

Specification For Approval

Date: 2020 / 11 / 13

File No.: 201113003

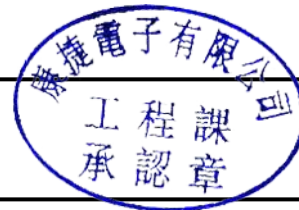
Version: 1.0

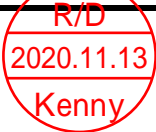
Customer : TF

Customer P/N : /

INVAX P/N : NB1523-A210BX

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. Mechanical and Packing Drawing / Page 7 ~ 8**
- 6. Material Description and RoHS Test Report / Page 9 ~ end**

Product Number: NB1523-A210BX

Product Name: Antenna



1. Revision History

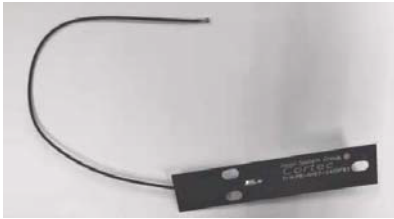
Revision	Date	Change Notification	Description
1.0	2020.11.13	初版	

Product Number: NB1523-A210BX

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 <= 2.5 @ 5150 ~ 5850 MHz
Peak Gain	4.39 dBi@2400~2500MHz 5.89 dBi@5150~5850MHz
Polarization	Linear
Impedance	50 Ohm
B. Material & Mechanical Characteristics	
Material of Radiator	PCB
Cable Type	O.D. 1.13 mm
Connector Type	Mini Connector
C. Environmental	
Operation Temperature	- 40 °C ~ + 65 °C
Storage Temperature	- 40 °C ~ + 80 °C

Product Number: NB1523-A210BX

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

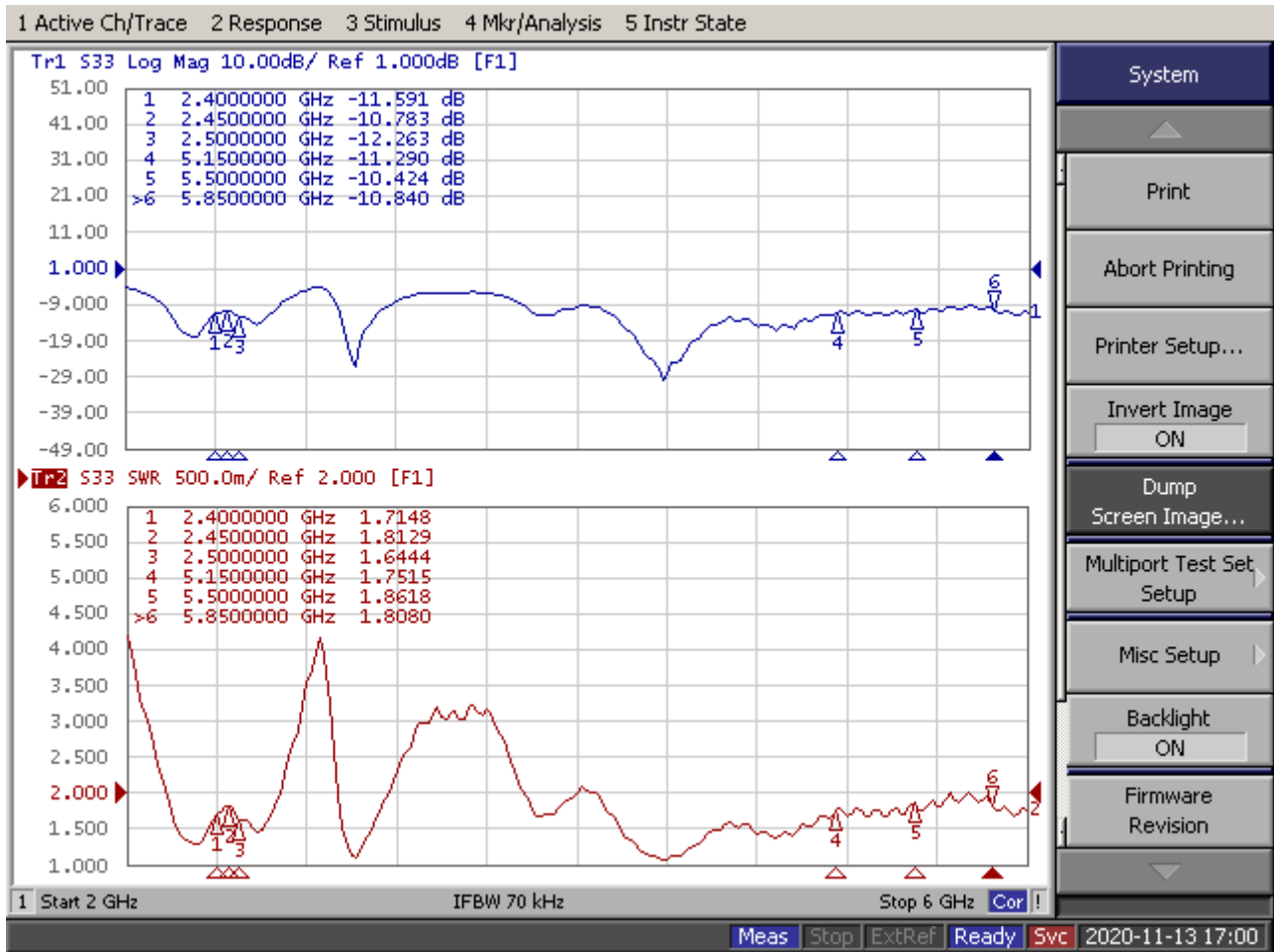
Product Number: NB1523-A210BX

Product Name: Antenna



4. Antenna - S Parameter Test Data

裸測

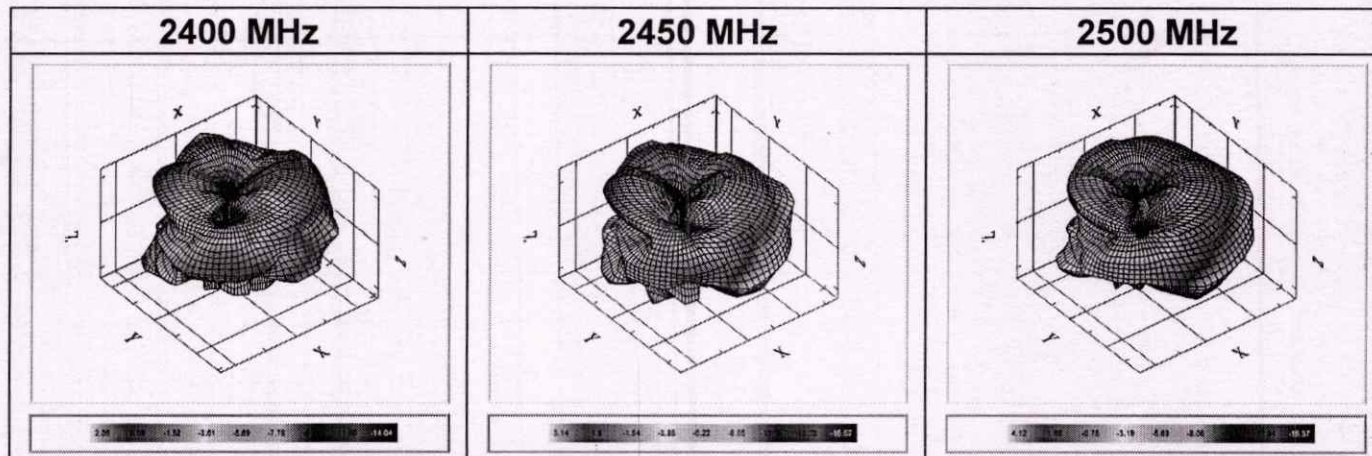


Product Number: NB1356-A240BF

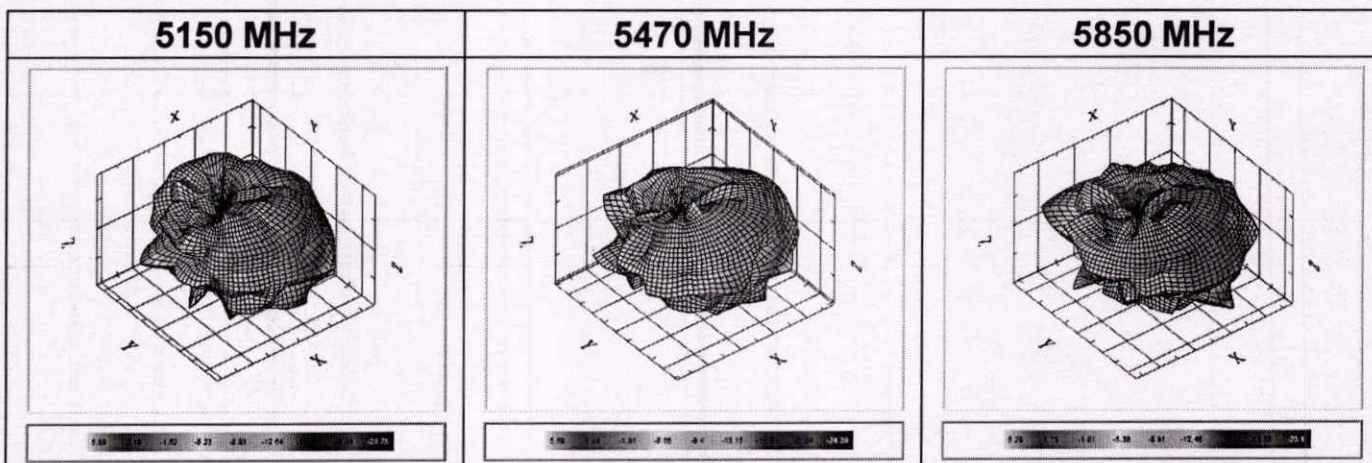
Product Name: Antenna



5. Antenna - Radiation Pattern Test Data



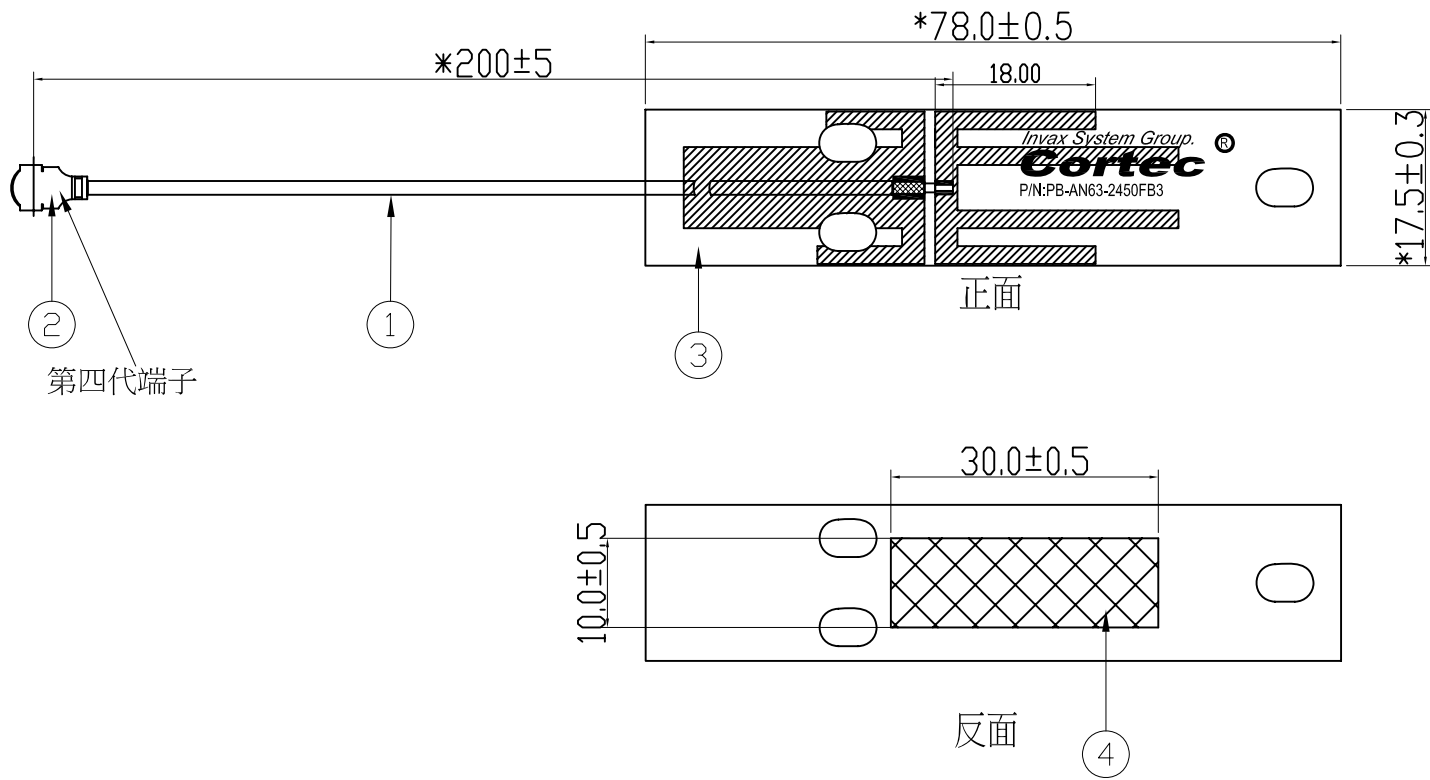
Frequency	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
E-Total Peak Gain (dBi)	2.65	2.94	2.81	2.92	3.17	3.14	3.89	4.06	4.39	4.18	4.12
Efficiency (%)	60.93	63.07	64.74	63.24	63.11	58.73	63.47	63.71	64.87	60.9	60.09
Average Gain (dB)	-2.15	-2	-1.89	-1.99	-2	-2.31	-1.97	-1.96	-1.88	-2.15	-2.21



Frequency	5150	5250	5350	5470	5600	5700	5725	5785	5800	5850
E-Total Peak Gain (dBi)	5.89	5.61	5.44	5.58	5.1	4.68	5.01	4.01	4.99	5.28
Efficiency (%)	65.62	59.49	56.67	63.92	59.72	58.65	65.08	57.36	57.55	62.24
Average Gain (dB)	-1.83	-2.48	-2.47	-1.94	-2.24	-2.55	-1.87	-2.81	-2.4	-2.06

HF
 RoHS
 REACH
CONFIDENTIAL

SIGN	DATE	DESCRIPTION	APPROVER
△			
△			
△			



Note:
 1. Mark * is important dimension; "Cpk "Identify for process control(CpK \geq 1.33).
 2. Tolerance: Unmarked tolerance refer to the standard tolerance please.

4	GS-NB1523-01SE	泡棉背膠	SONY-G9000	30*10*5mm	1
3	PB-AN63-2450FB3	PCB	FR4	Black T=0.4mm	1
2	CI-113-04	Connector	Cu	Au Plating	1
1	R-CB-113B	Coaxial Cable	OD1.13	Black	1
No.	Part Number	Name	Material	Finish	Q'ty

Invax System Group.
Cortec

Cortec Technology Inc.
 Http://www.invaxsystem.com Tel: 886-2-27885218
 E-mail: info@invax.com.tw Fax: 886-2-27831658

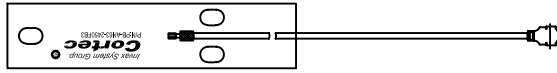
TITLE: 2.4G/5.8G Embedded Antenna

PART NO.: NB1523-A210BX CUSTOMER P/N: /

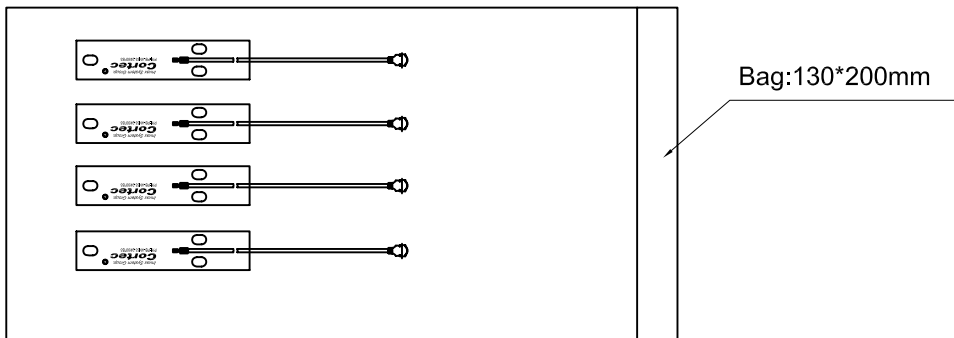
APP BY	CHK BY	RF BY	DES BY		Tolerance
Grant 2020/08/06	Kenny 2020/08/06		任玉浩 2020/08/06		X.X ±0.5 X.XX ±0.2 X° ±1
				UNITS: mm	
				SCALE: 1/1	
				REVISION: A	

Part Number : NB1523-A210BX	Revision : A
Name: 2.4G/5.8G Embedded Antenna	Customer :

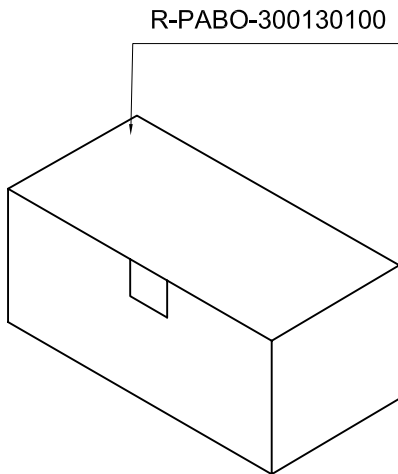
1. The Product



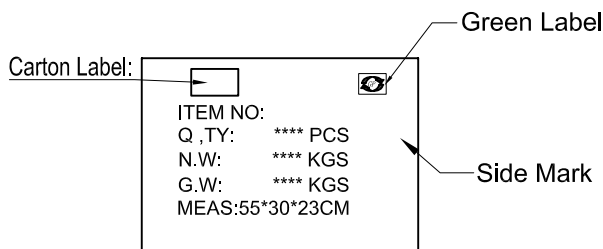
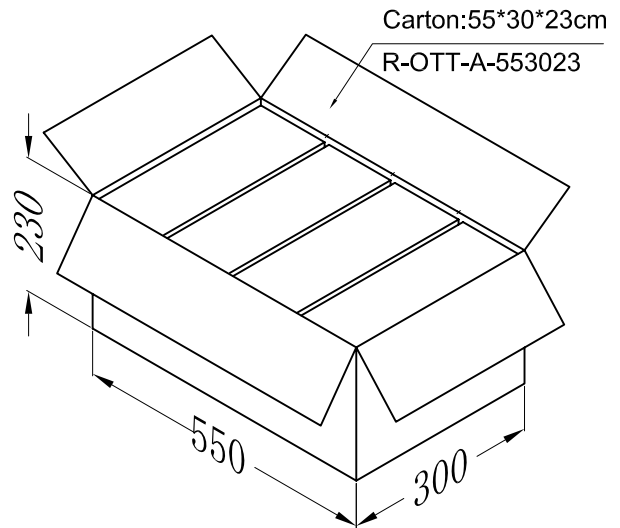
2. 20 PCS/per Bag



3. 200 PCS/per Box



4. 1600 PCS/per Carton



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

COR/F-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 (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)



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：NB1523-A210BX

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RoHS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	DIBP	DEHP					
1	PB-AN63-2450FB3	PCB	FR4	N.D.	12	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC1925344502	2019.12.27	HF-140.	SGS	
2	GS-NB1523-01SE	Paster	G9000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CE202012034 CE202022810	2020.01.15 2020.02.18	ADHESIVE	SGS	
3			EVA	N.D.	33	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC2001834614	2020.02.28	Environmental protectio	SGS
4	R-CB-113B	Cable	黑色色母	N.D.	8	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC2002124301	2020.03.13	Fluoroplastics FEP	SGS	
			FEP	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	NGBML2000312802	2020.01.22	聚全氟乙丙烯树脂.	SGS	
			鍍錫銅	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	A2200069617101001C	2020.04.01	鍍錫圓銅線	CTI
			鍍銀銅	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC2002004901	2020.03.05	SC	SGS
5	CI-113-04	Mini Connector	PBT	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	KA/2020/50243	2020.05.11	PBT	SGS	
			銅	N.D.	20	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	SHAEC2008922725	2020.06.04	C5210-C5212,Cu,Sn	SGS
			鍍金層	N.D.	18	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	SHAMLP1921181501	2019.09.26	plating fil	SGS

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、鋼中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%