

Product Number: NB010-13B-IX115
Product Name: 2.4GHz 内置全向黄膜天线

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1. Specification

A. Electrical Characteristics	
Frequency	2400 ~ 2500 MHz
S.W.R.	≤ 2.0
Antenna Gain	2 dBi ± 0.7
Polarization	Linear
Impedance	50 Ohm
B. Material & Mechanical Characteristics	
Material of Radiator	FR-4
Cable Type	RG-1.13
Connector Type	I-pex
C. Environmental	
Operation Temperature	- 40 °C ~ + 65 °C
Storage Temperature	- 40 °C ~ + 80 °C
Antenna Color Storage life	< 2 year

2. Characteristics and Reliability Test

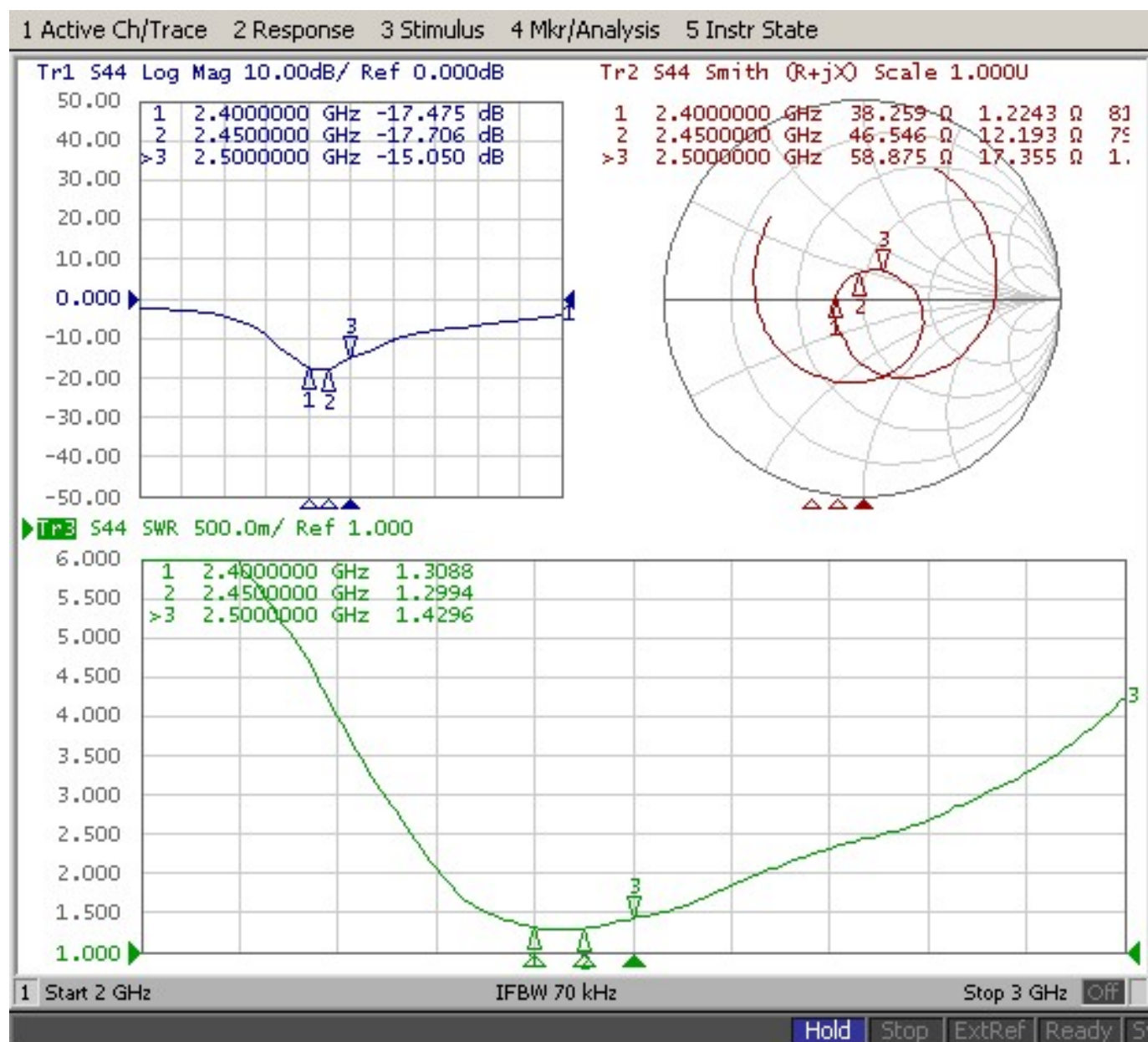
Test Items		Test Condition and Procedure	Requirements
C1	S.W.R.	Set DUT on Network Analyzer; make individual calibration to test	Directive DUT specification
C2	Antenna Gain	Set DUT on Antenna Chamber; make individual calibration to test	Directive DUT specification
M1	Vibration	GB / T2423 . 48-1997 Amplitude: 0.03 inch (1.5mm); Freq: 20 to 80 to 20 Hz 3 directions; 2 hours for each direction	1. No Visual Damage 2. Frequency Tol. $\leq$ 5%
M2	Random Drop	GB / T2423.8-1995 Height: 1.0 Meter;	1. No parts separated 2. Frequency Tol. $\leq$ 5%

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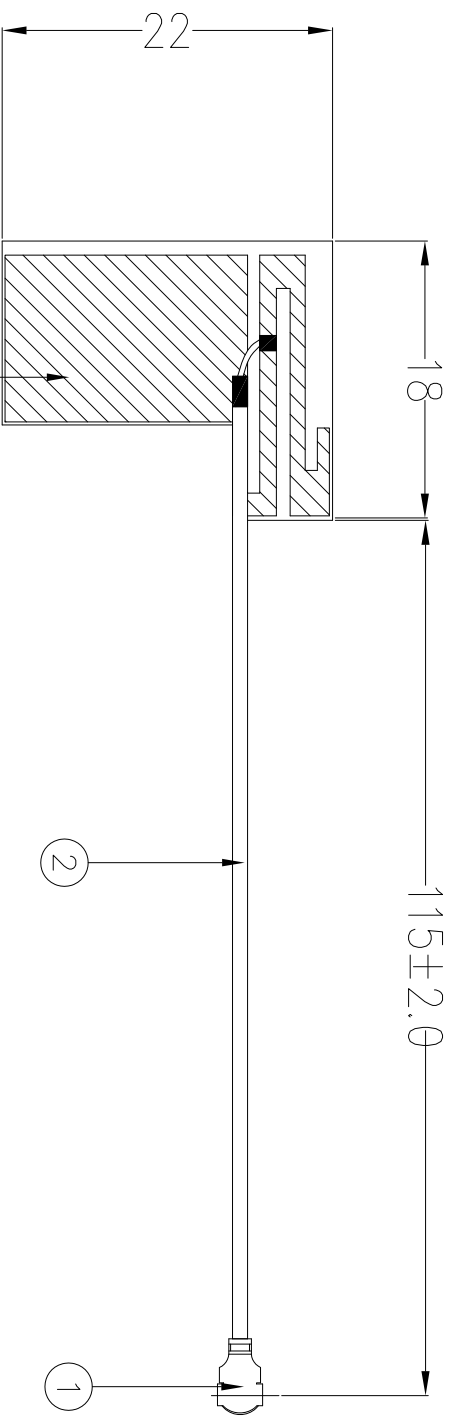
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		3 directions; 1 time for each direction	
M3	Solderability	GB 2423 . 28- 82 Solder iron: 260±5°C; Duration: 5 seconds	1. Mounted on PCB 2. No Visual Damage
M4	Terminal- Pull Test	Holding with individual specification; force applied to axis of terminal	1. Directive DUT specification 2. Frequency Tol.<= 5%
M5	Terminal- Torque Test	Holding with individual specification; applied clockwise and counterclockwise to the axis of terminal	1. Directive DUT specification 2. Frequency Tol.<= 5%
M6	Dimension	Inspection of dimension, color, material, package, surface process	Directive DUT specification
E1	Salt Spray	GB / T 2423 . 17- 93 Temp: 35°C; RH: >= 95%; NaCl solution: >= 5%; Time: 24 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E2	Humidity	GB / T 2423 . 4 - 93 Temp: 80°C / 12 H; -40°C / 12H RH: >= 90%; Time: 24 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E3	Thermal Shock	GB / T 2423 . 22 - 87 1 Cycle: - 40°C (30 minutes) to + 80°C (30 minutes) Cycles: 24	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
E4	Life (High Temp.)	GB /T 2423 . 2 - 89 Temp: 80°C; Time: 24 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.<= 5%
R1	RoHS	With Reference to IEC 62321:2008 with flow chart	Directive RoHS 2002/95/EC
R2	PFOS	With Reference to USA EPA 3540C:1996 by LC/MS	Directive RoHS 2006/122/EC
R3	PFOA	With Reference to USA EPA 3540C:1996 by LC/MS	Directive RoHS 2006/122/EC

3. Antenna - S Parameter Test Data



SIGN	DATE	DESCRIPTION	APPROVER
△A			
△A			
△A			



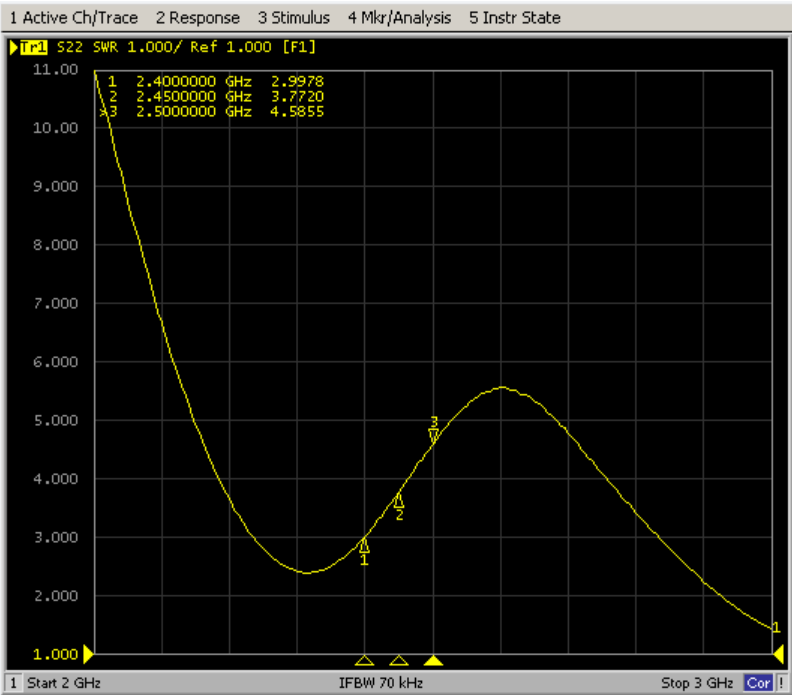
Note:

- 1. Take" * "is the important dimension.
- 2. Tolerance: Unmarked tolerance refer to the standard tolerance please.
- 3. Pull Strength of the connector must be >=1.0kg.
- 4. Note Connector orientation.

3	NB010-A01	FPCB	FPCB 18.2*21.2mm	1
2	R-CB-113B	Coaxial Cable	SHOWA-O.D. 1.13mm Black	1
1	CI-113	Connector	Mini Connector	1
No.	Part Number	Name	Material	Q'ty

TITLE: 2.4GHz Antenna				
PART NO.: NB010-13B-1X115		DWG NAME: NB010-13B-1X115.DWG		
APPROVED BY	CHECKED BY	DESIGNED BY	Tolerance	
jeff 2014-07-29	leon 2014-07-29	YD 2014-07-29	UNITS: mm	X.X ±0.20
			SCALE: 1/1	X.XX ±0.10
			REVISION: A	X° ±3°

Electrical performance test report: VSWR:



科信无线

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)	-12.51	-12.31	-12.03	-11.84	-11.75	-11.53	-11.44	-11.45	-11.39	-11.27	-11.17
Gain (dBi)	-5.97	-5.73	-5.38	-5.21	-5.09	-4.94	-4.87	-4.95	-4.97	-4.95	-5.00
Efficiency (%)	5.62	5.87	6.26	6.55	6.69	7.02	7.18	7.16	7.26	7.46	7.63
Directivity (dB)	6.54	6.59	6.65	6.63	6.65	6.60	6.56	6.50	6.42	6.33	6.17
Peak Gain Position (Theta)	125.00	124.00	123.00	124.00	124.00	125.00	126.00	126.00	127.00	128.00	128.00
Peak Gain Position (Phi)	75.00	75.00	75.00	76.00	76.00	76.00	77.00	77.00	78.00	79.00	79.00
Efficiency ThetaPol (%)	1.76	1.83	1.94	2.03	2.10	2.21	2.25	2.24	2.25	2.29	2.32
Efficiency PhiPol (%)	3.86	4.04	4.32	4.51	4.59	4.82	4.93	4.92	5.01	5.17	5.31
Upper Hem. Efficiency (%)	2.68	2.77	2.94	3.10	3.20	3.41	3.53	3.57	3.64	3.76	3.85
Lower Hem. Efficiency (%)	2.94	3.10	3.32	3.45	3.49	3.62	3.65	3.59	3.62	3.70	3.78
T90(H)角度	12.28	12.09	12.37	12.22	12.48	12.63	12.63	12.42	12.27	12.14	12.05
Gain 15deg (dBi)											
E1(XZ)波瓣宽度	27.00	27.00	28.00	33.00	39.00	37.00	56.00	63.00	67.00	66.00	59.00
E1(XZ)前后比	0.00	0.00	0.00	0.00	0.01	0.00	0.04	0.13	0.51	0.80	1.13
E2(YZ)波瓣宽度	62.00	63.00	63.00	64.00	65.00	67.00	67.00	63.00	57.00	53.00	52.00
E2(YZ)前后比	2.34	2.51	2.68	2.77	2.87	2.87	2.82	2.83	2.94	3.02	2.95
最大增益处轴比(P)	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
仰角10度最差(大)轴比(P)	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Hc(XY)波瓣宽度	102.00	101.00	100.00	98.00	98.00	98.00	98.00	99.00	98.00	97.00	96.00
Hc(XY)前后比	2.69	2.47	2.28	2.05	1.86	1.70	1.81	2.19	2.61	2.88	2.93
Empty											

