

Product Number: NB1183-H170BF
Product Name: Antenna



Gortec Technology Inc.
45 Jinghaidong Road, Changan Town,
Dongguan City, Guangdong Province, China

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1. Revision History

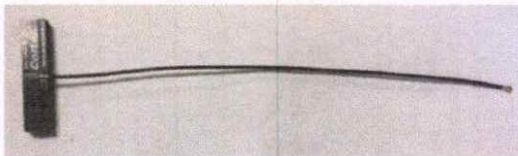
Revision	Date	Change Notification	Description
1.0	2021.08.10	初版	

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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	2.69 dBi @ 2400 ~ 2500 MHz 4.07 dBi @ 5150 ~ 5825 MHz
Efficiency	50 % @ 2400 ~ 2500 MHz 35 % @ 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

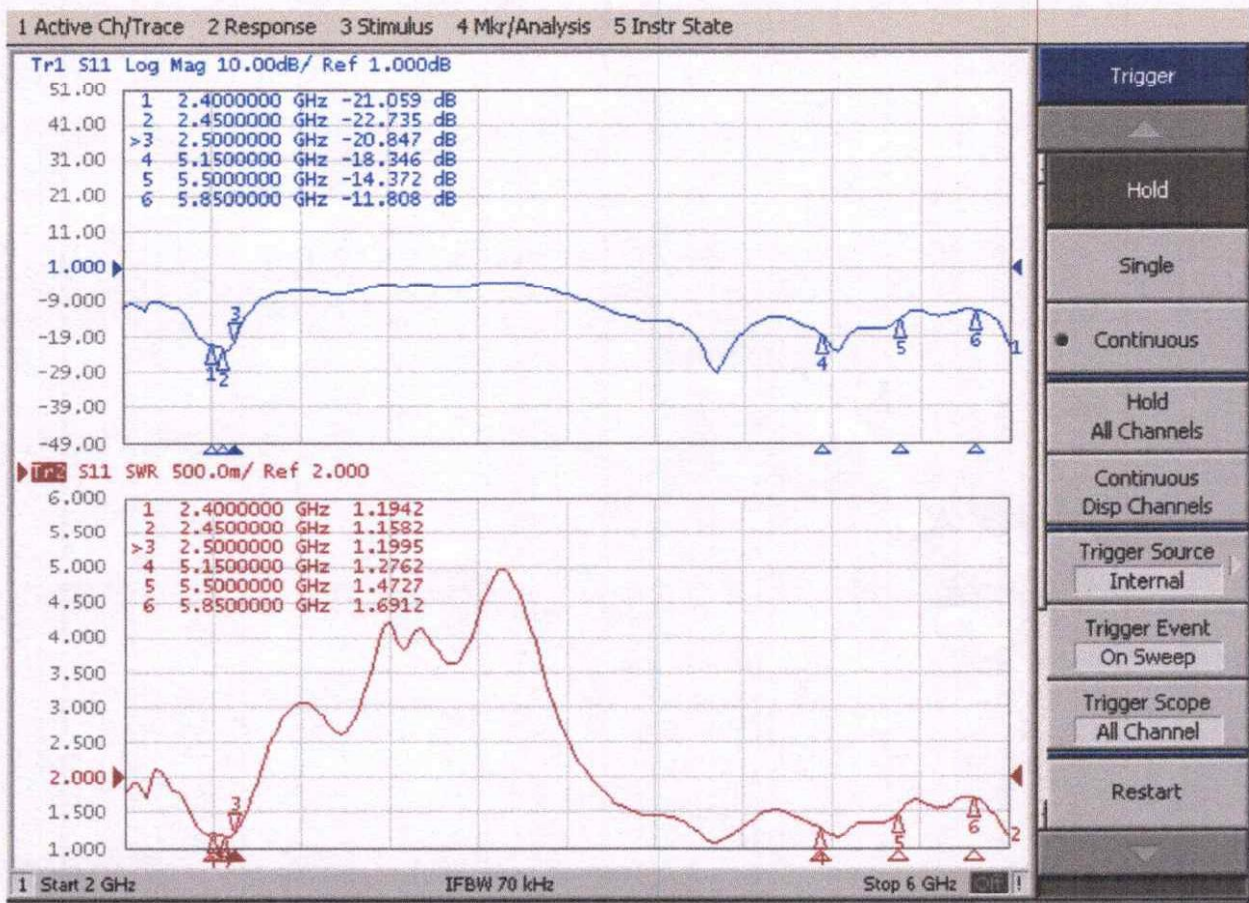
Test Items 測試項目		Test Condition and Procedure 測試方法	Requirements 要求	Result 結果
C1	V.S.W.R. 電壓駐波比	Set DUT on Network Analyzer; make individual calibration to test 設置網路分析儀參數進行測試	Directive DUT specification 符合待測物規範	PASS
C3	Antenna Gain 天線增益	Set DUT on Antenna Chamber; make individual calibration to test 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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4. Antenna - S Parameter Test Data

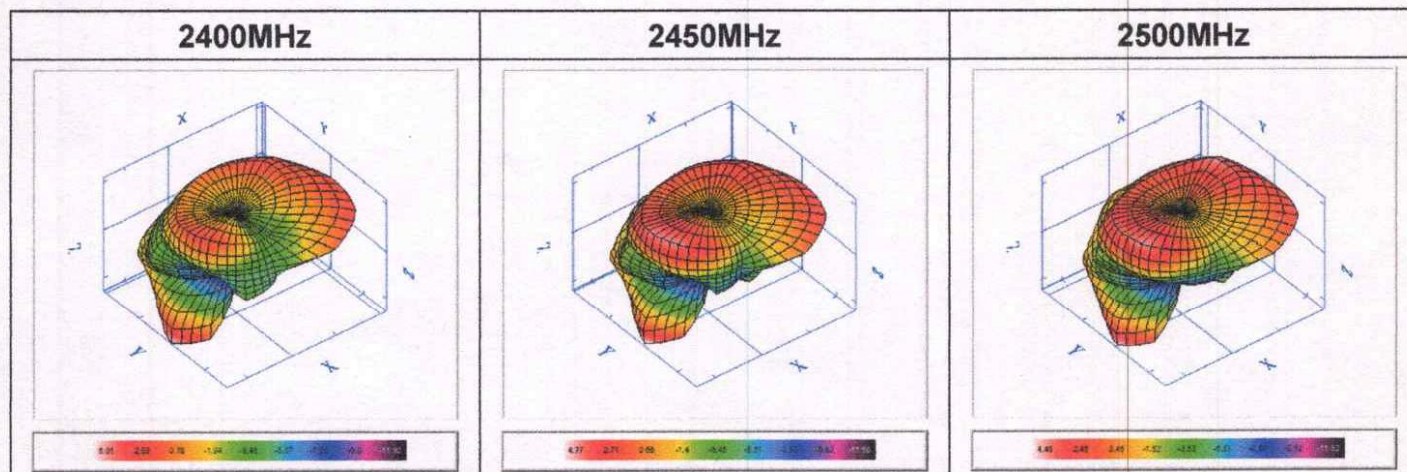


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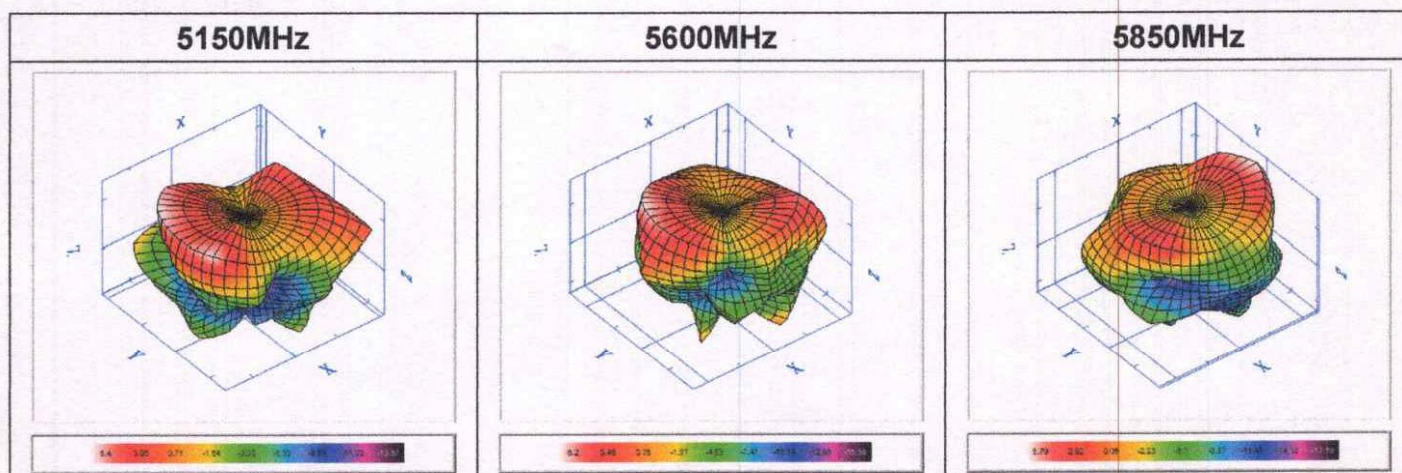


5. Antenna - Radiation Pattern Test Data



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
Efficiency (%)	51.84	52.42	50.87	49.74	49.88	48.94	51.75	51.97	52.08	54.73	55.39

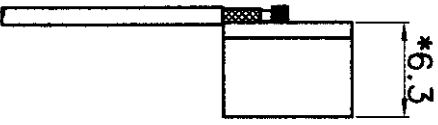
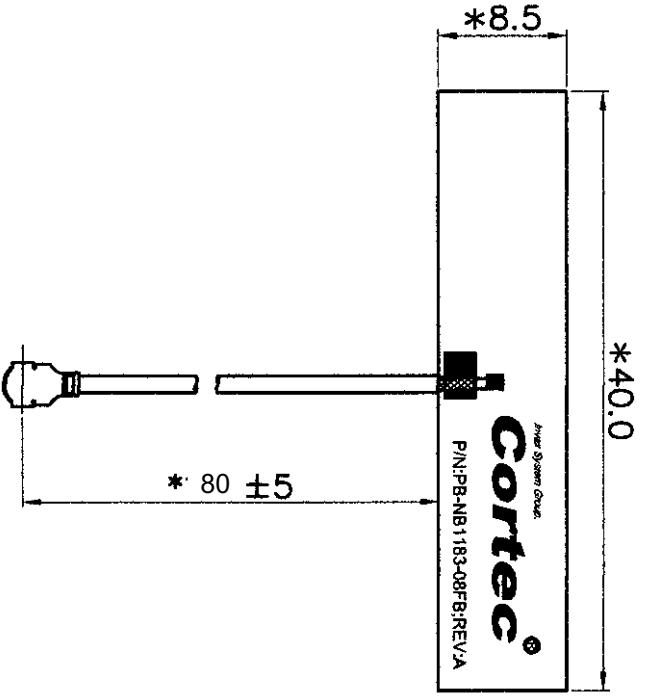
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Frequency	5150	5250	5350	5470	5600	5725	5750	5800	5825	5850	5875
TRP (dBm)	-4.54	-4.63	-4.68	-4.57	-5.28	-4.43	-5.41	-4.81	-4.79	-4.36	-4.01
Peak EIRP (dBm)	3.35	3.08	3.95	4.07	3.6	3.29	3.1	3.22	4.07	4.5	4.85
NHPRP +/- 45 (degree)	-6.22	-5.99	-5.92	-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
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	

SIGN	DATE	DESCRIPTION	APPROVER
A			
A			
A			



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.

No.	Part Number	Name	Material	Finish	Qty
4	GS-NB1183H-01SE	Adhesive	SONY-G9000	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-113-04	Connector	Cu	Au Plating	1

Cortec Inven System Group Cortec Technology Inc. TEL: 386-2-2785218 E-MAIL: info@cortec.com.tw FAX: 386-2-27857885	
TITLE: 2.485.8GHz Embedded Antenna	
PART NO.: NB1183-H170BF	CUSTOMER P/N: /
APP BY: Grant	CHK BY: Kenny
2021/08/09	2021/08/09
DES BY: WS	2021/08/09
UNIT: mm	SCALE: 1/1
REVISION: A	Tolerance: X.X ±0.5, X.XX ±0.2, X° ±1

Date: 2021/08/09

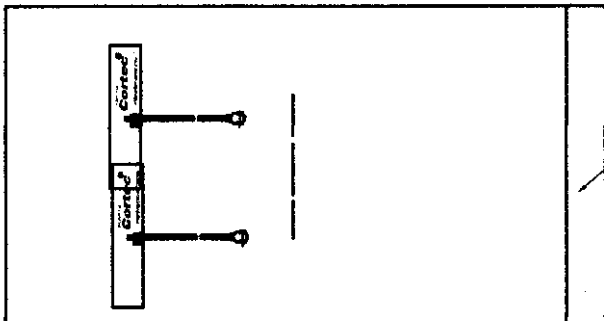
Page: 1 of 1

Part Number : NB1183-H170BF	Revision : A
Name: Embedded Antenna	Customer :

1. The Product

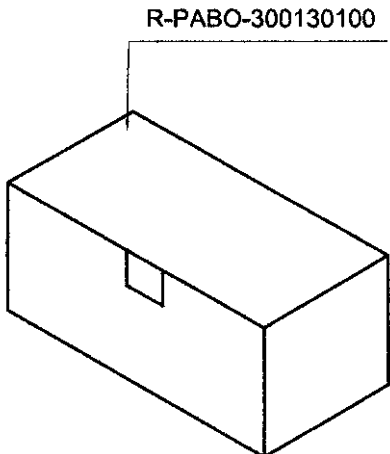


2. 25 PCS/per Bag



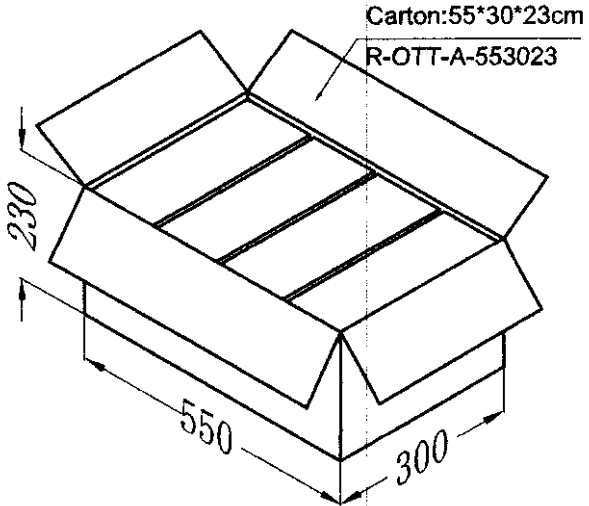
Bag: 130*200*0.04mm

3. 500 PCS/per Box



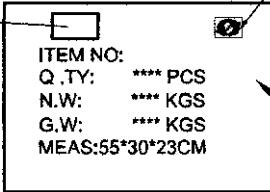
R-PABO-300130100

4. 4000 PCS/per Carton



Carton: 55*30*23cm
R-OTT-A-553023

Carton Label:



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

Green Label

Side Mark



Case Mark

APPROVED BY : Grant

CHECKED BY : Kenny

DESIGNED BY : ws

东完康捷电子有限公司

零部件尺寸检验报告

部品料号		NB1183-H170BF			检验日期			2021.08.09			
部品名称		内置天线			检验阶段			☒ 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	3	3	172	170	172	171	171	V		
2	8.5	0.3	0.3	8.53	8.52	8.56	8.62	8.55	V		
3	40	0.3	0.3	40.25	40.14	40.06	40.08	40.15	V		
4	6.3	0.3	0.3	6.29	6.35	6.35	6.34	6.31	V		
5											
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28											

检测人：易凤莲

审核：易凤莲

批准：梁继锋

SGS 台灣網站 → http://twap.sgs.com/sgsrsts/chn/cheres_tw.asp
 SGS 大陸網站 → http://rsts.cn.sgs.com/chn/cheres_cn.asp
 SGS 韓國網站 → http://rohs.kr.sgs.com/sgsrsts/en/cheres_en.asp

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 (YYYY/MM/DD)
3. 產品名稱 (輸入前 10 個字不含空白)
4. 圖示檢查碼 (依指示畫面)

COR/F-G-47b



康捷電子有限公司	
填表：	時麗
部門：	研發部
職務：	文員

物料中HSF對象物質含量調查表

物料名稱：NB1183-H100BF

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	測試名稱	測試機構名稱
				Cd	Pb	Hg	Cr(VI)	PBBs	PBDEs	DBP	BBP	DIBP	DEHP			
1	PB-NB1183-08FB	PCB	FR4	N.D.	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC210493214	KB-6160	SGS
2	GS-NB1183H-01SE	Paster	G9000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	ETR21101402 ETR21200106	ADHESIVE	SGS
3			EVA	N.D.	8	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC2100686411	Environment	SGS
4	R-CB-113B	Cable	黑色母	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	A2210000465101003	FEP+PFA 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	聚全氟乙丙烯樹脂.	SGS
6			鍍錫銅	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	TSNEC2002256103	TIN PLATIN	SGS
7			鍍銀銅	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	A2210025230101001C	鍍銀銅線	CTI
8	CR-113-04	Connector	PBT	N.D.	3.45	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	ETR20C05695	POLYBUTYLENE	SGS
9			銅	N.D.	5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC2102353601	BRONZE C5210	SGS
10			鍍金層	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	A2200375950101001	Gold plating	CTI

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

包裝材料中鉛、鎘、汞、六價鉻總含量不超過100ppm，鎘的允許濃度為5ppm

歐盟ROHS指令豁免條款2015/865/EU、銅合金元素中的鉛含量達0.35%、鉛含量達0.4%、銅合金中的鉛含量達4%