

Product Number: NB1470-A140BF
Product Name: Antenna



Specification For Approval

Date: 2025 / 09 / 19

File No.: 2509190001

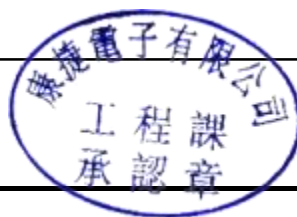
Version: 1.0

Customer : WQ

Customer P/N : /

INVAX P/N : NB1470-A140BF

Description : Antenna



Cortec Checked By:



Customer Approved By:



INVAX System Technology Corp.
4F. No. 815.Chung Hsiao East Rd.,Sec.5
Taipei, TAIWAN

TEL:886-2-2788-5218 FAX:886-2-2783-1658
<http://www.invaxsystem.com>



Cortec Technology Inc.
Xian-Xi Industrial, Sha-Tou Administration Zone,
Chang-An Town, Dong-Guan City, Guangdong
Province, China

TEL:86-769-85388261 FAX:86-769-85317869
<http://www.cortec.com.cn>

Index:

- 1. Revision History / Page 3**
- 2. Specification / Page 4**
- 3. Characteristics and Reliability Test / Page 5**
- 4. Antenna - S Parameter Test Data / Page 6**
- 5. Antenna - Radiation Pattern Test Data / Page 7**
- 6. Mechanical and Packing Drawing / Page 8 ~ 9**
- 7. Material Description and RoHS Test Report / Page 10 ~ end**

Product Number: NB1470-A140BF
Product Name: Antenna



1. Revision History

Revision	Date	Change Notification	Description
1.0	2025. 09. 19	初版	

Product Number: NB1470-A140BF

Product Name: Antenna



2. Specification

Sample Photo



A. Electrical Characteristics

Frequency	2400 ~ 2500 MHz
V.S.W.R.	≤ 2.0
Peak Gain	1.12 dBi
Polarization	Linear
Impedance	50 Ohm

B. Material & Mechanical Characteristics

Material of Radiator	PCB
Cable Type	O.D. 1.13 mm
Connector Type	MHF1
Pull Test of Connector	≥ 1 Kg

C. Environmental

Operation Temperature	- 40 °C ~ + 65 °C
Storage Temperature	- 40 °C ~ + 80 °C

Product Number: NB1470-A140BF

Product Name: Antenna



3. Characteristics and Reliability Test

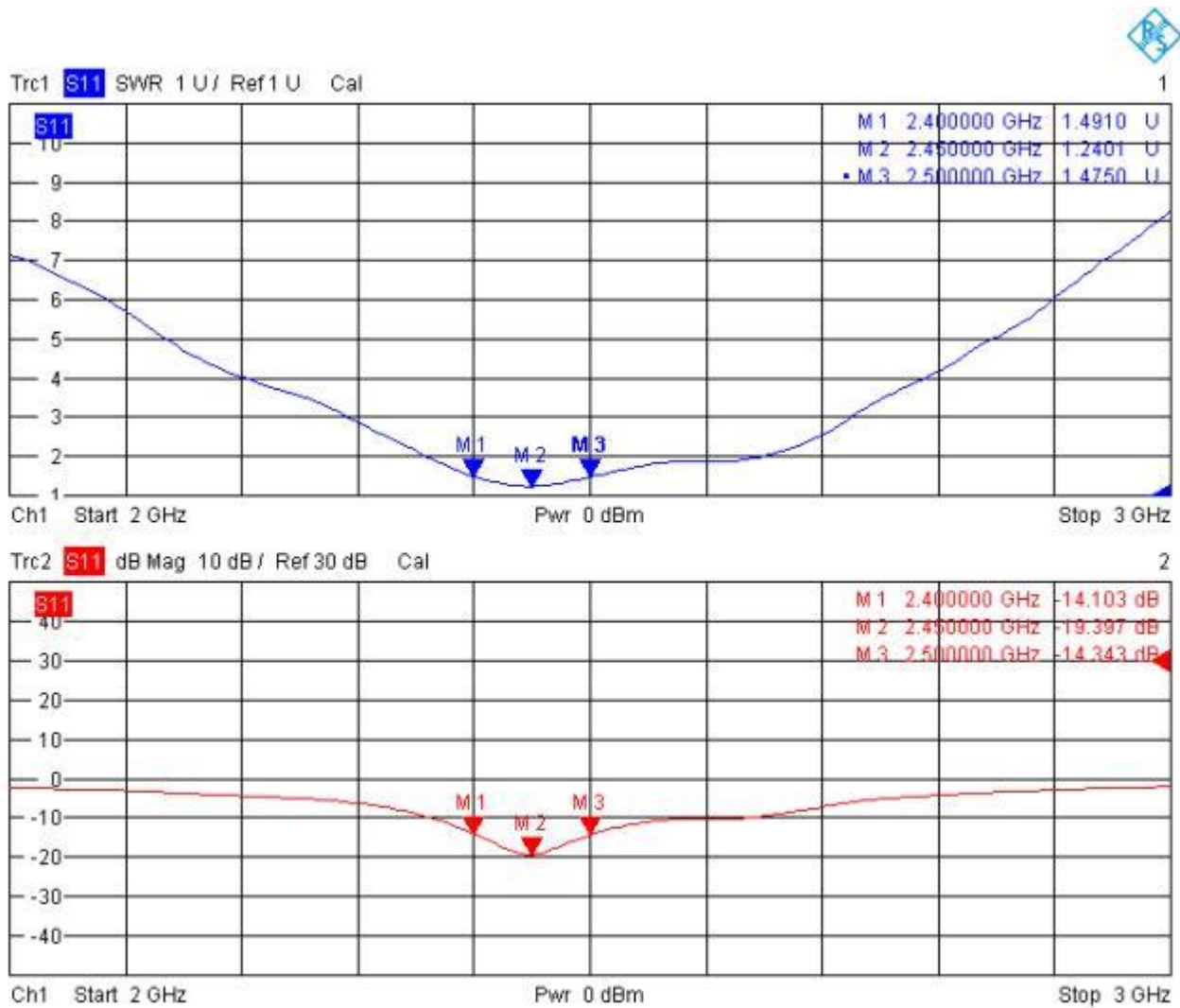
Test Items		Test Condition and Procedure	Requirements
C1	S.W.R.	Set DUT on Network Analyzer; make individual calibration to test	Directive DUT specification
C2	Antenna Gain	Set DUT on Antenna Chamber; make individual calibration to test	Directive DUT specification
M1	Vibration	GB / T2423 . 48-1997 Amplitude: 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
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

Product Number: NB1470-A140BF

Product Name: Antenna



4. Antenna - S Parameter Test Data

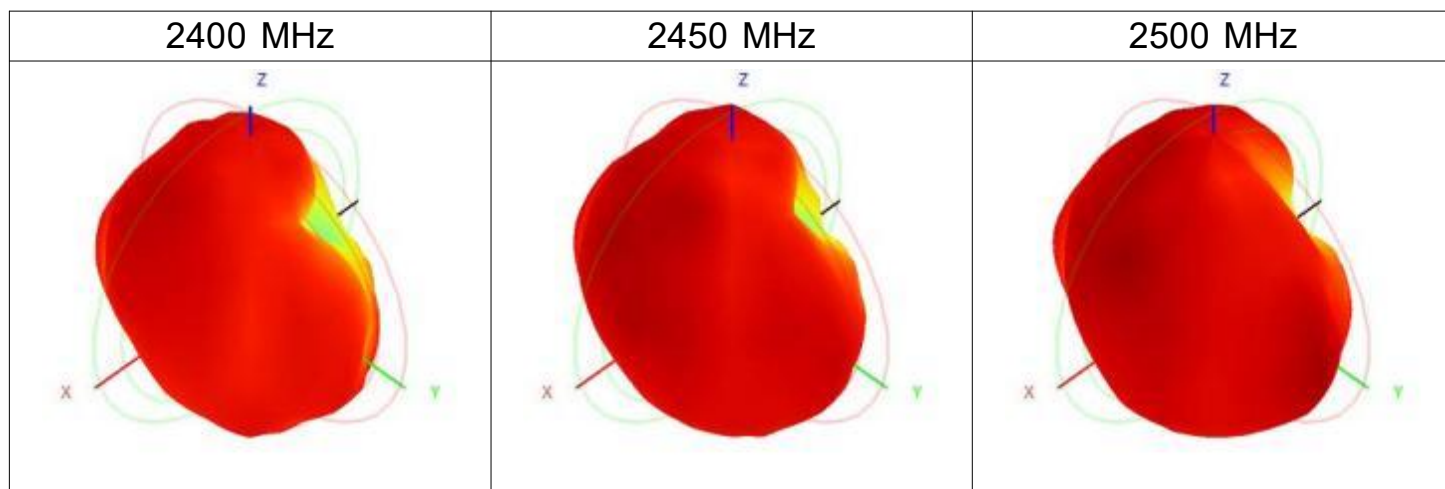


Product Number: NB1470-A140BF

Product Name: Antenna



5. Antenna - Radiation Pattern Test Data



频率(MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2500.0
效率 (dBi)	-3.92	-3.84	-4.07	-4.28	-4.27	-4.76	-4.53	-4.67	-4.70	-4.56
增益 (dBi)	1.10	1.12	0.73	0.34	0.18	-0.49	-0.46	-0.77	-0.76	-0.60
效率 (%)	40.54	41.28	39.15	37.30	37.43	33.42	35.23	34.09	33.89	35.01
方向性(dB)	5.02	4.96	4.81	4.62	4.45	4.27	4.07	3.90	3.94	3.96

1	2	3	4	5	6	7	8																																																																																						
HF☐ RoHS☒ REACH☐ CONFIDENTIAL					<table><tr><td>SIGN</td><td>DATE</td><td>DESCRIPTION</td><td>APPROVER</td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>			SIGN	DATE	DESCRIPTION	APPROVER																																																																																		
SIGN	DATE	DESCRIPTION	APPROVER																																																																																										
E							E																																																																																						
D							D																																																																																						
C							C																																																																																						
B	Note: 1.The * and Red Mark are important ;"Cpk "Identify for process control(CpK≥1.33). 2.Tolerance:Unmarked tolerance refer to the standard tolerance please. 3.Pay attention to the direction of the connector.						B																																																																																						
A	<table><tr><td>4</td><td>GS-NB1470-01A</td><td>Adhesive</td><td>T911</td><td></td><td>1</td></tr><tr><td>3</td><td>PB-NB1470-01FB</td><td>PCB</td><td>FR4</td><td>35*10*T0.6mm</td><td>1</td></tr><tr><td>2</td><td>R-CB-113BS</td><td>Coaxial Cable</td><td>OD1.13</td><td>Black</td><td>1</td></tr><tr><td>1</td><td>CR-113</td><td>Connector</td><td>Cu</td><td>Au Plating</td><td>1</td></tr><tr><td>No.</td><td>Part Number</td><td>Name</td><td>Material</td><td>Finish</td><td>Q'ty</td></tr></table>					4	GS-NB1470-01A	Adhesive	T911		1	3	PB-NB1470-01FB	PCB	FR4	35*10*T0.6mm	1	2	R-CB-113BS	Coaxial Cable	OD1.13	Black	1	1	CR-113	Connector	Cu	Au Plating	1	No.	Part Number	Name	Material	Finish	Q'ty	<table><tr><td colspan="2">naxsystemGnup</td><td colspan="2">Cortec Technology Inc.</td></tr><tr><td colspan="2">cortec</td><td colspan="2">Http://www.invaxsystem.com E-mail:info@invax.com.tw</td></tr><tr><td colspan="2">TITLE: 2.4G Antenna</td><td colspan="2">CUSTOMER P/N: /</td></tr><tr><td colspan="2">PART NO.: NB1470-A140BF</td><td colspan="2"></td></tr><tr><td>APP BY</td><td>CHK BY</td><td>RF BY</td><td>DES BY</td></tr><tr><td>SF</td><td>YS</td><td></td><td>CMY</td></tr><tr><td>2025/09/02</td><td>2025/09/02</td><td></td><td>2025/09/02</td></tr><tr><td colspan="2"></td><td colspan="2">UNITS: mm</td></tr><tr><td colspan="2"></td><td colspan="2">SCALE: 1/1</td></tr><tr><td colspan="2"></td><td colspan="2">REVISION: A</td></tr><tr><td colspan="2"></td><td colspan="2">Tolerance</td></tr><tr><td colspan="2"></td><td colspan="2">X.X ±0.5</td></tr><tr><td colspan="2"></td><td colspan="2">X.XX ±0.2</td></tr><tr><td colspan="2"></td><td colspan="2">X° ±1</td></tr></table>	naxsystemGnup		Cortec Technology Inc.		cortec		Http://www.invaxsystem.com E-mail:info@invax.com.tw		TITLE: 2.4G Antenna		CUSTOMER P/N: /		PART NO.: NB1470-A140BF				APP BY	CHK BY	RF BY	DES BY	SF	YS		CMY	2025/09/02	2025/09/02		2025/09/02			UNITS: mm				SCALE: 1/1				REVISION: A				Tolerance				X.X ±0.5				X.XX ±0.2				X° ±1		A
4	GS-NB1470-01A	Adhesive	T911		1																																																																																								
3	PB-NB1470-01FB	PCB	FR4	35*10*T0.6mm	1																																																																																								
2	R-CB-113BS	Coaxial Cable	OD1.13	Black	1																																																																																								
1	CR-113	Connector	Cu	Au Plating	1																																																																																								
No.	Part Number	Name	Material	Finish	Q'ty																																																																																								
naxsystemGnup		Cortec Technology Inc.																																																																																											
cortec		Http://www.invaxsystem.com E-mail:info@invax.com.tw																																																																																											
TITLE: 2.4G Antenna		CUSTOMER P/N: /																																																																																											
PART NO.: NB1470-A140BF																																																																																													
APP BY	CHK BY	RF BY	DES BY																																																																																										
SF	YS		CMY																																																																																										
2025/09/02	2025/09/02		2025/09/02																																																																																										
		UNITS: mm																																																																																											
		SCALE: 1/1																																																																																											
		REVISION: A																																																																																											
		Tolerance																																																																																											
		X.X ±0.5																																																																																											
		X.XX ±0.2																																																																																											
		X° ±1																																																																																											
1	2	3	4	5	6	7	8																																																																																						

Date: 2025/09/18

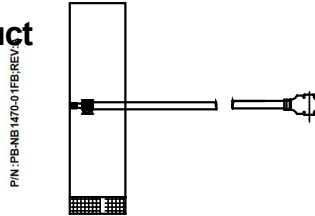
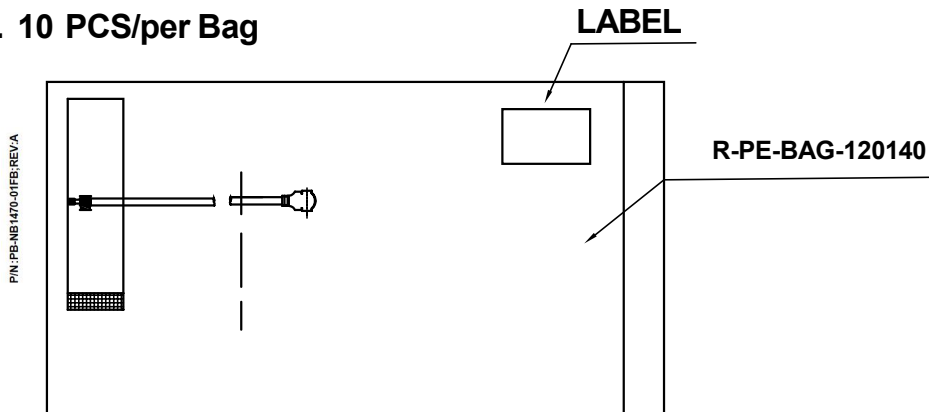
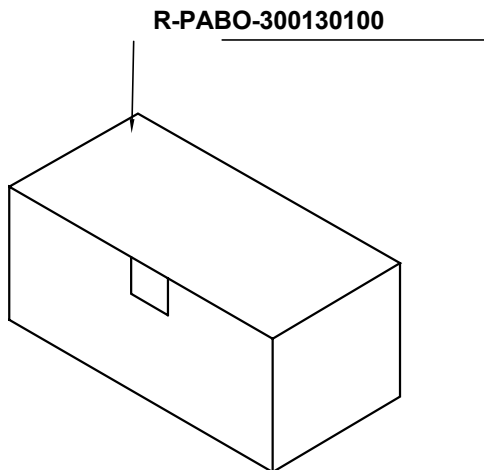
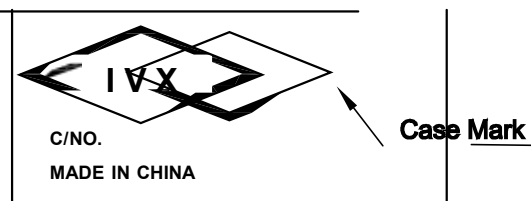
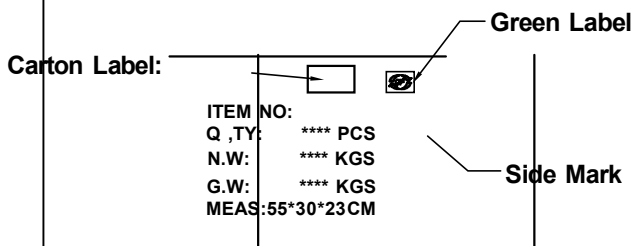
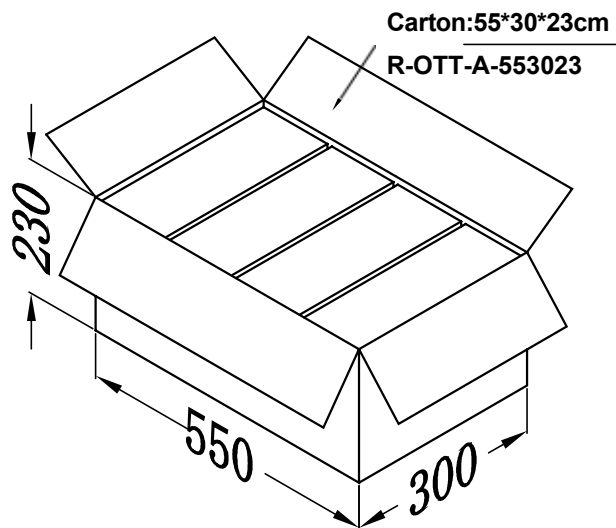
Page: 1 of 1

Part Number : NB1470-A140BF

Revision : A

Name: Embedded Antenna

Customer :

1. The Product**2. 10 PCS/per Bag****3. 500PCS/per Box****4. 4000 PCS/per Carton**APPROVED BY : SFCHECKED BY : YSDESIGNED BY : CMY