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Product Number: NB1183-H170BF

Product Name: Antenna



1. Revision History

Revision	Date	Change Notification	Description
1.0	2021.08.10	初版	

Product Number: NB1183-H170BF

Product Name: Antenna

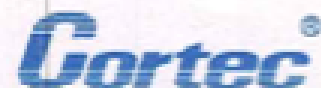


2. Specification

Sample Photo		
		
A. Electrical Characteristics		
Frequency	2400 ~ 2500 MHz 5150 ~ 5850 MHz	
V.S.W.R.	≤ 2.0 @ 2400 ~ 2500 MHz ≤ 2.0 @ 5150 ~ 5850 MHz Test data from the model test	
Peak Gain	2.69dBi @ 2400 ~ 2500 MHz 4.85 dBi @ 5150 ~ 5850 MHz	
Efficiency	55.39 % @ 2400 ~ 2500 MHz 39.7 % @ 5150 ~ 5850 MHz	
Polarization	Linear	
Impedance	50 Ohm	
B. Material & Mechanical Characteristics		
Material of Radiator	PCB	
Cable Type	OD1.13mm	
Connector Type	Mini Connector	
C. Environmental		
Operation Temperature	- 40 °C ~ + 65 °C	
Storage Temperature	- 40 °C ~ + 80 °C	

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3. Characteristics and Reliability Test

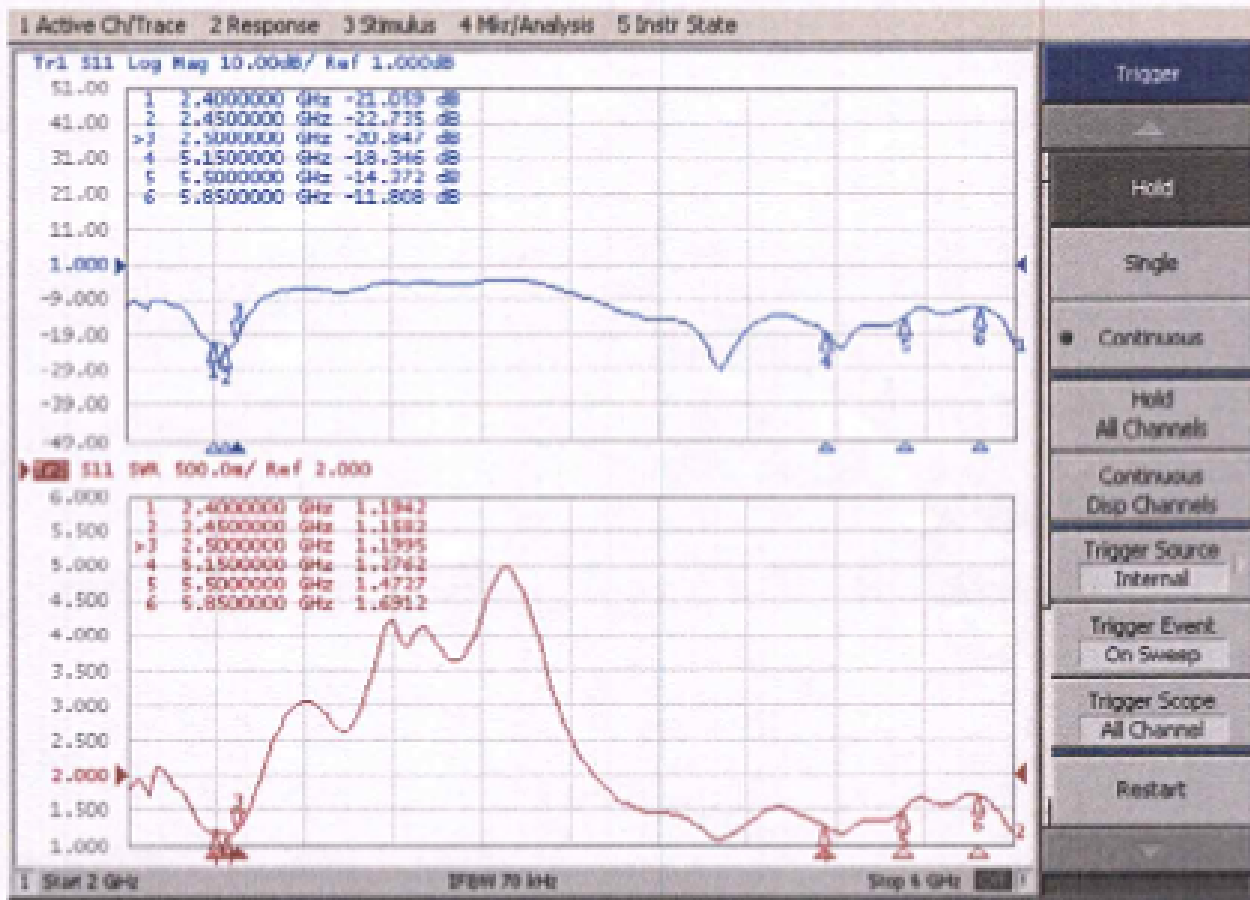
Test Items 測試項目		Test Condition and Procedure 測試方法	Requirements 要求	Result 結果
C1	V.S.W.R. 電壓駐波比	Set DUT on Network Analyzer; make individual calibration to test 設置網路分析儀參數進行測試	Directive DUT specification 符合待測物規範	PASS
C3	Antenna Gain 天線增益	Set DUT on Antenna Chamber; make individual calibration to test 設置天線暗室參數進行測試	Directive DUT specification 符合待測物規範	PASS
M1	Vibration 震動	GB / T2423.48-2008 Amplitude: 0.03 inch (1.5mm); Freq: 20 to 80 to 20 Hz 3 directions; 2 hours for each direction 振幅 1.5mm : 頻率 20~80~20Hz : 3 個方向各 2H	1. No Visual Damage 2. Frequency Tol. $\leq 5\%$ 無明顯外觀不良; 頻率偏移 $\leq 5\%$	PASS
M3	Solderability 可焊性	GB / T2423.28-2005 Temp: $260 \pm 5^\circ \text{C}$; Duration: 5 seconds 溫度 $260 \pm 5^\circ \text{C}$; 持續 5 秒	Tin evenly on full 上錫均勻飽滿	PASS
M4	Pull Test 拉力	Holding with individual specification; force applied to axis of terminal 單獨定義產品端子拉力	1. Directive DUT specification 2. Frequency Tol. $\leq 5\%$ 符合待測物規範; 頻率偏移 $\leq 5\%$	PASS
M6	Dimension 尺寸	Inspection of dimension, color, material, package, surface process. 檢查尺寸, 顏色, 材料, 包裝, 表面處理	Directive DUT specification 符合待測物規範	PASS
E3	Temperature and Humidity Chamber 恒溫恒濕	GB / T 2423.3-2006 Temp: 80°C / 12 H; -40°C / 12H RH: $\geq 90\%$; Time: 24H 溫度 80°C 測試 12H 轉 -40°C 測試 12H; 濕度 $\geq 90\%$; 時間 24H	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. $\leq 5\%$ 恢復 2H 后, 無明顯外觀不良; 頻率偏移 $\leq 5\%$	PASS
E5	Aging test 老化	GB / T 2423.2 - 2008 Temp: 80°C ; Time: 24 hours 溫度 80°C · 測試 24H	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol. $\leq 5\%$ 恢復 2H 后, 無明顯外觀不良; 頻率偏移 $\leq 5\%$	PASS
R1	RoHS	With Reference to IEC 62321:2008 with flow chart 參考 IEC 62321 測試流程	Directive RoHS 2015/863/EU 符合 RoHS 2015/863/EU 標準	PASS

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Product Name: Antenna



4. Antenna - S Parameter Test Data

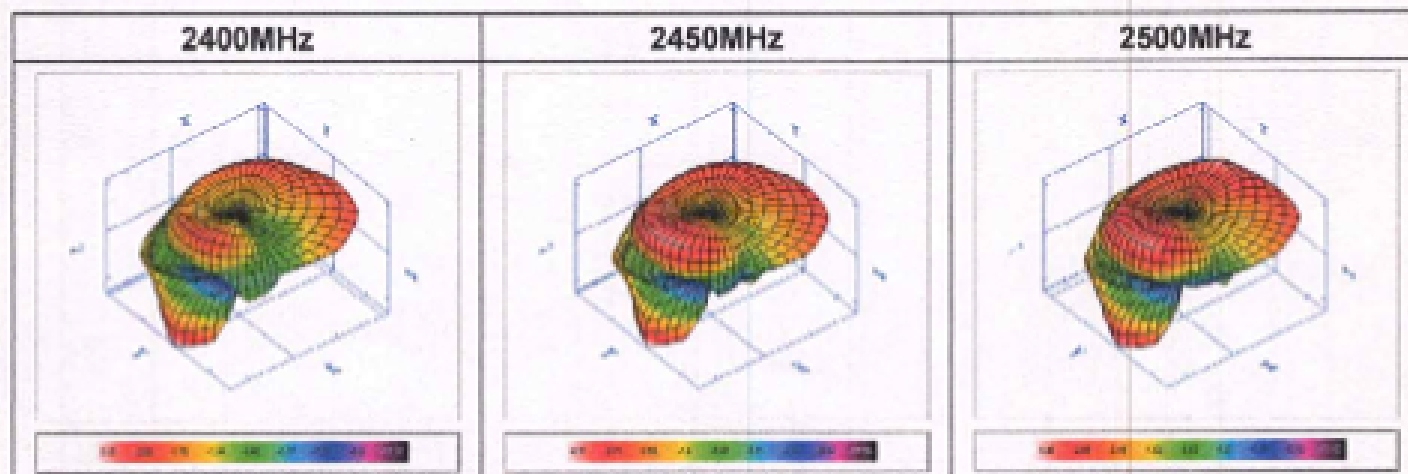


Product Number: NB1183-H170BF

Product Name: Antenna



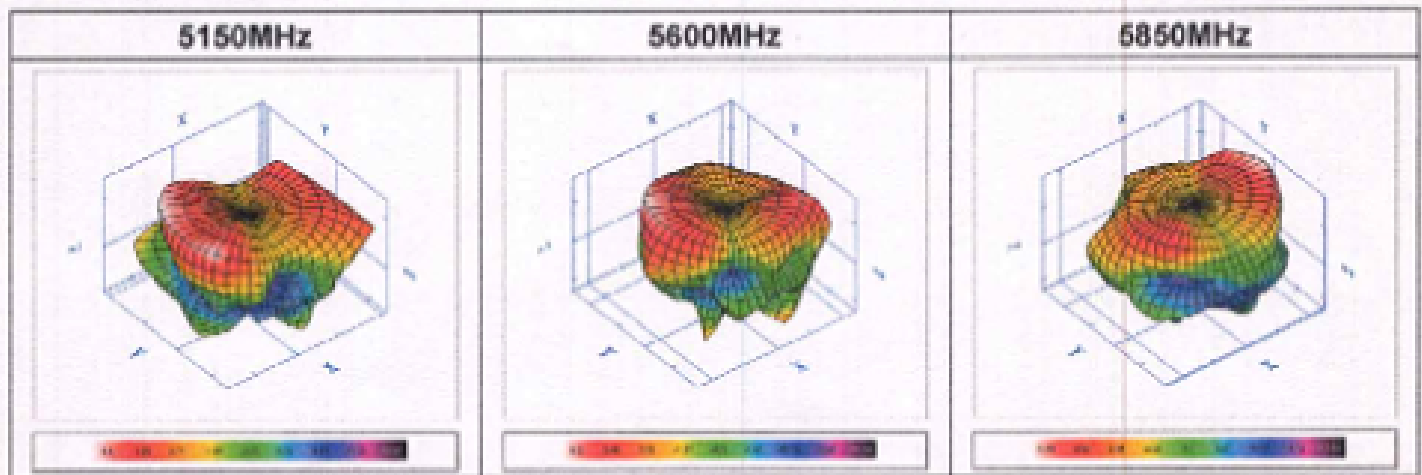
5. Antenna - Radiation Pattern Test Data



Frequency	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
TRP (dBm)	-2.85	-2.8	-2.94	-3.03	-3.02	-3.1	-2.86	-2.84	-2.83	-2.62	-2.57
Peak EIRP (dBm)	2.68	2.65	2.69	2.5	2.68	2.13	2.34	2.48	2.47	2.65	2.66
NHPRP +/- 45 (degree)	-3.7	-3.62	-3.76	-3.9	-3.88	-4	-3.74	-3.71	-3.74	-3.56	-3.55
NHPRP +/- 30 (degree)	-4.8	-4.78	-4.97	-5.06	-5.03	-5.11	-4.84	-4.89	-4.94	-4.75	-4.73
E-Theta Peak Gain (dBi)	-1.01	-0.99	-1.16	-1.1	-0.93	-1.43	-0.86	-1.03	-1.12	-0.83	-0.08
E-Phi Peak Gain (dBi)	1.7	1.89	2.01	1.81	1.76	1.64	1.38	1.66	1.81	2.06	2.04
E-Total Peak Gain (dBi)	2.68	2.65	2.69	2.5	2.68	2.13	2.34	2.48	2.47	2.65	2.66
Directivity (dBi)	5.53	5.46	5.63	5.53	5.7	5.23	5.2	5.32	5.31	5.26	5.23
Efficiency (%)	51.84	52.42	50.87	49.74	49.88	48.94	51.75	51.97	52.08	54.73	55.39

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Product Name: Antenna

Gortec®



Frequency	5150	5250	5350	5470	5600	5725	5750	5800	5825	5850	5875
TRP (dBm)	4.54	4.63	4.68	4.57	5.28	4.43	5.41	4.81	4.79	4.36	4.01
Peak EIRP (dBm)	3.35	3.08	3.95	4.07	3.6	3.29	3.1	3.22	4.07	4.5	4.85
NHPRP +/- 45 (degree)	-6.22	-5.99	-5.92	-6.16	-6.76	-6.26	-7.48	-6.72	-7.03	-6.42	-6.07
NHPRP +/- 30 (degree)	-6.58	-6.3	-6.25	-6.52	-7.21	-6.79	-7.92	-7.38	-7.45	-6.99	-6.64
E-Theta Peak Gain (dBi)	-1.45	-1.72	-2.93	-2.44	-1.07	-2.05	-4.13	-3.65	-3.66	-2.42	-2.07
E-Phi Peak Gain (dBi)	3.31	3.01	3.93	4.07	3.57	3.28	2.9	3.07	3.97	4.48	4.83
E-Total Peak Gain (dBi)	3.35	3.08	3.95	4.07	3.6	3.29	3.1	3.22	4.07	4.5	4.85
Directivity (dBi)	7.89	7.71	8.63	8.64	8.87	7.72	8.51	8.03	8.86	8.86	8.86
Efficiency (%)	35.18	34.46	34.03	34.91	29.68	36.1	28.77	33.05	33.18	36.62	39.7

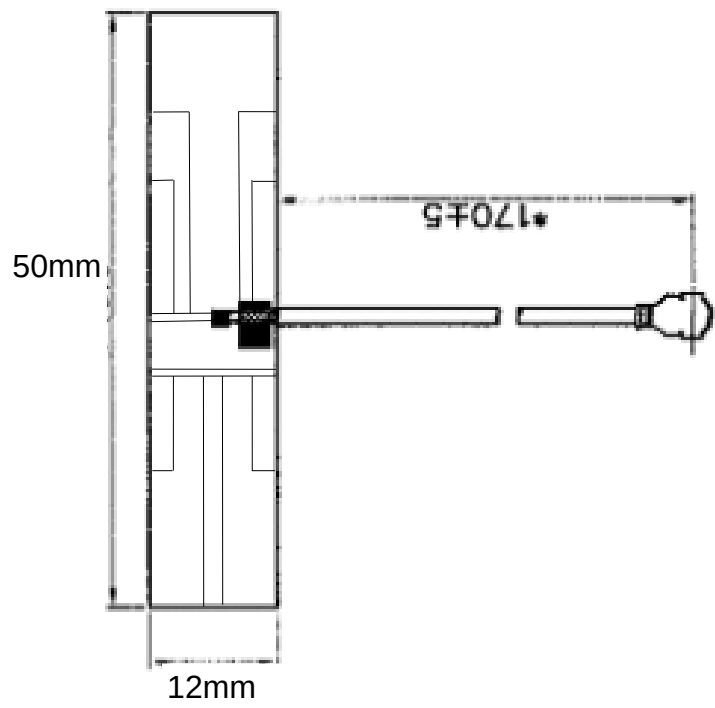
HF☐

RoHS☒

REACH☐

CONFIDENTIAL

DATE	DESCRIPTION	APPROVER
A		
A		
A		



Note:

1. The ϕ and Red Mark are Important; Cpk Identify for process control(Cpk ≥ 1.33).
2. Tolerance: Unmarked tolerance refer to the standard tolerance please.

4	GS-NB1183H-01SE	Adhesive	SONY-G98XX	40*8*5mm	1
3	PB-NB1183-08FB	PCB	FR4	40*8.5*1mm Black	1
2	R-CB-113B	Coaxial Cable	OD1.13	Black	1
1	CR-113-C4	Connector	Cu	Au Plating	1
No.	Part Number	Name	Material	Finish	QTY

www.cortec.com

Cortec

Cortec Technology Inc.

TEL: 0086 21 6111 1838

E-MAIL: sales@cortec.com

TITLE: 2.4G5.8GHz Embedded Antenna

PART NO.: NB1183-H170BF

CUSTOMER P/N: /

APP BY: Grand	CHK BY: Kenny	DES BY: /	DATE: 20210309	WS: 20210309	DESIGN: A	Tolerance: X.X ±0.5 X.XX ±0.3 X' ±0.2
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东完康捷电子有限公司

零部件尺寸检验报告

部品料号		NB1180-H1170EP			检验日期		2021.08.09			
部品名称		内置天线			校验阶段		☒ 试产		☐ 量产	
项次	尺寸	公差		测量数据(5个部件)					结果	
		+	-	#1	#2	#3	#4	#5	OK	NG
1	170	0	0	172	170	172	171	171	Y	
2	8.5	0.3	0.3	8.53	8.52	8.56	8.62	8.55	Y	
3	40	0.3	0.3	40.25	40.14	40.06	40.08	40.15	Y	
4	6.3	0.3	0.3	6.29	6.35	6.35	6.34	6.31	Y	
5										
6										
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检测人: 易凤莲

审核: 易凤莲

批准: 梁继峰

SGS 台灣網站 → http://tw.sgs.com/sgsrsts/cn/cheres_fw.asp
 SGS 大陸網站 → http://rsts.cn.sgs.com/cn/cheres_cn.asp
 SGS 韓國網站 → http://rsts.kr.sgs.com/sgsrsts/en/cheres_en.asp

CORIF-G-47b

請輸入以下報告正確資料及檢查碼以便查核

1. 報告編號
2. 報告日期 (YYYYMMDD)
3. 產品名稱 (輸入前 10 個字不含空白)
4. 顯示檢查碼 (按指示圖面)



原捷電子有限公司	
地址:	時間
部門:	研發部
電話:	文書

物料中HSF對象物質含量調查表

物料名稱: NSI DK3-JH008P

序號	物料型號	物料各構成名稱	各構成物料 的材質	測試報告裡RoHS2.0對應物質測試結果										檢測報告編號	測試日期	測試名稱	測試機構 名稱
				Cd	Pb	Hg	Cr(VI)	PBBs	PBDEs	DBP	BBP	DEHP	DIBP				
1	FR-4	PCB	FR4	N.D.	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC2104493214	2021.04.15	FR-4	SGS
2	GS-AG1180H0-SE	Poster	G9000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	ETR21101402 ETR21200106	2021.01.14 2021.02.08	ADHESIVE	SGS
3			EVA	N.D.	6	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC2100688411	2021.01.14	Environment	SGS
4			黑色色母	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	A2210000465101003	2021.01.07	SGS-PLAS Color Master Batch	CTI
5			FEP	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	SHAEC2101969102	2021.02.03	完全無乙丙橡膠粉	SGS
6			橡膠粉	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	TSNEC2002256103	2020.11.30	TPU R/ATN	SGS
7			橡膠粉	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	A0210000330101001C	2021.01.25	橡膠粉	CTI
8			PBT	N.D.	3.45	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	ETR20000686	2020.12.30	POLYBUTYLENE	SGS
9	CR-113-G4	Cable	銅	N.D.	5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC2102363601	2021.02.25	BRODGE CS216	SGS
10			鍍金膠	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	A2200375650101001	2020.10.31	Gold plating	CTI

根據測試報告如實填寫鉛、銅、汞、六價鉻、PBBs和PBDEs六項禁用物質的含量

包裝材料中鉛、銅、汞、六價鉻的含量不超過100ppm，銅的允許濃度為5ppm

歐盟RoHS指令豁免條款2015/863/EU，銅中含金元素中的鉛含量達0.3%、銅含量達0.4%、銅合金中的鉛含量達4%