

Specification For Approval

Date: 2019 / 05 / 28

File No.: 190528001

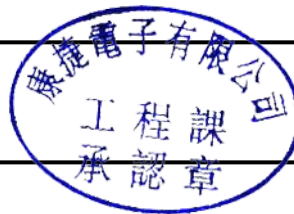
Version: 1.0

Customer : 弘真科技股份有限公司

Customer P/N : /

INVAX P/N : AN5800-5546BRS

Description : Antenna



Cortec Checked By:

RD
2019.05.28
Kenny

Customer Approved By:



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Product Number: AN5800-5546BRS

Product Name: Antenna



1. Revision History

Revision	Date	Change Notification	Description
1.0	2019.05.28	初版	

Product Number: AN5800-5546BRS

Product Name: Antenna



2. Specification

Sample Photo	
	
A. Electrical Characteristics	
Frequency	5150 ~ 5850 MHz
V.S.W.R.	<= 2.5 The data is tested with 1M cable
Peak Gain	2.5dBi
Polarization	Linear
Impedance	50 Ohm
B. Material & Mechanical Characteristics	
Material of Radiator	CU
Material of Plastic	TPEE / ABS
Cable Type	RG178
Connector Type	SMA Male Reverse
C. Environmental	
Operation Temperature	- 25 °C ~ + 70 °C
Storage Temperature	- 40 °C ~ + 80 °C
Antenna Color Storage life	< 2 year

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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
C2	Insertion Loss 插入損失	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	N/A
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
C4	Voltage Breakdown 耐電壓	Test voltage should be applied between insulated portions, or between ground as specified. 在绝缘部分测试电压,或指定接地面之间	Max Voltage ≥ 500 V or directive material specification 最大電壓 ≥ 500 V 或符合材料規範	N/A
C5	Insulation Resistance 絕緣阻抗	Set Voltage: 500 ± 50 V; between the insulated portions, or between ground as specified. 設置電壓 500 ± 50 V,在绝缘部份測試或指定接地面之间	Resistance ≥ 500 M ohm or directive material specification 阻抗 ≥ 500 M ohm 或符合材料規範	N/A
C6	Contact Resistance 接觸阻抗	Air Temp: 26°C ; measured with test equipment 室溫 26°C , 指定量測設備	Directive material specification 符合材料規範	N/A
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
M2	Random Drop 跌落	GB / T2423.8-1995 Single : Height: 1.0 Meter; 3 directions; 1 time for each direction 單支天線, 高 1m ; 3 個方向各 1 次	1. No parts separated 、 fracture 2. Frequency Tol. $\leq 5\%$ 產品無脫落、斷裂; 頻率偏移 $\leq 5\%$	PASS
		Packing : Height: 0.76 Meter; 1 corner, 3 edges, 6 surface 包裝 : 高 0.76m , 一角、三棱、六面各一次		N/A
		Antenna+Machine: Height: 0.76 Meter; 1 corner, 3 edges, 6 surface. 整機 : 高 0.76m , 一角、三棱、六面各一次		N/A
M3	Solderability	GB / T2423.28-2005	Tin evenly on full	N/A

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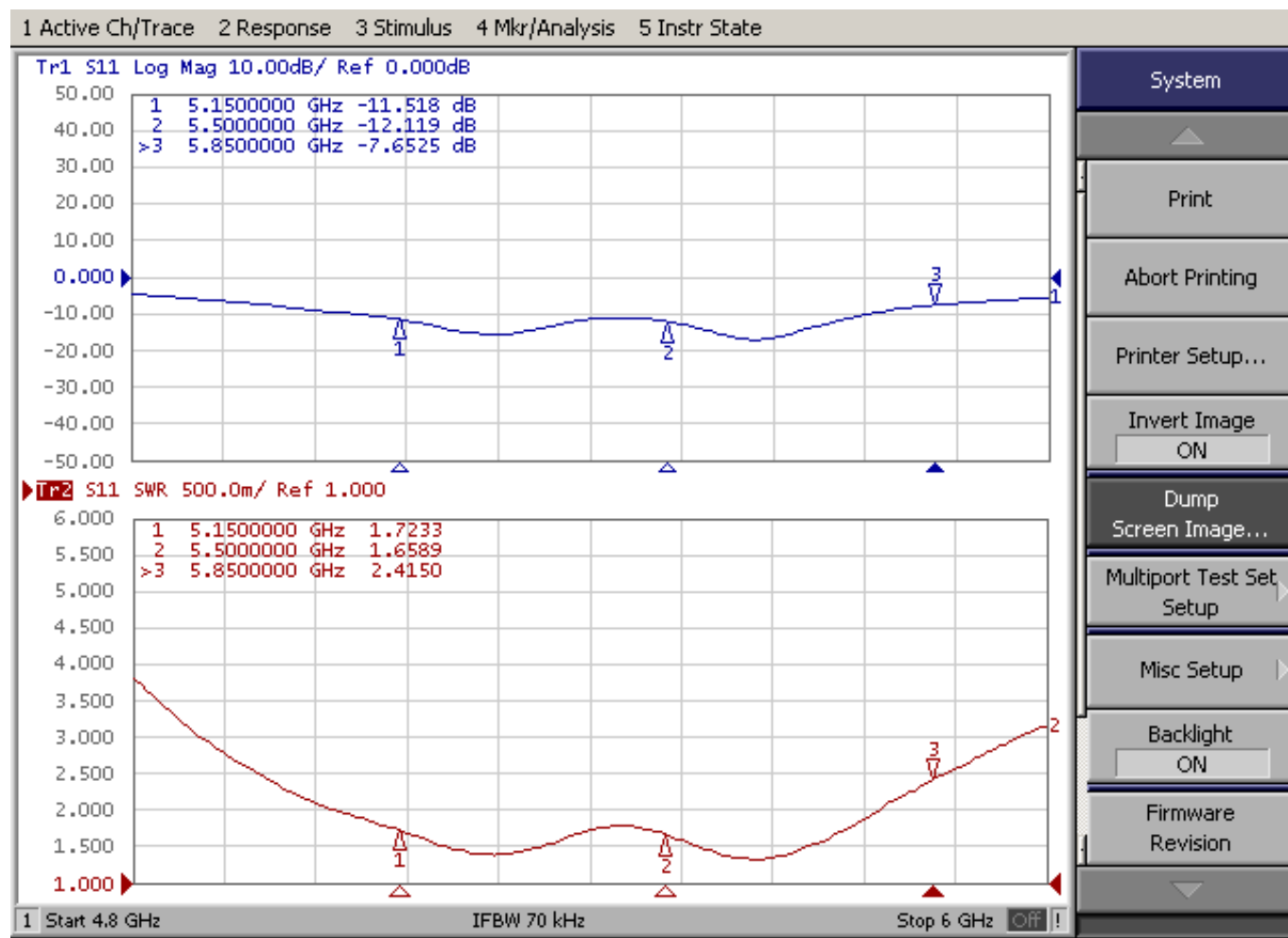
	可焊性	Temp: 260±5° C;Duration: 5 seconds 溫度 260±5° C;持續 5 秒	上錫均勻飽滿	
M4	Pull Test 拉力	Holding with individual specification; force applied to axis of terminal .單獨定義產品端子拉力	1. Directive DUT specification 2. Frequency Tol.≤5% 符合待測物規範;頻率偏移≤5%	PASS
M5	Torque Test 扭力	Holding with individual specification; applied clockwise and counterclockwise to the axis of terminal 單獨定義產品端子之順時針及逆時針扭力	1. Directive DUT specification 2. Frequency Tol.≤ 5% 符合待測物規範;頻率偏移≤5%	PASS
M6	Dimension 尺寸	Inspection of dimension, color, material, package, surface process.检查尺寸,颜色,材料,包装,表面處理	Directive DUT specification 符合待測物規範	PASS
E1	Waterproof 防水	With Reference to IEC 60529 // IP Code Definition 參考 IEC60529 IP 定義	Directive DUT specification 符合待測物規範	N/A
E2	Salt Spray 鹽霧	GB / T 2423.17-2008 Temp: 35°C; RH: ≥ 95%; NaCl solution: ≥ 5%;Time: 24H 溫度 35°C ; 濕度≥95%;鹽水濃度≥5% ; 測試 24H	1. No Visual Damage 2. Frequency Tol.≤5% 無明顯外觀不良;頻率偏移≤5%	PASS
E3	Temperature and Humidity Chamber 恒溫恒濕	GB / T 2423.3-2006 Temp: 80°C / 12 H; -40°C / 12H RH: ≥ 90%; Time: 24H 溫度 80°C 測試 12H 轉-40°C 測試 12H;濕度≥ 90% ; 時間 24H	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.≤5% 恢復 2H 后, 無明顯外觀不良;頻率偏移≤5%	PASS
E4	Thermal Shock 冷熱衝擊	GB / T 2423.22 - 2008 - 40°C (30 minutes) to + 80°C (30 minutes) ; Cycles: 24 - 40°C 測試 30 分轉 80°C 測試 30 分為一個週期;共 24 週期	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.≤5% 恢復 2H 后, 無明顯外觀不良;頻率偏移≤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.≤5% 無明顯外觀不良;頻率偏移≤5%	PASS
E6	High Temp. 高溫	Temp. 270±10°C ; Times : 120 seconds 溫度 270±10°C , 測試時間 120 秒	No Visual Damage 無明顯外觀不良	N/A
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

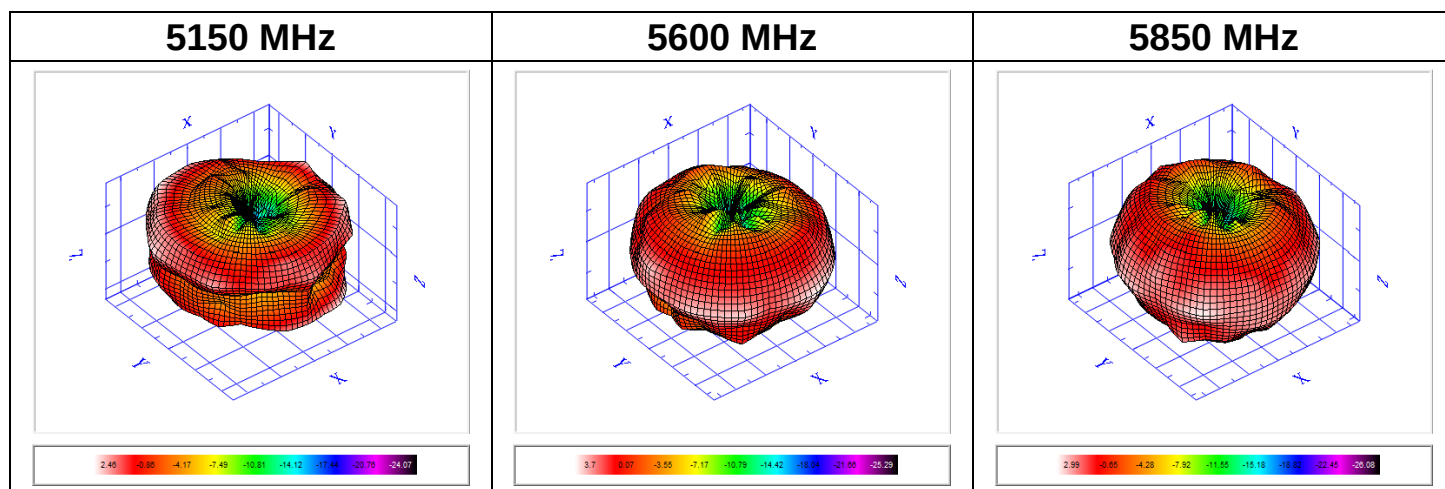


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Product Name: Antenna



5. Antenna - Radiation Pattern Test Data



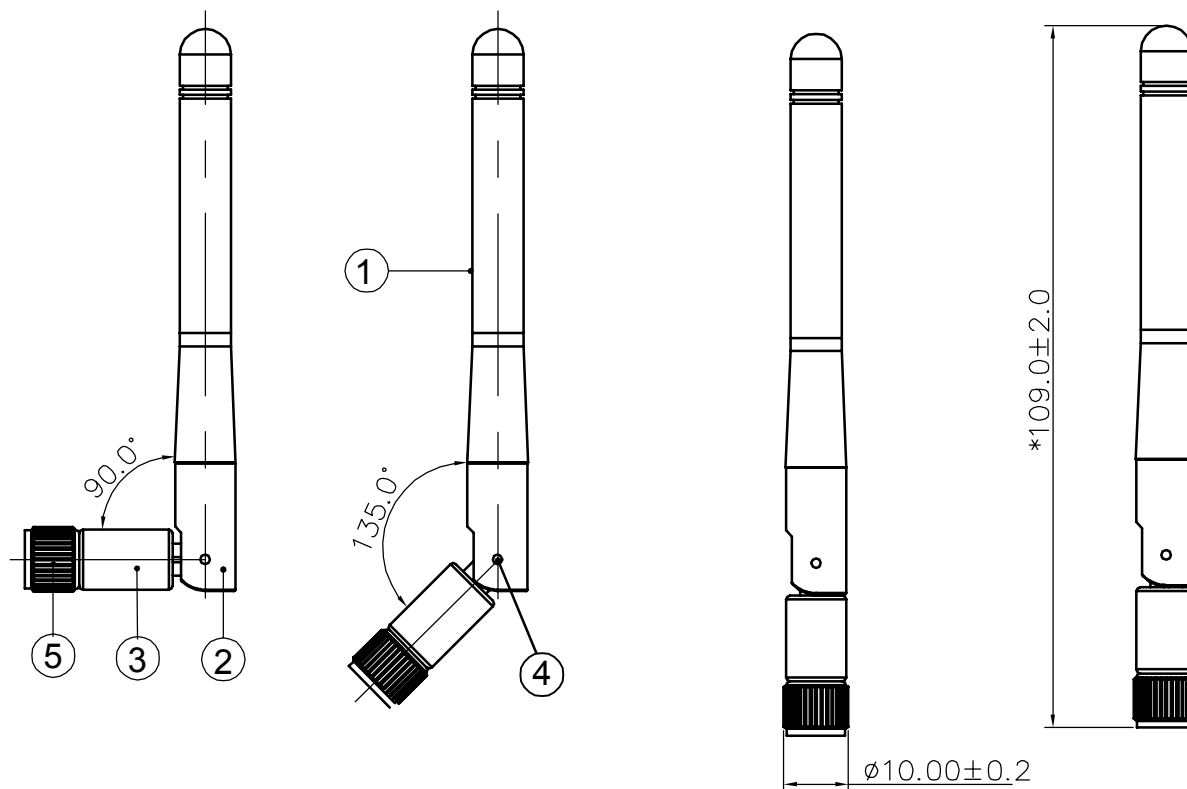
Frequency	5150	5250	5350	5470	5600	5700	5725	5785	5800	5850
E-Total Peak Gain (dBi)	2.46	1.47	1.41	2.63	3.7	2.77	3.01	2.19	1.83	2.99
Efficiency (%)	60.19	47.6	47.7	57.72	78.41	71.87	76.63	65.73	63.1	76.99
Average Gain (dB)	-2.2	-3.22	-3.22	-2.39	-1.06	-1.43	-1.16	-1.82	-2	-1.14

RoHS

Compatible



SIGN	DATE	DESCRIPTION	APPROVER
△			
△			
△			
△			
△			



Note:

- 1.Take" * "is the important dimension.
- 2.Tolerance:Unmarked tolerance refer to the standard tolerance please.

5	SMA809-CPR5A56-B1	SMA Male Reverse	POM+Cu	Black(低鉛)	1
4	RVT-AN55-01PB	Hinge Pin	POM	Black	2
3	BODY1-AN57-01B	Body3	ABS	Black	1
2	HINGE-AN57-01B	Body2	ABS	Black	1
1	BODY-AN55-01B	Body1	TPEE	Black	1
NO.	Part Number	Description	Material	Finish	Q'ty

Invax System Group.				Cortec Technology Inc.				
Cortec				Http://www.invaxsystem.com		Tel: 886-2-27885218		
				E-mail: info@invax.com.tw		Fax: 886-2-27831658		
TITLE: Antenna 5150-5850MHz								
PART NO.: AN5800-5546BRS				CUSTOMER P/N: /				
APP BY	CHK BY	RF BY	DES BY			Tolerance		
Grant	Kenny	SF	LJF	UNITS: mm		X.X	±0.5	
2019/05/08	2019/05/08	2019/05/08	2019/05/08	SCALE: 1/1		X.XX	±0.2	
				REVISION: A		X°		±1°

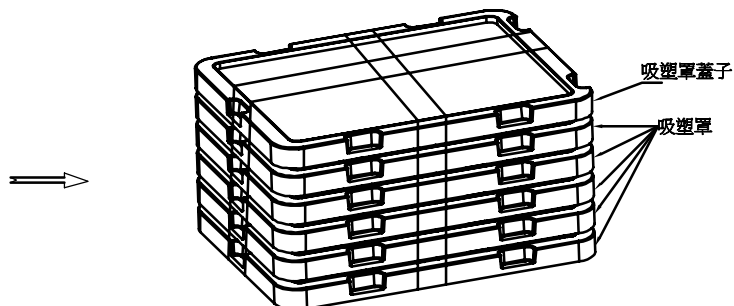
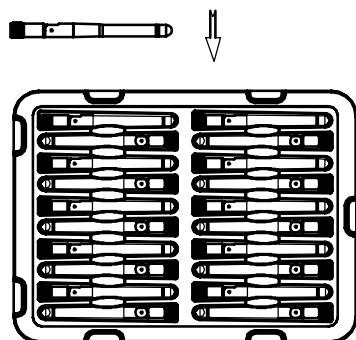
Part Number : AN5800-5546BRS

Revision : A

Name: Antenna

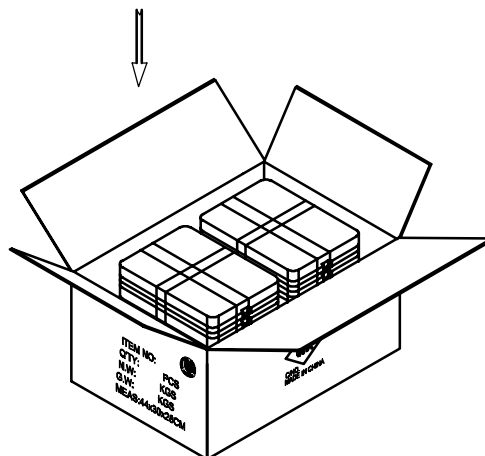
Customer : ALL

一. 將天線放入吸塑罩,每盤20PCS.



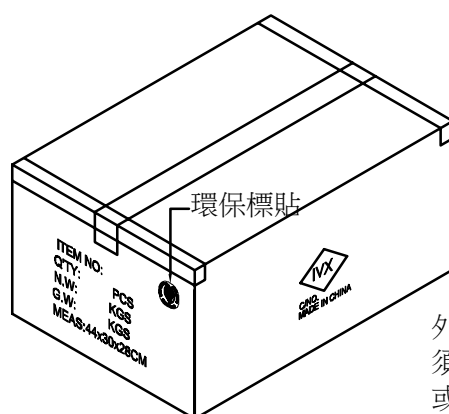
5層吸塑罩(裝100PCS產品)疊加起來
頂層再加一吸塑罩蓋子做為一捆,用塑膠薄膜捆扎.

二. 將捆好的吸塑罩放進外箱
一箱放10捆即1000PCS產品
擺放要整齊.



規格:44.0x30.0x28.0cm
1000PCS/箱.

三. 封箱.



外箱側面右上角貼一張環保標籤。
須填寫產品品號/數量/淨重/毛重。
或以實際重量填寫,未裝滿空間和尾
數箱請用合適箱替代并用填充物填滿。
標貼依客戶要求由生管提供。

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-47a

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)



物料中HSF對象物質含量調查表

康捷電子有限公司	
填表：	時麗
部門：	研發部
職務：	文員

物料名稱：AN5800-5546BRS

序號	物料型號	物料各構成名稱	各構成物料的材料質	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	DIBP	DEHP				
1	BODY-AN55-01B	Body1	TPEE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANML1905274602	2019.04.04	TPEE.	SGS
2	HING-AN57-01B	Body2	ABS	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	0114084381d5001	2018.11.29	POLYLAC® PA-757	TuvRheinland
3	BODY1-AN57-01B	Body3	ABS	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	0114084381d5001	2018.11.29	POLYLAC® PA-757	TuvRheinland
4	RVT-AN55-01PB	Hinge Pin	POM	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANML1808483301	2018.05.10	聚甲醛	SGS
5	SMA808-CPR5A56-B1	SMA Male Reverse	POM	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANML1808483301	2018.05.10	聚甲醛	SGS
6			銅	N.D.	62	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANML1814524401	2018.07.20	無鉛環保銅棒	SGS
7	TUBE-AN441312-CS	Tube	銅	N.D.	23	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC1900437904	2019.01.11	黃銅帶.	SGS
8	R-RG-178U-03	Cable (RG178)	FEP	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	NGBML1900152502	2019.01.16	聚全氟乙丙烯樹脂	SGS
9			PTFE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	NGBML1900158602	2019.01.16	聚四氟乙烯分散樹脂	SGS
10			鍍銀銅	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	SHAEC1901381806	2019.01.29	鍍銀圓銅線.	SGS
12			鍍錫銅	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	A2190070837101001C	2019.04.08	鍍錫圓銅線	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2009/95/BC、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%