

# Specification For Approval

Date: 2025 / 08 / 01

File No.: 2508010006

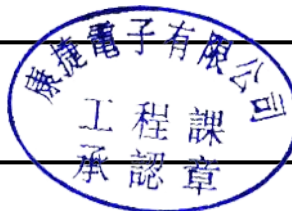
Version: 1.0

Customer : 澳洲商摩爾斯微有限公司台灣分公司

Customer P/N : /

INVAX P/N : AN0915-5005BSM

Description : Antenna



Cortec Checked By:

RD  
2025.08.01  
SF

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>

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1. Revision History

| Revision | Date       | Change Notification | Description |
|----------|------------|---------------------|-------------|
| 1.0      | 2025.08.01 | 初版                  |             |
|          |            |                     |             |
|          |            |                     |             |
|          |            |                     |             |
|          |            |                     |             |
|          |            |                     |             |
|          |            |                     |             |
|          |            |                     |             |
|          |            |                     |             |
|          |            |                     |             |

Product Number: AN0915-5005BSM

Product Name: Antenna



## 2. Specification

| Sample Photo                                                                       |                      |
|------------------------------------------------------------------------------------|----------------------|
|  |                      |
| A. Electrical Characteristics                                                      |                      |
| Frequency                                                                          | 902 ~ 928 MHz        |
| V.S.W.R.                                                                           | $\leq 1.5$ / 915 MHz |
| Peak Gain                                                                          | 2.34 dBi             |
| Polarization                                                                       | Linear               |
| Impedance                                                                          | 50 Ohm               |
| B. Material & Mechanical Characteristics                                           |                      |
| Material of Radiator                                                               | Cu                   |
| Material of Plastic                                                                | TPEE / ABS           |
| Cable Type                                                                         | RG-178U-03           |
| Connector Type                                                                     | SMA Male             |
| C. Environmental                                                                   |                      |
| Operation Temperature                                                              | - 40 °C ~ + 65 °C    |
| Storage Temperature                                                                | - 40 °C ~ + 80 °C    |
| Antenna Color Storage life                                                         | < 2 year             |

Product Number: AN0915-5005BSM

Product Name: Antenna



### 3. Characteristics and Reliability Test

| Test Items |                      | Test Condition and Procedure                                                                                              | Requirements                                                            |
|------------|----------------------|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| C1         | V.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<br>Amplitude: 0.03 inch (1.5mm); Freq: 20 to 80 to 20 Hz<br>3 directions; 2 hours for each direction | 1. No Visual Damage<br>2. Frequency Tol.<= 5%                           |
| M2         | Random Drop          | GB / T2423.8-1995<br>Height: 1.0 Meter;<br>3 directions; 1 time for each direction                                        | 1. No parts separated<br>2. Frequency Tol.<= 5%                         |
| M3         | Solderability        | GB 2423 . 28- 82<br>Solder iron: 260±5°C; Duration: 5 seconds                                                             | 1. Mounted on PCB<br>2. No Visual Damage                                |
| M4         | Terminal-Pull Test   | Holding with individual specification; force applied to axis of terminal                                                  | 1. Directive DUT specification<br>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<br>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<br>Temp: 35°C; RH: >= 95%; NaCl solution: >= 5%;<br>Time: 24 hours                                   | After 2 Hours Recovery<br>1. No Visual Damage<br>2. Frequency Tol.<= 5% |
| E2         | Humidity             | GB / T 2423 . 4 - 93<br>Temp: 80°C / 12 H; -40°C / 12H RH: >= 90%;<br>Time: 24 hours                                      | After 2 Hours Recovery<br>1. No Visual Damage<br>2. Frequency Tol.<= 5% |
| E3         | Thermal Shock        | GB / T 2423 . 22 - 87<br>1 Cycle: - 40°C (30 minutes) to + 80°C (30 minutes)<br>Cycles: 24                                | After 2 Hours Recovery<br>1. No Visual Damage<br>2. Frequency Tol.<= 5% |
| E4         | Life (High Temp.)    | GB /T 2423 . 2 - 89<br>Temp: 80°C; Time: 24 hours                                                                         | After 2 Hours Recovery<br>1. No Visual Damage<br>2. Frequency Tol.<= 5% |
| R1         | RoHS                 | With Reference to IEC 62321:2008 with flow chart                                                                          | Directive RoHS 2015/863/EU                                              |

Product Number: AN0915-5005BSM

Product Name: Antenna

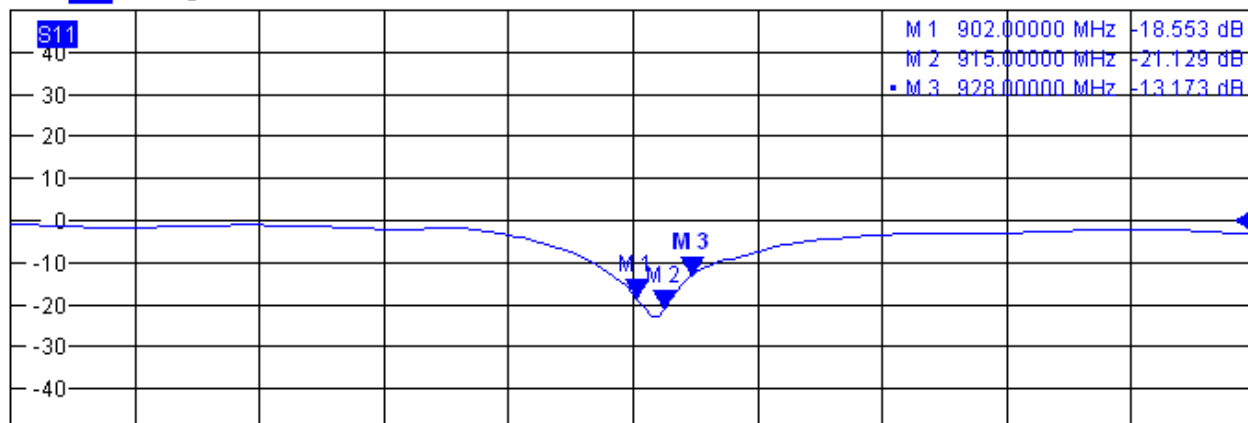


#### 4. Antenna - S Parameter Test Data



Trc1 S11 dB Mag 10 dB / Ref 0 dB Cal

1



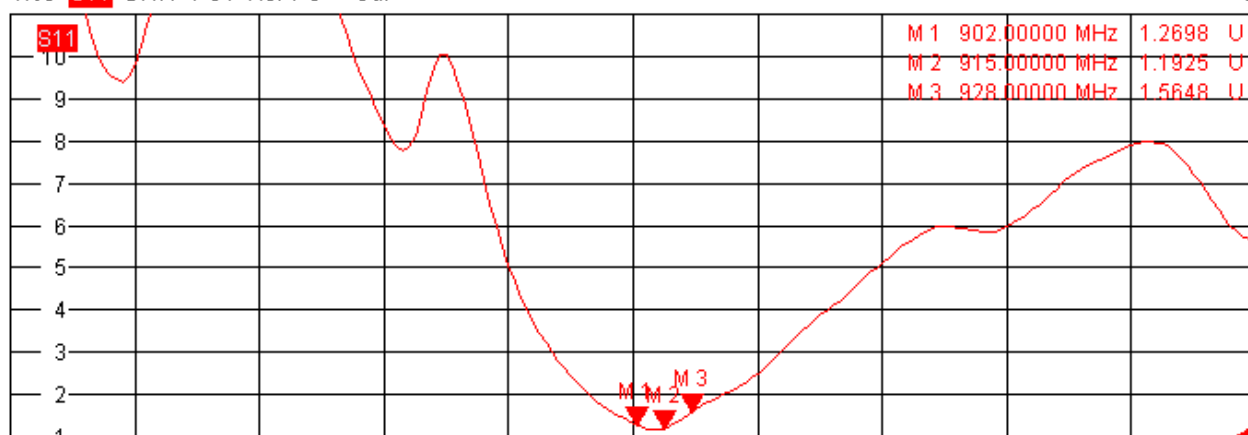
Ch1 Start 600 MHz

Pwr 0 dBm

Stop 1.2 GHz

Trc3 S11 SWR 1 U / Ref 1 U Cal

3



Ch1 Start 600 MHz

Pwr 0 dBm

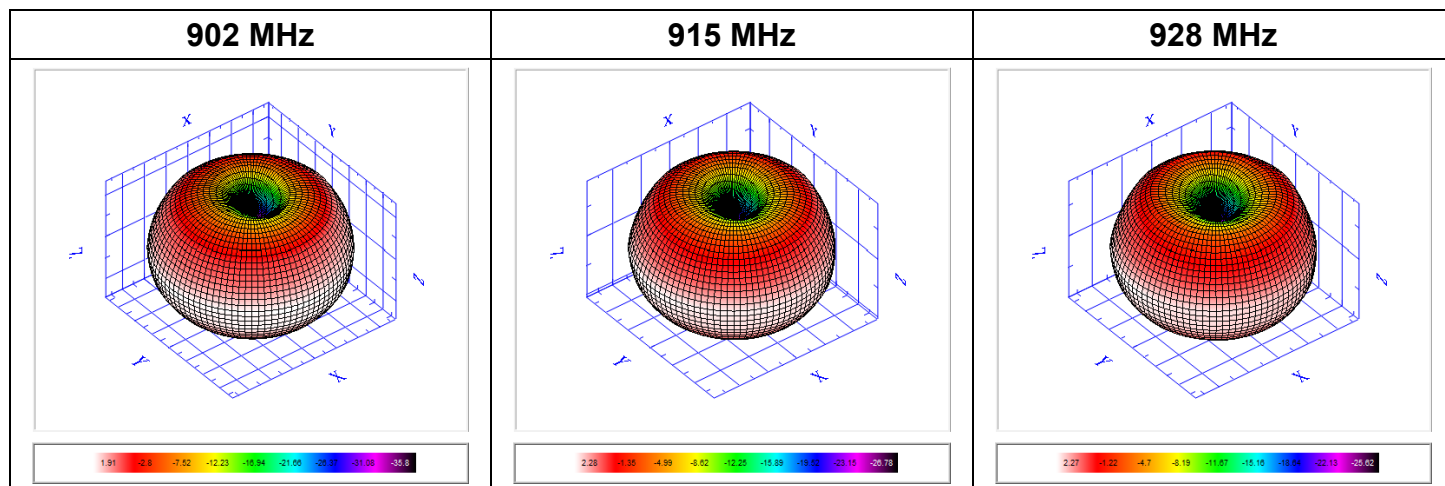
Stop 1.2 GHz

Product Number: AN0915-5005BSM

Product Name: Antenna



## 5. Antenna - Radiation Pattern Test Data



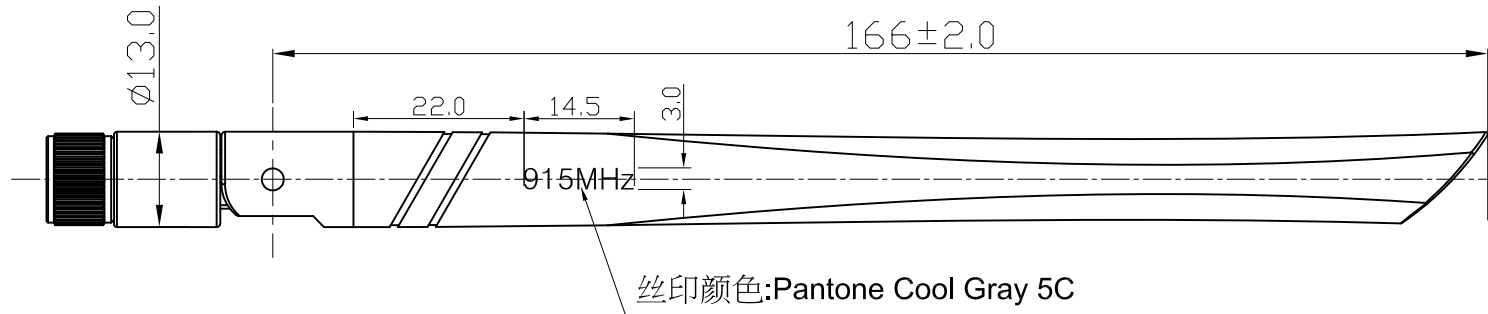
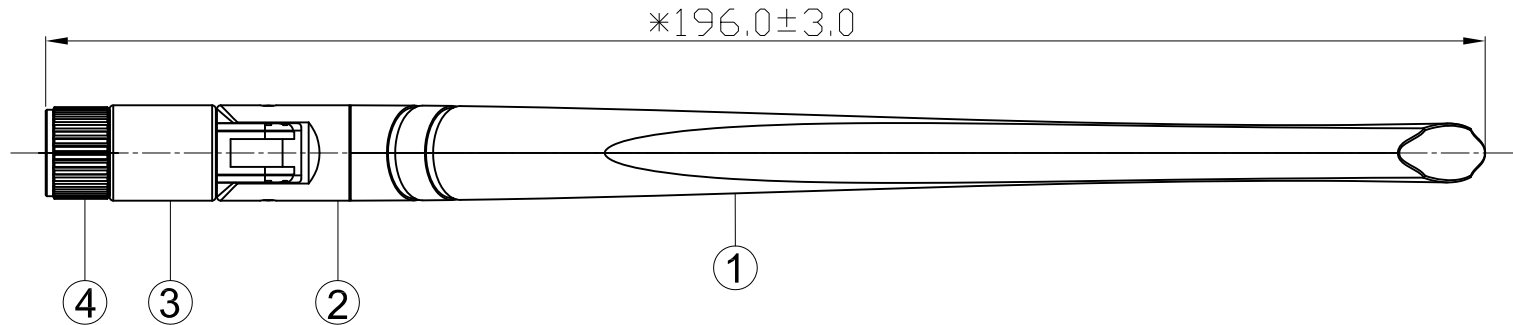
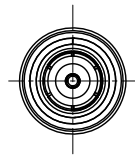
|                         |      |       |       |       |       |
|-------------------------|------|-------|-------|-------|-------|
| Frequency               | 902  | 910   | 915   | 920   | 928   |
| E-Total Peak Gain (dBi) | 1.91 | 2.34  | 2.28  | 2.2   | 2.27  |
| Efficiency (%)          | 91.3 | 97.04 | 94.43 | 92.22 | 92.88 |
| Average Gain (dB)       | -0.4 | -0.13 | -0.25 | -0.35 | -0.32 |

RoHS

Compatible



| SIGN | DATE | DESCRIPTION | APPROVER |
|------|------|-------------|----------|
| △    |      |             |          |
| △    |      |             |          |
| △    |      |             |          |



|     |                   |             |          |          |      |
|-----|-------------------|-------------|----------|----------|------|
| 4   | SMA194-CCT5AN19-D | SMA公頭公針     | 銅        | 電著       | 1    |
| 3   | AN0304-T07B       | 連接頭         | ABS      | 黑色       | 1    |
| 2   | AN9201-06B        | 連接筒         | ABS      | 黑色       | 1    |
| 1   | BODY-AN50-01B-915 | 天線塑膠外套      | TPEE     | 黑色       | 1    |
| No. | Part Number       | Description | Material | Finished | Q'ty |

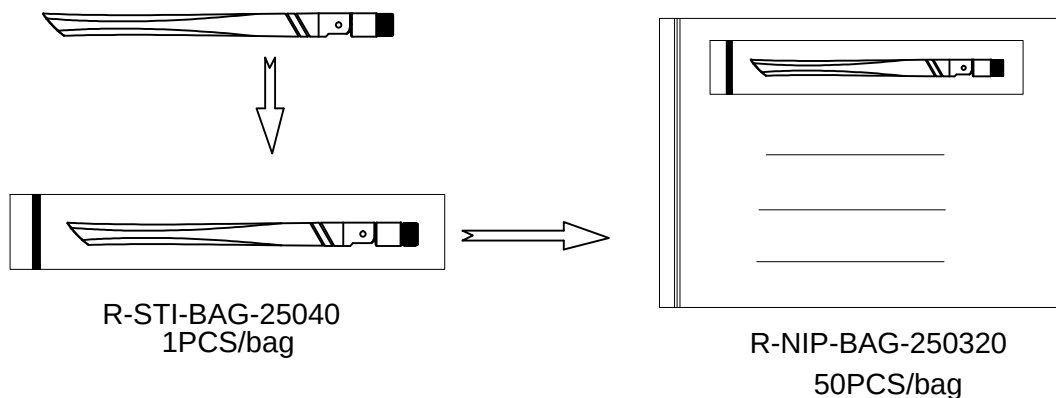
|                                      |  |            |  |                                                                                       |                 |          |  |                                                                                       |  |           |  |
|--------------------------------------|--|------------|--|---------------------------------------------------------------------------------------|-----------------|----------|--|---------------------------------------------------------------------------------------|--|-----------|--|
| Invax System Group.<br><b>Cortec</b> |  |            |  | Cortec Technology Inc.<br>Http://www.invaxsystem.com<br>E-mail:info@invax.com.tw      |                 |          |  | Tel :886-2-27885218<br>Fax:886-2-27831658                                             |  |           |  |
| TITLE: 902~928MHz Antenna            |  |            |  |                                                                                       |                 |          |  |                                                                                       |  |           |  |
| PART NO.: AN0915-5005BSM             |  |            |  |                                                                                       | CUSTOMER P/N: / |          |  |                                                                                       |  |           |  |
| APP BY                               |  | CHK BY     |  | RF BY                                                                                 |                 | DES BY   |  |  |  | Tolerance |  |
| SF                                   |  | YS         |  |  |                 | YWB      |  | UNITS: mm                                                                             |  | X.X ±0.3  |  |
| 2024.06.11                           |  | 2024.06.11 |  |                                                                                       |                 | 2025.7.1 |  | SCALE: 1/1                                                                            |  | X.XX ±0.2 |  |
|                                      |  |            |  |                                                                                       |                 |          |  | REVISION: A                                                                           |  | X° ±1     |  |



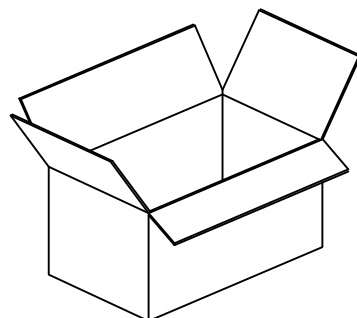
Date: 2024.03.25

|                              |                |
|------------------------------|----------------|
| Part Number : AN0915-5005BSM | Revision : A   |
| Name: 902~928MHz Antenna     | Customer : All |

1.Enter OPP bag ◦

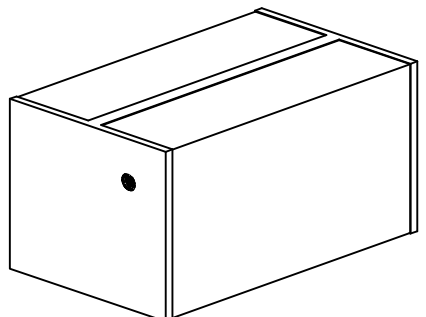


2.PACKING ◦

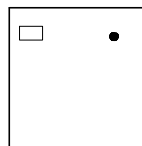


SIZE:29.0x23.0x32.5cm  
300PCS/CARTON

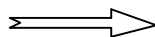
3. SEALING ◦



SIDE



FRONT



APPROVED BY : \_\_\_\_\_ CHECKED BY : \_\_\_\_\_ DESIGNED BY : LISA

SGS 台灣網站 → [http://twap.sgs.com/sgsrsts/chn/cheres\\_tw.asp](http://twap.sgs.com/sgsrsts/chn/cheres_tw.asp)  
SGS 大陸網站 → [http://rsts.cn.sgs.com/chn/cheres\\_cn.asp](http://rsts.cn.sgs.com/chn/cheres_cn.asp)  
SGS 韓國網站 → [http://rohs.kr.sgs.com/sgsrsts/en/cheres\\_en.asp](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：AN0915-5005BSM

| 序號 | 物料型號                      | 物料各構成名稱  | 各構成物料的材料 | 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  | AN9201-06B<br>AN0304-T07B | Body1    | TPEE     | N.D.              | N.D.  | N.D. | N.D.   | N.D. | N.D.  | N.D. | N.D. | N.D. | N.D. | A2250006875128004  | 2025.02.25 | TPEE                         | CTI    |
| 2  | BODY-AN50-01B-915         | Body     | ABS      | N.D.              | N.D.  | N.D. | N.D.   | N.D. | N.D.  | N.D. | N.D. | N.D. | N.D. | A2250053068101003  | 2025.03.07 | ABS HP171-NP                 | CTI    |
| 3  | SMA194-CCT5AN19-D         | SMA Male | 銅        | 43                | 28146 | N.D. | N.D.   | N.D. | N.D.  | N.D. | N.D. | N.D. | N.D. | CANPC25009215005   | 2025.04.30 | Brass rod (C3604)            | SGS    |
| 4  | ASM-TUBE-060710           | Tube     | 铜        | N.D.              | 41    | N.D. | N.D.   | N.D. | N.D.  | N.D. | N.D. | N.D. | N.D. | CANEC24019446601   | 2024.09.09 | Apply to H65(C2680,C2700     | SGS    |
| 5  | R-GS-SP3001001            | 泡棉       | EVA      | N.D.              | 14    | N.D. | N.D.   | N.D. | N.D.  | N.D. | N.D. | N.D. | N.D. | CANEC24028865441   | 2025.01.03 | Environmental                | SGS    |
| 6  | R-RG-178U-03              | Cable    | FEP      | N.D.              | N.D.  | N.D. | N.D.   | N.D. | N.D.  | N.D. | N.D. | N.D. | N.D. | SHAEC24029171725   | 2024.12.26 | NEOFLON FEP                  | SGS    |
| 7  |                           |          | FEP      | N.D.              | N.D.  | N.D. | N.D.   | N.D. | N.D.  | N.D. | N.D. | N.D. | N.D. | SHAEC24027284563   | 2024.12.05 | NEOFLON FEP                  | SGS    |
| 8  |                           |          | 镀银铜包钢    | N.D.              | N.D.  | N.D. | N.D.   | N.D. | N.D.  | N.D. | N.D. | N.D. | N.D. | A2250016523101002  | 2025.01.14 | ilver plated copper clad ste | CTI    |
| 9  |                           |          | 镀锡铜      | N.D.              | 46    | N.D. | N.D.   | N.D. | N.D.  | N.D. | N.D. | N.D. | N.D. | A2250174863101001E | 2025.03.26 | TINNDE COPPER WIRE           | 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2015/863/EU、钢中合金元素中的铅含量达0.35%、铝含量达0.4%、铜合金中的铅含量达4%