



HF.RADIO COMMUNICATION TECHNOLOGY CO., LTD.

Form
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Edition

A0

File class

Four-level
document

Sample test report

Pagination

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Sample test report

SAMPLE FOR APPROVAL

SUPPLIER	Shenzhen Keesun Technology Co.,Ltd		
RARTNAME	5.8G FPC Internal antenna 1.13 Black Cable +IPEX (forward) L=90MM (EM72)	CATEGORY	Built-in antenna
DESCRIPTION	KS053-10068-A	SAMPLE CODE	RD-21-005310
REVISION	X1	DATESUBMITTED	2023.12.01

Guest side (HF.RADIO Fill in)		Acceptor		
Customer confirmation	Approval	Quality	Engineering department	Business department
		Miaoyan Wu	Haibin Liao	Chenglan Liu
Date		Date		

Shenzhen Keesun Technology Co., Ltd.(Seal)

Address:	4 / F, Building B, Hai Wei Jingsong Center Warehouse, Building 12, Heping Tong Rich Industrial Zone, Fuhai Street, Bao 'an District, Shenzhen		
Contact	Chenglan Liu	Website:	www.keesunantenna.com



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Product specification overview

●Electrical Performance:

1. Frequency Range: 5.8Ghz
2. Impedance: 50 Ohms nominal
3. VSWR: ≤ 1.92
4. Gain: 2dBi
5. Admitted power radiation: 1W
6. Radiation of Radiation: Toroidal
7. Radiation: Omni
8. Polarization: Vertical
9. Connector Type: I-PEX

●Mechanical properties:

1. Cable: MI1.13mm Black Cable, 50 Ohm
2. Operation temperature range: $-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$
3. Storage temperature range: $-30^{\circ}\text{C} \sim +80^{\circ}\text{C}$
4. Color:



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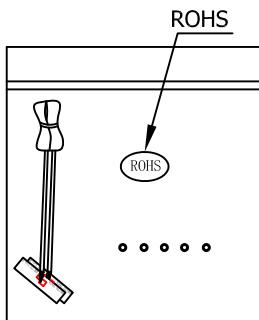
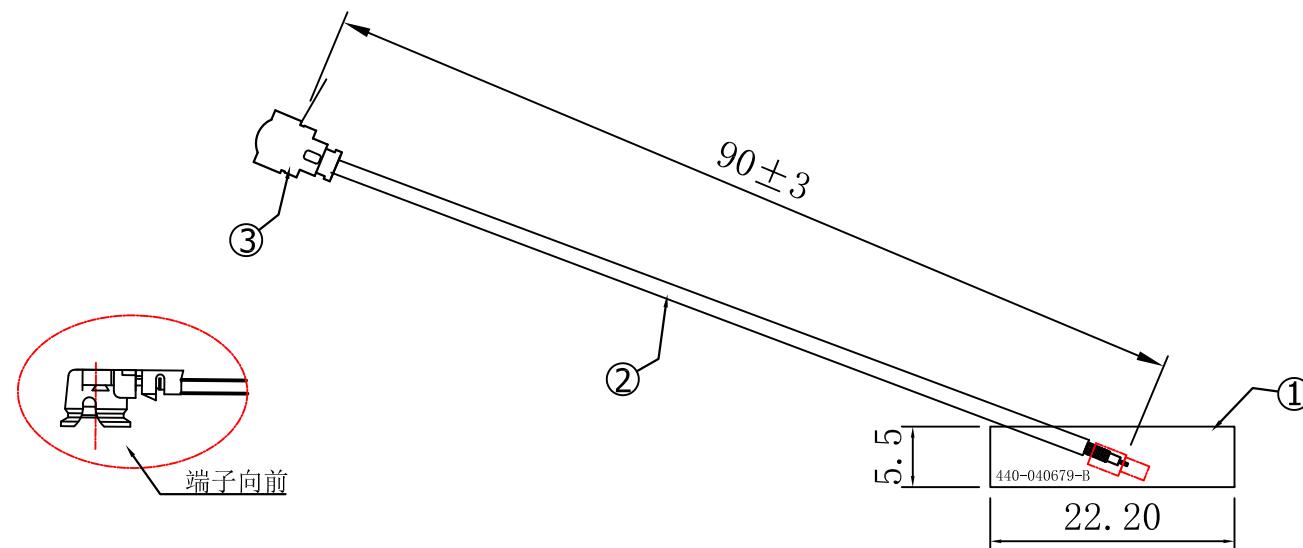
产品图片



Drawing

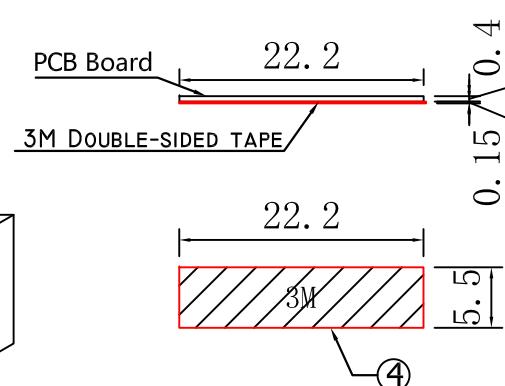
REV.	DESCRIPTION	DATE
A	NEW	2025.03.14

ROHS



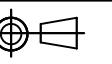
Pack:50PCS/Bundle
500PCS/PE Bag

1.The outer box needs to be pasted 1PCS/RoHS label on the outer box label
2.The outer box requires 1PCS/outer box label on the upper right corner of the outer box side wheat



Specification:
Frequency Range: 5GHz
Return Loss: -10dB or less
VSWR: 1.92 Max
Gain: 2.0 dBi

NO.	DESCRIPTION	Q'TY	REMARK
4	Double glue	3M 9448A(L22.2*W5.6)	1
3	CONN	IPEX FOR φ1.38mm CABLE	1
2	CABLE	φ1.13mm CABLE (Black)	1
1	PCB	EM72 (L22.2*W5.6*T0.4mm)	1

TITLE:	Built-in antenna+IPEX L=90mm EM72		 KEESUN Shenzhen Keesun Technology Co., Ltd	
P/N:	RD-21-005310			
CUSTOMER:	KS053			
DRAW NO.:	KS053-10068-A			
DIMENSIONS TOLERANCES UNLESS OTHERWISE NOTED			APPROVED	
TOLERANCE		.XXX ±0.05 .XX ±0.1 .X ±0.2 X ±0.5	SHEET:1/1 SCALE:NONE UNIT: mm REV.A DRAWED Julia	

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Network analyzer test diagram

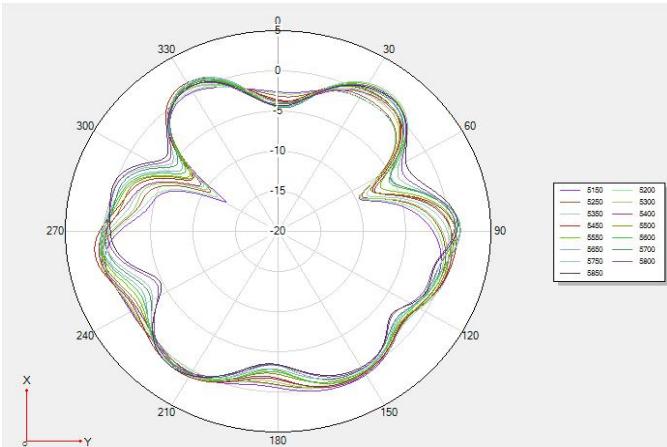
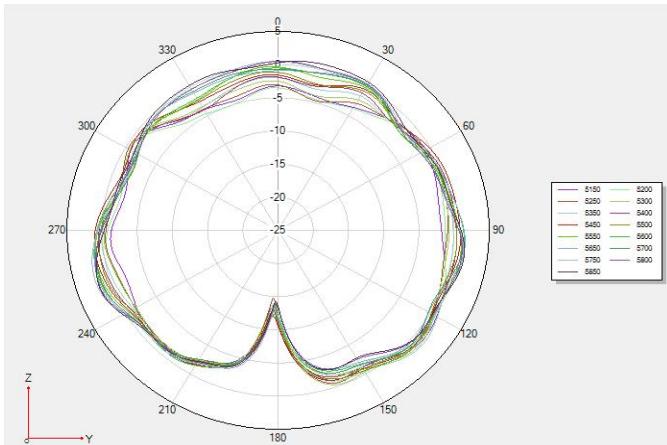
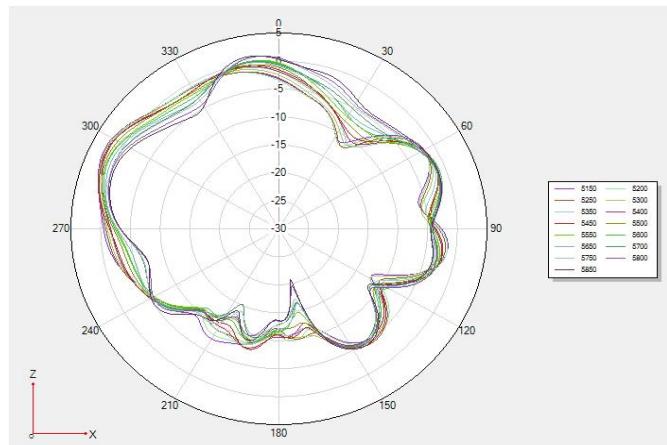
P/N:KS053-10068-A

SPECS: 5.8GHz FPC Built-in antenna

Test value:Return Loss/ VSWR

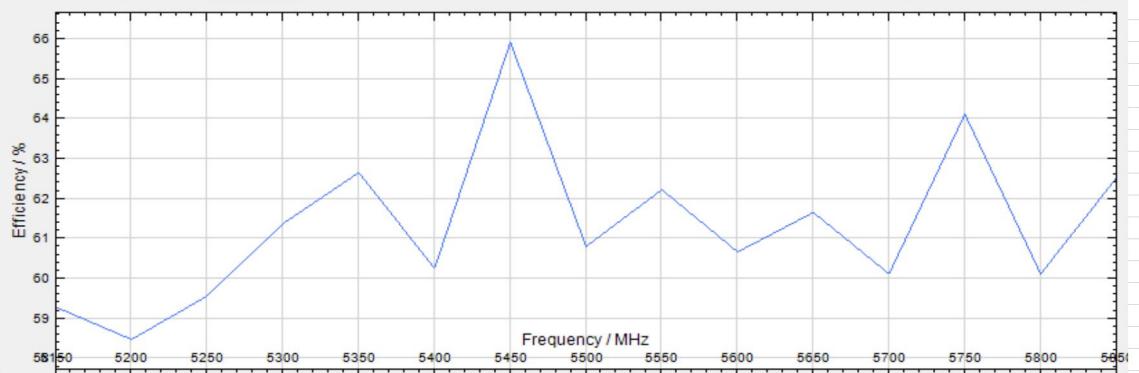


Antenna 2D Report-5.8GHz



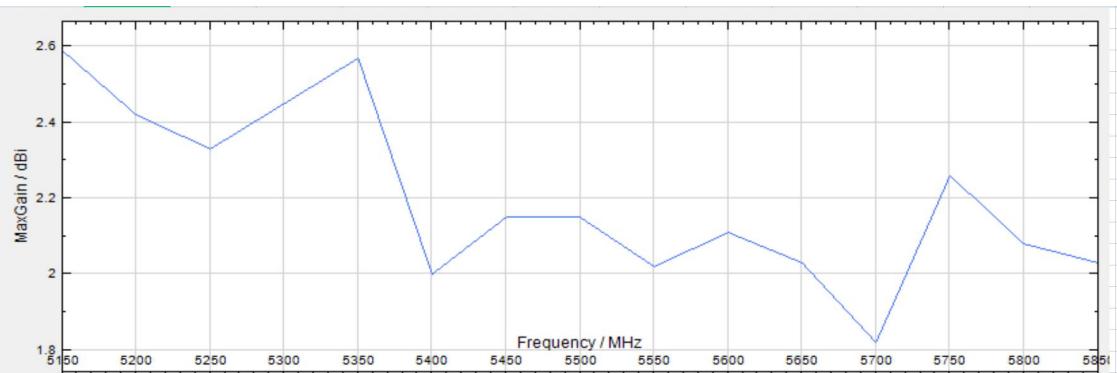
Antenna Efficiency-5.8GHz

Frequency / MHz	Efficiency / %
5150	59.29
5200	58.48
5250	59.57
5300	61.38
5350	62.66
5400	60.26
5450	65.92
5500	60.81
5550	62.23
5600	60.67
5650	61.66
5700	60.12
5750	64.12
5800	60.12
5850	62.52



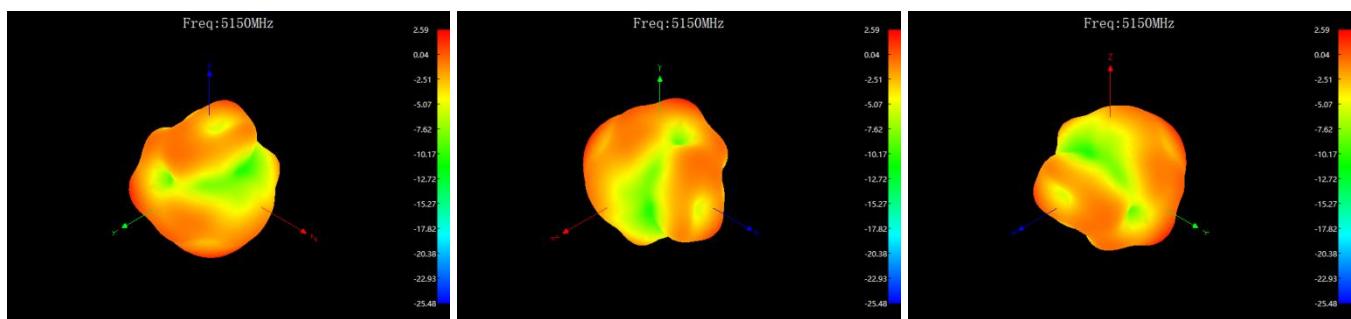
Peak Gain -5.8GHz

Frequency / MHz	MaxGain / dBi
5150	2.59
5200	2.42
5250	2.33
5300	2.45
5350	2.57
5400	2
5450	2.15
5500	2.15
5550	2.02
5600	2.11
5650	2.03
5700	1.82
5750	2.26
5800	2.08
5850	2.03

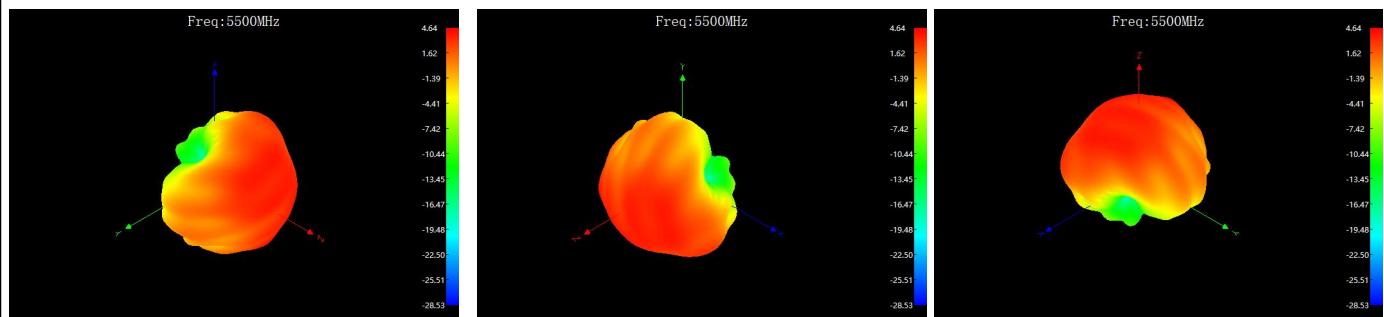


Antenna 3D Report-5.8GHz

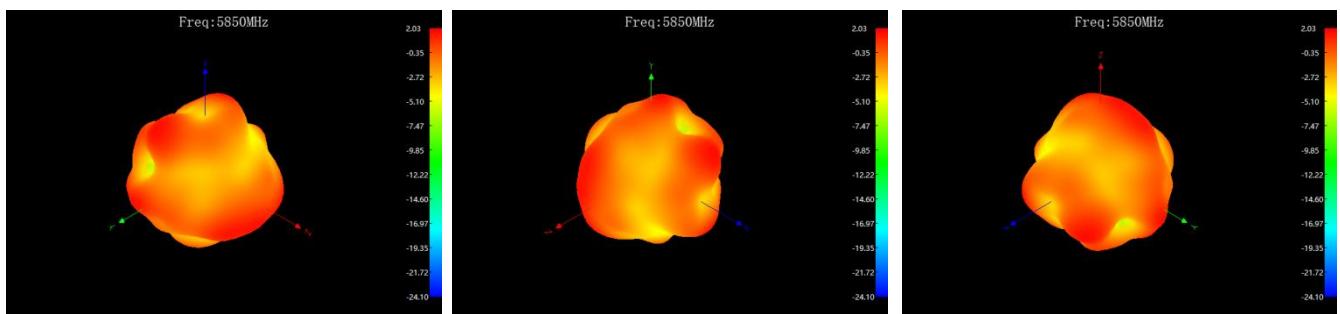
5.15G



5.55G



5.85G



一、 Technical specifications



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Operating frequency range	5.8GHz
S.W.R	≤ 1.92
Antenna gain	2dBi
Switching mode	I-PEX
Impedance	50 Ohm

二、 Reliability test

Project	Test condition	Specifications
Storage environment	Temperature, humidity, and air pressure are tested in the absence of specified conditions: 1 temperature is -30 degrees C to +80 2 relative humidity is 45%-85% 3 air pressure is 86kpa-106kpa	Normal electrical and mechanical properties
High and low temperature test	Between 70 and 40 degrees C for 5 cycles, and then under normal conditions 1-2H, check the appearance quality.	The dimensions shall meet the requirements and shall meet the requirements of the mechanical and electrical properties.
Resistance to constant damp heat test	Relative humidity 95 + 3%, the test temperature: 40 degrees C, after continuing the 2H effect, the test sample after taking out the electrical performance of 5min, test product under normal conditions 1-2H, check the appearance quality	The dimensions shall meet the requirements and shall meet the requirements of the mechanical and electrical properties.
Voltage resistance	1 insulation spark voltage 1.5KV 2 sheath spark voltage 1.5KV 3 insulation resistance to sheath voltage 0.5KV	Normal electrical and mechanical properties
Attenuation value	2.0(nominal) 1.0GHz 2.9(nominal) 2.0GHz 3.2(nominal) 2.4GHz 3.7(nominal) 3.0GHz 4.3(nominal) 4.0GHz 4.8(nominal) 5.0GHz 5.3(nominal) 6.0GHz	3.3dB/m (at20°C)