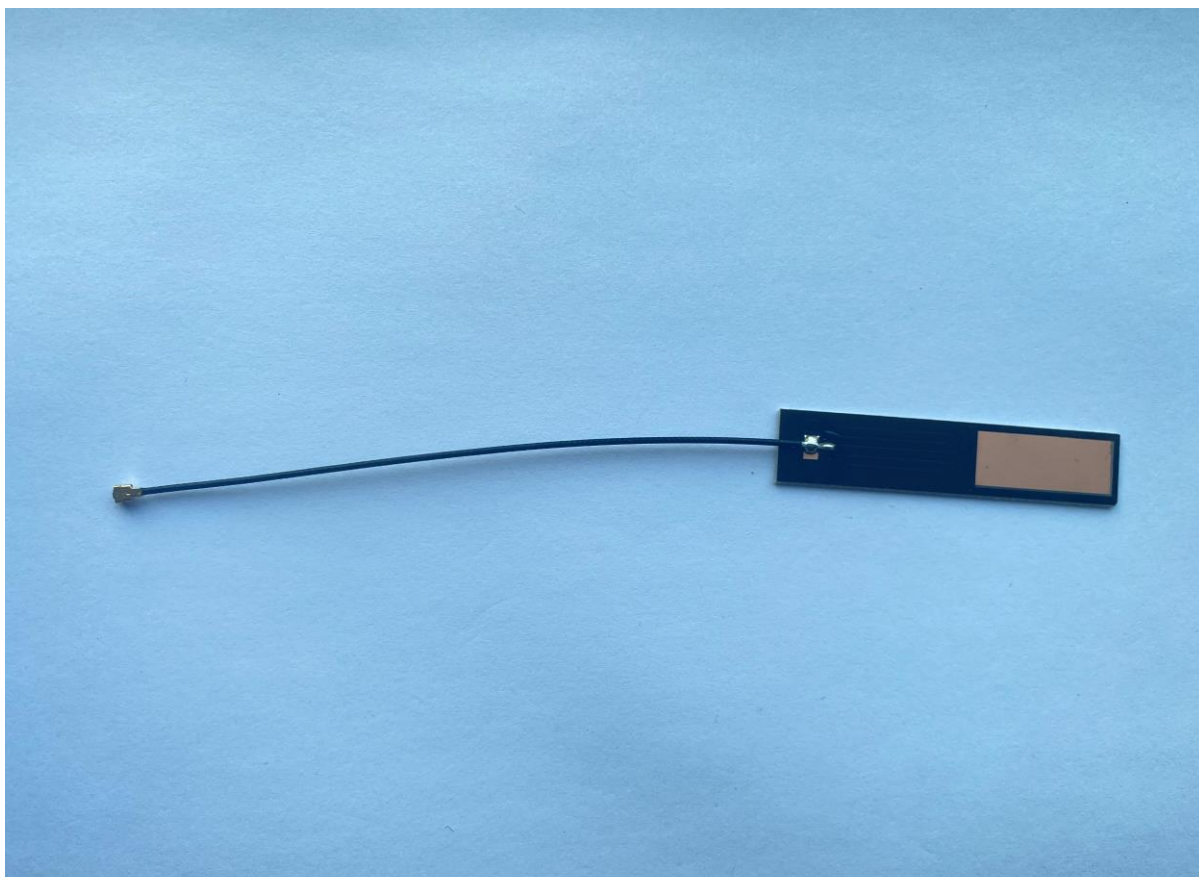
**HJ-Tech 东莞市皇捷通讯科技有限公司**

此线材为OD1.13黑色双锡线 MHF

DRAW NO.	DATE	DRAW NAME: 内置天线, 1.13黑色双锡线, P1端焊接PCB, P2端打一代端子, 裁线长L=130.5mm (4G)	
DESIGN: Mark	2019.04.05	FILE:	P/N NO. 3N0301BK-029
CHECK:		MODEL:	UNIT: mm SHEET: N/A
APPROVED:		REV. A0 SCALE N/A	

\* NO USING RESTRICTED AND BANNED SUBSTANCE

# 实物照片



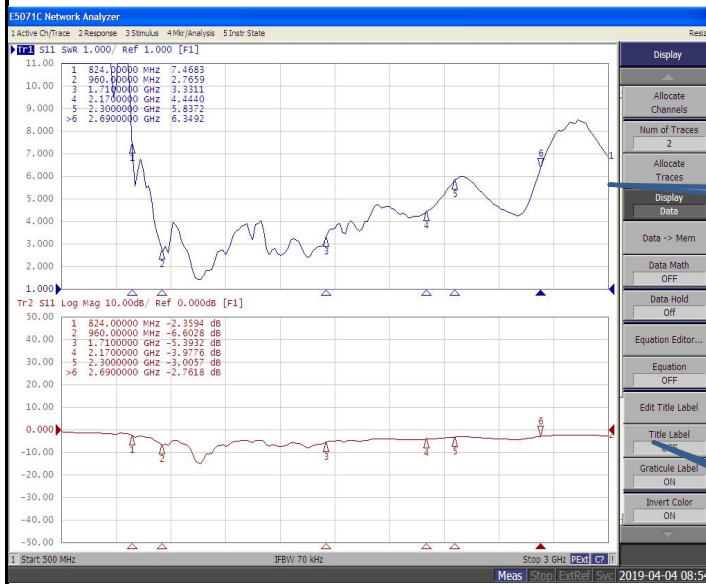


# 天线电气特性测试报告

## Antenna Electrical Characteristic Test Report

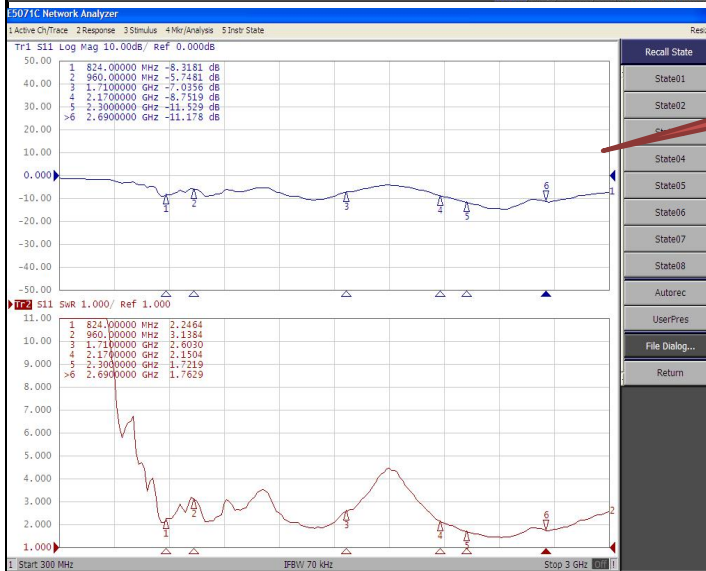
文件编号:HJ-QR-Q-22 Rev:A0

产品料号 Part Number:	3N0301BK-029	测试项目 Item	规格 Spec	结果判定 Judge
产品名称 Part Name:	1.13黑色双锡线,P1端焊接PCB,P2端打一代端子,裁线长L=130.5mm	VSWR 驻波比	见以波形图	
测试设备 Test Equipment	网络分析仪	Characteristic impedance 特性阻抗	50Ω	
数量 Quantity	5pcs	Gain 增益	≤1dB	
测试日期 Test Date	2019/4/23			



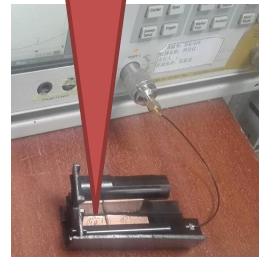
天线裸测波形

天线裸测波形



天线贴铜箔波形图

天线贴铜箔



Test Point ID	Freq. (MHz)	TRP (dBm)	Gain (dBi)	Directivity (dB)	Efficiency (%)
1	700.0	700.00	-9.58	1.13	8.5%
2	824.0	824.00	-9.92	1.65	7.0%
3	880.0	880.00	-4.30	1.57	25.9%
4	960.0	960.00	-3.83	2.09	25.6%
5	1710.0	1710.00	0.88	1.23	92.2%
6	1880.0	1880.00	-1.52	0.90	57.3%
7	1990.0	1990.00	-7.68	1.70	11.5%
8	2170.0	2170.00	-0.73	0.85	69.6%
9	2300.0	2300.00	0.50	0.75	94.5%
10	2350.0	2350.00	0.42	0.79	91.8%
11	2390.0	2390.00	-0.57	0.86	71.8%
12	2500.0	2500.00	-1.78	0.67	57.0%
13	2550.0	2550.00	-0.76	0.72	71.1%
14	2600.0	2600.00	-1.11	0.61	67.4%
15	2650.0	2650.00	-2.04	0.20	59.8%
16	2690.0	2690.00	-1.37	0.28	68.3%

参数/频率 (MHz)	824	880	960	1710	1880	1990	2170	2300	2390	2550	2690
Gain(dBi)	-9.92	-4.3	-3.83	0.88	-1.52	-7.68	-0.73	0.5	-0.57	-0.78	-1.37
Efficienc (%)	7	25.9	25.6	92.2	57.3	11.5	69.6	94.5	71.8	71.1	68.3

审核Checker: 王 俊

测试者Tester: Mark

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