

Product Number: NB1024-E65BF  
Product Name: Antenna

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1. Revision History

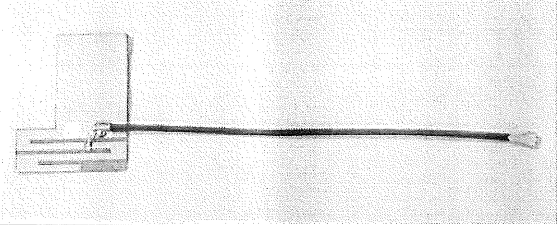
Revision	Date	Change Notification	Description
1.0	2023.02.28	初版	

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## 2. Specification

Sample Photo	
	
A. Electrical Characteristics	
Frequency	2400~2500 MHz
V.S.W.R.	$\leq 2.0$ Test data from the model test
Gain	- 0 dBi
Efficiency	28 %
Polarization	Linear
Impedance	50 Ohm
B. Material & Mechanical Characteristics	
Material of Radiator	FPC
Cable Type	OD1.13mm
Connector Type	Mini Connector
Connector Pull Test	$\geq 1\text{Kgf}$
C. Environmental	
Operation Temperature	- 40 °C ~ + 65 °C
Storage Temperature	- 40 °C ~ + 80 °C

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### 3. Characteristics and Reliability Test

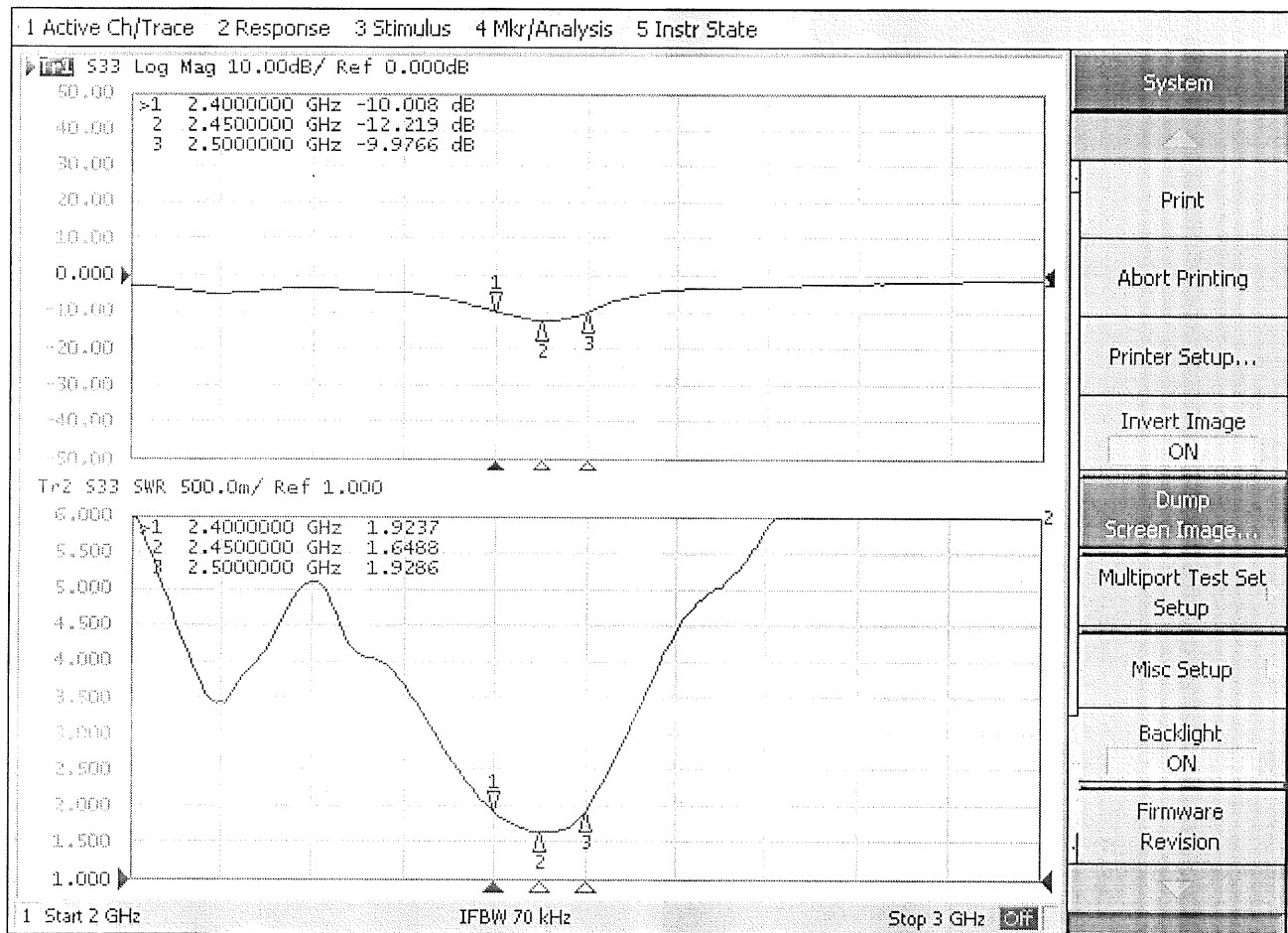
Test Items		Test Condition and Procedure	Requirements
C1	S.W.R.	Set DUT on Network Analyzer; make individual calibration to test	Directive DUT specification
C2	Antenna Gain	Set DUT on Antenna Chamber; make individual calibration to test	Directive DUT specification
M1	Vibration	GB / T2423 . 48-1997 Amplitude: 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.<= 5%
M2	Random Drop	GB / T2423.8-1995 Height: 1.0 Meter; 3 directions; 1 time for each direction	1. No parts separated 2. Frequency Tol.<= 5%
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 2011/65/EU

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#### 4. Antenna - S Parameter Test Data



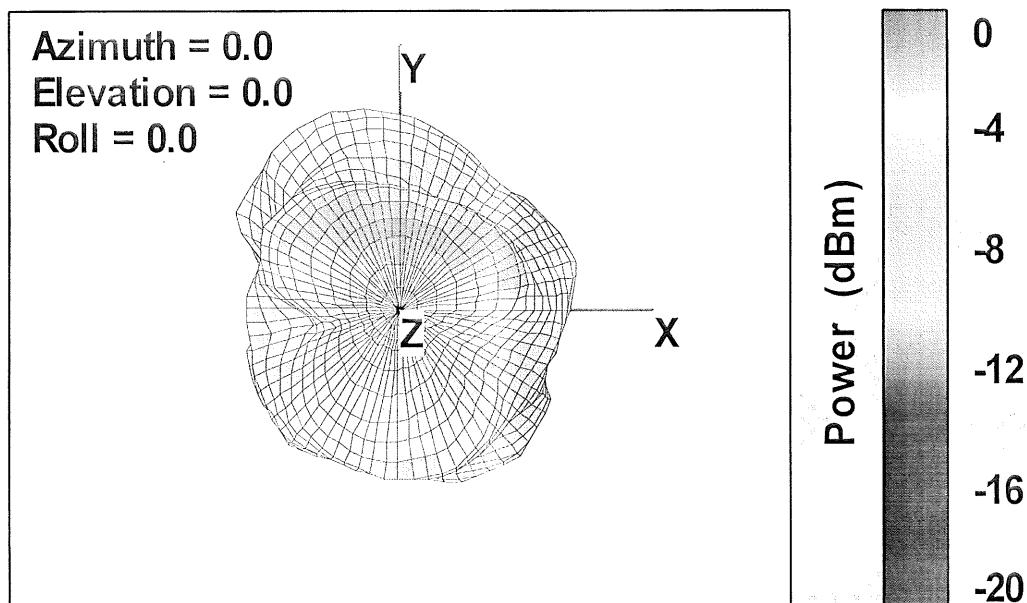
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## 5. Antenna - Radiation Pattern Test Data

### Total



Total Point Values	Ant. Port Input Pwr. (dBm)	Tot. Rad. Pwr. (dBm)	Peak EIRP (dBm)	Directivity (dBi)	Efficiency (dB)	Efficiency (%)	Gain (dBi)
Frequency (MHz)							
2400	0	-5.19847	-0.758568	4.43991	-5.19847	30.2101	-0.758568
2410	0	-5.26773	-0.773247	4.49448	-5.26773	29.7322	-0.773247
2420	0	-5.24748	-0.585349	4.66213	-5.24748	29.8712	-0.585349
2430	0	-5.40594	-0.612638	4.7933	-5.40594	28.8009	-0.612638
2440	0	-5.49369	-0.624929	4.86876	-5.49369	28.2248	-0.624929
2450	0	-5.50548	-0.634792	4.87069	-5.50548	28.1483	-0.634792
2460	0	-5.43753	-0.57442	4.86311	-5.43753	28.5921	-0.57442
2470	0	-5.3995	-0.479727	4.91977	-5.3995	28.8436	-0.479727
2480	0	-5.49285	-0.419763	5.07309	-5.49285	28.2303	-0.419763
2490	0	-5.43976	-0.177993	5.26176	-5.43976	28.5775	-0.177993
2500	0	-5.57396	-0.0555497	5.51841	-5.57396	27.7079	-0.0555497



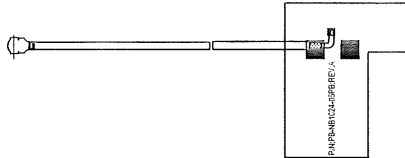
Date: 2023/02/06

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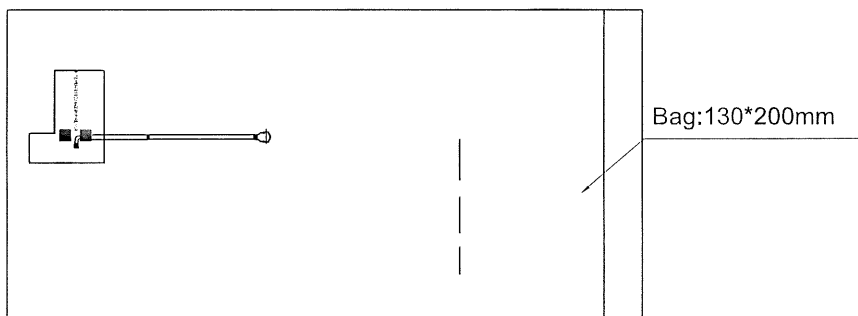
Part Number : NB1024-E65BF	Revision : A
Name: Embedded Antenna	Customer :

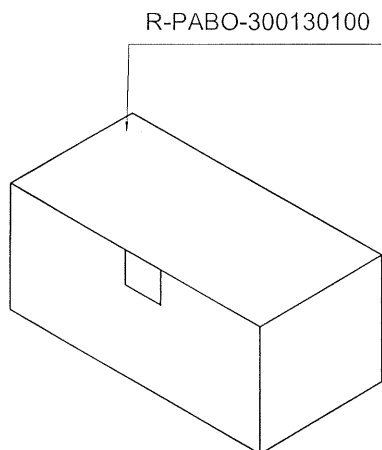
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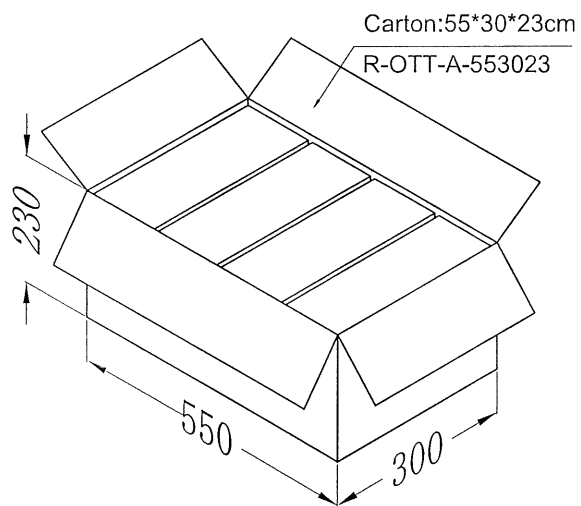
2. 100PCS/per Bag



3. 1000 PCS/per Box



4. 8000PCS/per Carton



Carton Label:

ITEM NO:  
Q ,TY: \*\*\*\* PCS  
N.W: \*\*\*\* KGS  
G.W: \*\*\*\* KGS  
MEAS:55\*30\*23CM

Green Label

Side Mark

**IVX**

C/NO.  
MADE IN CHINA

Case Mark

APPROVED BY : SFCHECKED BY : YSDESIGNED BY : WS





## 東莞康捷電子有限公司(Cortec Technology Inc.)

## 樣品檢測報告(Sample inspection report)

编号(number): 20230225001

客戶名稱 Customer	TF	產品編號 Product ID	NB1024-E65BF		產品名稱 P/N	內置天线				
送樣日期 send kind time	2023.02.25	送樣數量 sample number	70pcs	檢驗數量 Inspection no	20 pcs	檢驗日期 Testing Date	2023.02.25			
第幾次打樣 The first few times proofing		1	產品工程師 product engineer		魏沈					
物料組合 combination of materials	塑膠 plasti	/								
	五金 metal	端子								
	其他 other	FPC、线材								
序號 Item	檢測項目 Inspection item	規格要求 Specification requiremenes	檢驗記錄 Inspection record					判定 (deteminant)		檢驗工具(方法) Inspection tool(way)
			1	2	3	4	5	OK	NG	
1	外觀 appearance	无边形、刮伤	OK	OK	OK	OK	OK	√		目视
2	實配 it with	1.13四代端子	OK	OK	OK	OK	OK	√		对扣
3	功能 function	电性	OK	OK	OK	OK	OK	√		网络分析仪
4	尺寸(size)	65.0±3.0mm	65	65	65	65	65	√		钢尺
5		62.0±3.0mm	62	62	62	62	62	√		钢尺
6		17.6±0.5mm	17.55	17.54	17.55	17.56	17.54	√		2. 5D投影
7		11.4±0.5mm	11.28	11.27	11.28	11.27	11.29	√		2. 5D投影
8		7.0±0.5mm	6.93	6.94	6.94	6.95	6.96	√		2. 5D投影
9		22.0±0.5mm	21.90	21.91	21.93	21.92	21.93	√		2. 5D投影
10										
11										
12										
13										
是否符合ROHS指令 products comply with ROHS		<input checked="" type="checkbox"/> 是(Yes) <input type="checkbox"/> 不是(No) <input type="checkbox"/> 其他(Other)								
最終結果判定 Integration result		<input checked="" type="checkbox"/> 合格(OK) <input type="checkbox"/> 不合格(NG)								
備註 (Mark)										

審核(Audit): 梁继锋

確認(Confirm By): 徐瑞阳

檢驗員(Checkout By): 罗丹丹

表單編號Flie No.: COR/F-H-58b

SGS TaiBei Network---http://twap.sgs.com/sgsrsts/chn/cheres\_tw.asp

SGS Mainland Network---http://rsts.cn.sgs.com/zh-cn/cheres\_cn.asp

SGS Korea S. Network---http://rohs.kr.sgs.com/sgsrsts/en/cheres\_en.asp

PLS fill out the correct data for search

- 1.Report Number
- 2.Report Date(YYYY/MM/DD)
- 3.Product Name(Input the first 10 figures. Do not include the blank )
- 4.The graphic presentation checking yard

Part Number : NB1024-E65BF

HSF Datasheet

Num ber	Detail Part Number	Detail Name	Material	RoHS Test Results										Report Number	Test Date	Test Name	Test Locale
				Cd	Pb	Hg	Cr(VI)	PBBs	PBDEs	DBP	BBP	DIBP	DEHP				
1	PB-CB-113B	FPC	PI	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC2203104910	2022.03.22	SJC-8025S.	SGS
2	R-CB-113B	Cable	FEP黑色色母	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC222604310	2022.12.13	FEP黑色	SGS
3			FEP	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	NGBMR23000169901	2023.02.06	FLUORINATED ETHYLENE	SGS
4			镀锡铜	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	A2220469900101001	2022.10.25	TIN PLATING ROUND	CTI
5	CR-113-04	Mini Connector	镀银铜	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	SHAEC2217007511	2022.12.15	SILVER-COATED	SGS
6			PBT	N.D.	10.4	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	ETR22C03352	2022.12.22	POLYBUTYLENE	SGS
7			铜	N.D.	5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC2301145809	2023.02.08	C5210	SGS
8			镀金层	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	A2220058173101001E	2022.03.05	金镀层	CTI

PLS refer the SGS report, fill out the content of Pb, Cd, Hg, Cr6+, PBBs, PBDEs

The content of Pb, Cd, Hg, Cr6+, PBBs, PBDEs is less than 100 ppm in the package. The content of Cd is less than 5 ppm.

According to the EU ROHS directive exemption clause 2011/65/EU Lead as an alloying element in steel containing up to 0.35 % aluminium containing up to 0.4% copper alloy containing up to 4%