

亞 驪 企 業 股 份 有 限 公 司  
ARISTOTLE ENTERPRISES

承 認 申 請 書

ROHS COMPLIANCE

客戶名稱: 東訊股份有限公司  
Customer  
廠商料號: RFA-02-G81-70-70  
Part No.  
品名: 特諾,SW1.13G,L=70mm  
Description  
圖號: RFA-02-G81-70-70.DWG  
Drawing No.  
客戶料號:  
Drawing No.

出廠簽章:

| 檢 查<br>TEST BY | 核 對<br>CHECK BY | 承 認<br>APPROVE BY |
|----------------|-----------------|-------------------|
| 周沂珮            | 黃秋芳             | 廖煥文               |

承認簽章:

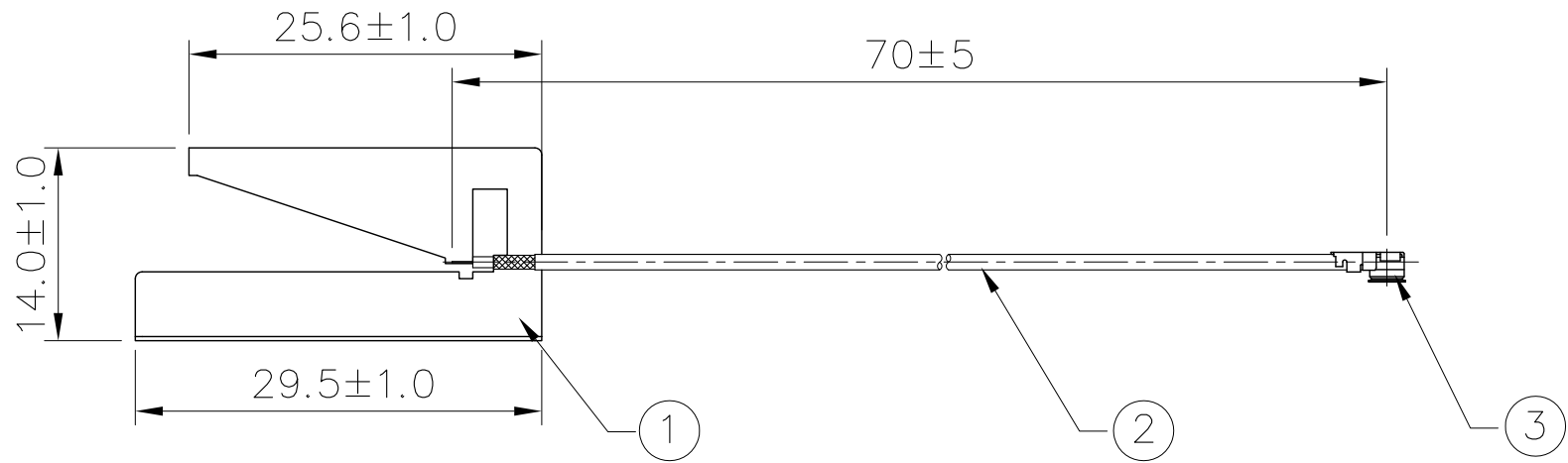
| 檢 查<br>TEST BY | 核 對<br>CHECK BY | 承 認<br>APPROVE BY |
|----------------|-----------------|-------------------|
|                |                 |                   |

地址:台北縣中和市莒光路 63 號 8 樓

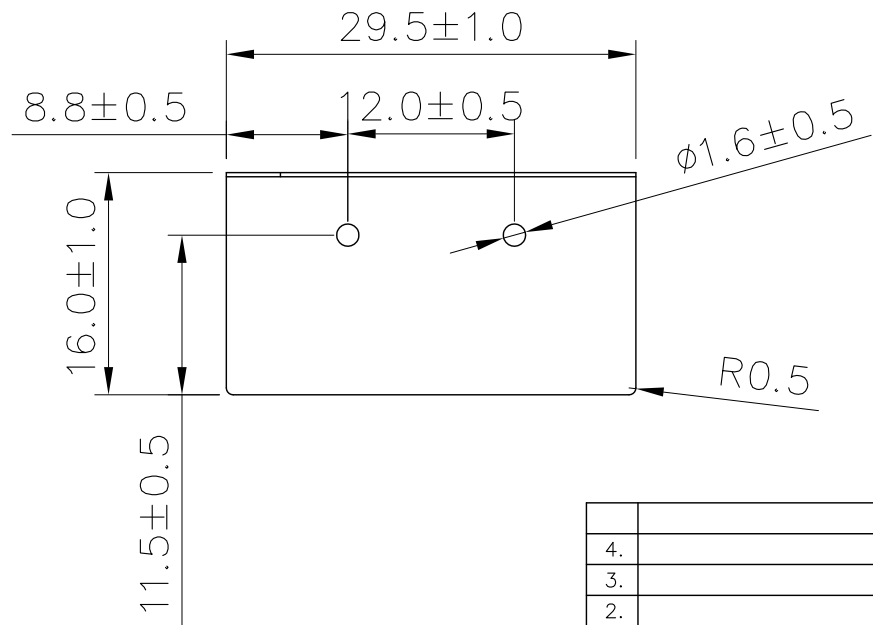
電話:02-2225-8209

傳真:02-2225-7523

| 1   |           | 2            |  | 3      |  | 4    |  | 5     |  |
|-----|-----------|--------------|--|--------|--|------|--|-------|--|
| NO. | NAME      | FINISH       |  | MAT'L  |  | Q'TY |  | MEMO  |  |
| 1.  | ANT       | --           |  | --     |  | 1    |  |       |  |
| 2.  | CABLE     | GRAY         |  | TEFLON |  | 1    |  | ø1.13 |  |
| 3.  | CONNECTOR | PLANTED GOLD |  | BRASS  |  | 1    |  | 特諾    |  |



孔位尺寸圖



**ARISTOTLE**  
ENTERPRISES INC

亞 驪 企 業 股 份 有 限 公 司

|            |       |      |                  |          |
|------------|-------|------|------------------|----------|
| PROJECTION | UNITS | mm   | TITLE            | SHEET    |
|            | SCALE | 2/1  | RFA-02-G81-70-70 | 1/1      |
|            | PAPER | A4   |                  |          |
| APPD.      |       |      | DWG NO.          | REV.     |
| CHKD       |       |      | RFA-02-G81-70-70 | A        |
| DESIGN     |       |      |                  |          |
| REV        | ECN   | NAME | DATE             |          |
|            |       |      | Vince Tsai       | 31/08/11 |

### RFA-02-G81-70-70

#### Electrical Specifications

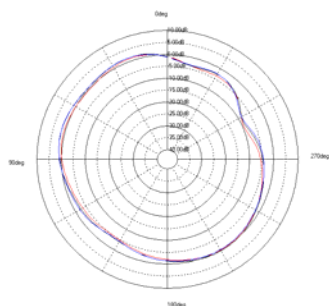
|                 |                     |
|-----------------|---------------------|
| Frequency range | 2400 MHz – 2500 MHz |
| Peak Gain       | < 3.5dBi            |
| VSWR            | 2.0 : 1 Max.        |
| Power handling  | 1W (cw)             |
| Impedance       | 50 $\Omega$         |
| Cable           | $\phi$ 1.13         |



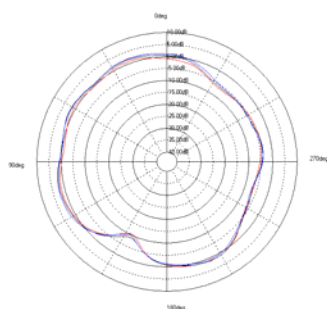
#### Environmental & Mechanical Characteristics

|             |                 |
|-------------|-----------------|
| Temperature | - 10°C to +55°C |
| Humidity    | 95% @ 55°C      |

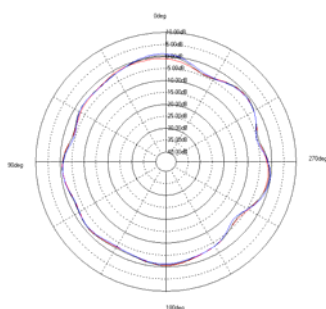
XY-plane



YZ-plane



ZX-plane



# 檢 查 證 明 書

## INSPECTION CERTIFICATE



**CHIA FAR**

嘉發實業工廠股份有限公司

CHIA FAR INDUSTRIAL FACTORY CO., LTD.

公司：台北市大直路83號 TEL: 886-2-24550000

日期：2009/4/10

客戶：  
Customer:  
材證編號：ASY-940176  
Certificate no:

規範：JIS G4313  
Specification:

| 項目<br>Item No. | 產品名稱<br>Description | 產品尺寸<br>Size         | 鋼種<br>Type | 板面<br>Finish | 調質記號<br>Temper Symbol | 數量<br>Quantity | 重量(KG)<br>Weight | 鋼卷號碼<br>Coil No. | 爐號<br>Heat No. | 箱號<br>C/No. |
|----------------|---------------------|----------------------|------------|--------------|-----------------------|----------------|------------------|------------------|----------------|-------------|
| 1              | CSP                 | 0.301 X 600.0 X C mm | SUS 304    |              | 1/2H                  | 1              | 216t             | CACWG58BT9855    | 38795          |             |
| 2              | CSP                 | 0.301 X 600.0 X C mm | SUS 304    |              | 1/2H                  | 1              | 1973             | CACWH58BT9741    | 38834          |             |
| 3              | CSP                 | 0.301 X 600.0 X C mm | SUS 304    |              | 1/2H                  | 1              | 1945             | CACWH58BT9850    | 38795          |             |

### 化 學 成 份 (%)

#### Chemical Composition

| 項目<br>Item No. | C     | Si    | Mn    | P     | S     | Ni     | Cr    |  |  |  |  | 抗拉強度<br>TS<br>N/mm <sup>2</sup> | 降伏強度<br>YS (0.2%)<br>N/mm <sup>2</sup> | 伸長率<br>EL<br>% | 硬度試驗<br>Hardness<br>Tset<br>HRB HV |     |  |
|----------------|-------|-------|-------|-------|-------|--------|-------|--|--|--|--|---------------------------------|----------------------------------------|----------------|------------------------------------|-----|--|
| Min            |       |       |       |       |       | 8.000  | 18.00 |  |  |  |  |                                 |                                        |                |                                    |     |  |
| Max            | 0.080 | 1.000 | 2.000 | 0.045 | 0.030 | 10.500 | 20.00 |  |  |  |  |                                 |                                        |                |                                    |     |  |
| 1              | 0.040 | 0.530 | 0.940 | 0.034 | 0.003 | 8.140  | 18.11 |  |  |  |  | 858                             | 610                                    | 34.3           |                                    | 263 |  |
| 2              | 0.040 | 0.560 | 1.080 | 0.031 | 0.002 | 8.310  | 18.28 |  |  |  |  | 878                             | 650                                    | 30.6           |                                    | 283 |  |
| 3              | 0.040 | 0.530 | 0.940 | 0.034 | 0.003 | 8.140  | 18.11 |  |  |  |  | 871                             | 623                                    | 31.4           |                                    | 280 |  |

### 註 記 Regulation

查產品符合GPER01S檢測規範  
檢測編號：CE/2008/C5528A

### 產 品 名 稱 Description

CS: 冷軋不銹鋼帶 Cold Rolled Stainless Steel Strip  
CP: 冷軋不銹鋼片 Cold Rolled Stainless Steel Plate  
CSP: 冷軋不銹鋼(彈片) Cold Rolled Stainless Steel Strip For Spring  
HS: 熱軋不銹鋼帶 Hot Rolled Stainless Steel Strip  
HP: 熱軋不銹鋼片 Hot Rolled Stainless Steel Plate

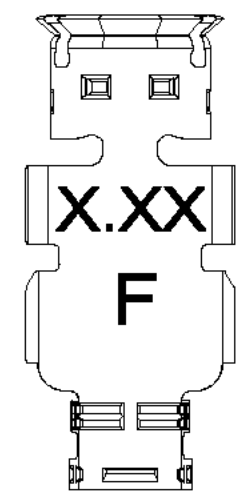
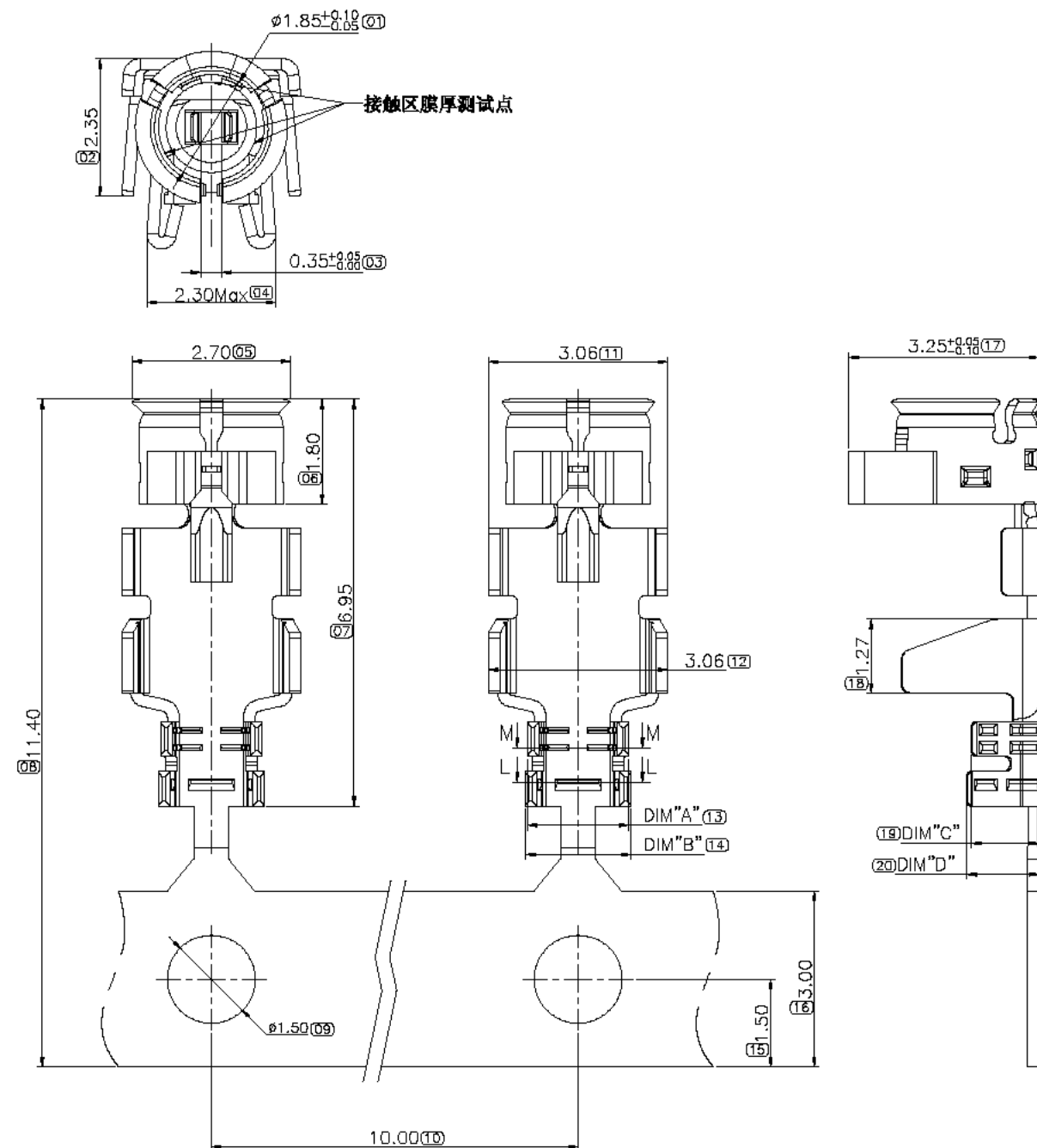
### 品管組長 QC Manager



### 檢驗員 Inspector

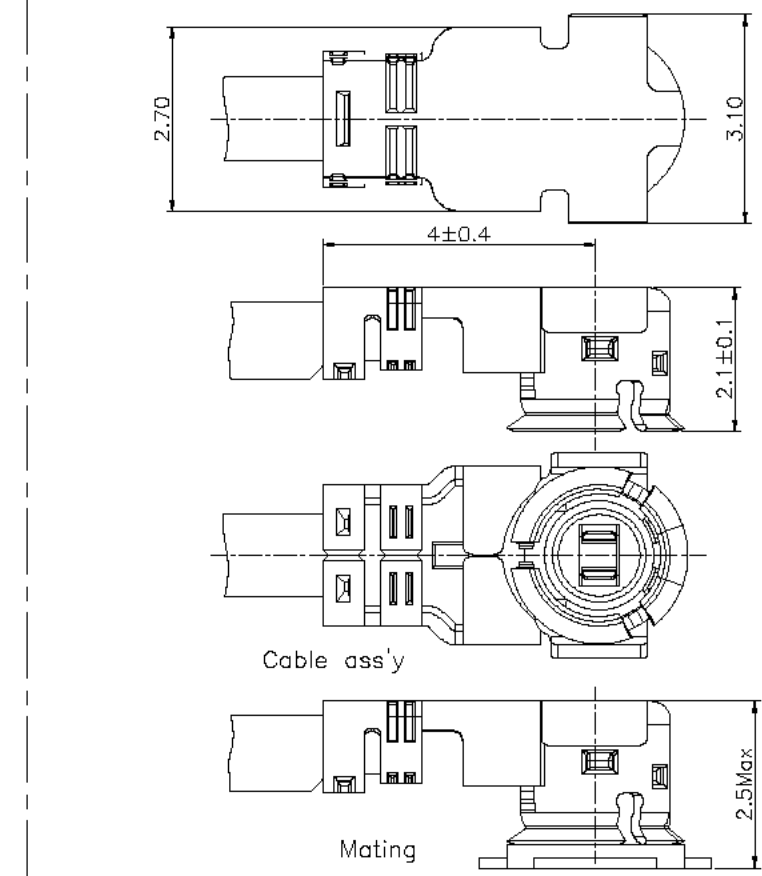


A3



MARK示意图

| REV | ECN NO     | DESCRIPTION                                                                     | DATE       | APPD   |
|-----|------------|---------------------------------------------------------------------------------|------------|--------|
| A   |            | 初版发行                                                                            | 2008.04.17 | gaohui |
| B   |            | 5#尺寸由2.60±0.10变更至2.70±0.10,同时整理图面                                               | 2008.11.18 |        |
| C   |            | 设计变更                                                                            | 2008.12.03 |        |
| D   |            | 依客户要求,增加包线后相关尺寸管控.                                                              | 2009.01.06 |        |
| E   |            | 依客户要求,增加电镀规格说明.                                                                 | 2009.02.05 |        |
| F   |            | 图框更新.                                                                           | 2009.04.10 |        |
| G   |            | 针对不同线材规格差异,变更产品三个端子包线后的尺寸规格,以保证其相容性.                                            | 2009.04.16 |        |
| H   |            | 产品包线导入到位后C角由0.1±0.1mm变更为0.2±0.25mm,使产品打线时,线材导向性更好,同时变更电镀规格.                     | 2009.08.06 |        |
| J   | ECN0909033 | 为改善产品包线每位偏斜和外皮外露,变更19#和20#尺寸: 19#由1.45±0.1变更为1.55±0.1, 20#由1.60±0.1变更为1.70±0.1. | 2009.08.20 |        |
| K   |            | 说明2.2处:耐电压1000V AC 1 Minute变更为200V AC 1 Minute.                                 | 2010.03.09 |        |



- 说明:
- NOTE:
- 材料:  
MATERIAL:  
1.1. 塑胶: PBT, Color: black, UL 94V-0;  
Housing: PBT, Color: black, UL 94V-0;  
1.2. 端子材料: 铜合金, 表面先镀底镍, 接触区镀金0.127~0.20um;  
Contact: Copper alloy, 0.127~0.20um gold plating over nickel plated;  
1.3. 铜壳材料: 铜合金, 表面先镀底镍, 接触区镀金0.0508~0.127um;  
Shell: Copper alloy, 0.0508~0.127um gold plating on contact area over nickel plated;
  - 产品性能:  
PRODUCT PERFORMANCE:  
2.1. 接触阻抗: 20mΩ Max.  
Termination Resistance: 20mΩ Max.  
2.2. 耐电压: 200V AC, 1 Minute;  
Dielectric Withstanding Voltage: 200V AC, 1 Minute;  
2.3. 绝缘阻抗: 500MΩ Min.  
Insulation Resistance: 500MΩ Min.  
2.4. 插拔耐久性: 30次 Min.  
Durability: 30 cycles Min.

|                        |                 |        |        |        |        |      |                       |
|------------------------|-----------------|--------|--------|--------|--------|------|-----------------------|
| OD1.32 RF CONNECTOR(F) | 7.000AD-000-1R0 | 1.99   | 2.04   | 1.80   | 1.95   | 1.32 | 1.32                  |
| OD1.13 RF CONNECTOR(F) | 7.000AC-000-1R0 | 1.87   | 1.92   | 1.55   | 1.70   | 1.13 | 1.13                  |
| OD1.00 RF CONNECTOR(F) | 7.000AB-000-1R0 | 1.78   | 1.85   | 1.20   | 1.40   | 1.00 | 1.00                  |
| OD0.81 RF CONNECTOR(F) | 7.000AA-000-1R0 | 1.73   | 1.80   | 1.05   | 1.25   | 0.81 | 0.81                  |
| 品名                     | 料号              | DIM"A" | DIM"B" | DIM"C" | DIM"D" | MARK | Diameter of the cable |

|                                                                                                         |  |                                                                                       |  |                                                       |  |                              |  |                        |  |                                                                                       |  |          |  |
|---------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------|--|-------------------------------------------------------|--|------------------------------|--|------------------------|--|---------------------------------------------------------------------------------------|--|----------|--|
| EXTEND USE<br>RF 2.5H CONNECTOR                                                                         |  |  |  | TITLE<br>7.000A0 CONNECTOR<br>A-TYPE CUSTOMER DRAWING |  | TNOV®                        |  |                        |  |                                                                                       |  |          |  |
|                                                                                                         |  | UNIT mm                                                                               |  |                                                       |  |                              |  |                        |  |                                                                                       |  |          |  |
| GENERAL TOLERANCE  |  | MATERIAL                                                                              |  | APPD<br>Gaohui 2010.03.09                             |  | DWG NO<br>C-7.000AA          |  |                        |  |                                                                                       |  |          |  |
| DIMENSION<br>.<br>.0 ±0.30<br>.0 ±0.15<br>.00 ±0.10<br>.000                                             |  | ANGLES<br>.<br>.0<br>.00                                                              |  | QTY                                                   |  | CHD<br>LiuJunxian 2010.03.09 |  | P/N:<br><br>(SEE NOTE) |  |                                                                                       |  |          |  |
|                                                                                                         |  |                                                                                       |  | FINISHED                                              |  | DRN<br>Zhengdexin 2010.03.09 |  |                        |  |                                                                                       |  |          |  |
|                                                                                                         |  |                                                                                       |  |                                                       |  |                              |  |                        |  |                                                                                       |  |          |  |
|                                                                                                         |  |                                                                                       |  |                                                       |  | SHEET<br>1/2                 |  | SCALE<br>1:1           |  |  |  | REV<br>K |  |



## 物性報告表

主題： JK11 之檢驗

溫度： 26 °C

濕度： 78 % RH

|                             |              |        |
|-----------------------------|--------------|--------|
| 批 號 ( Lot.No. )             | 109407       | 單 位    |
| 1.外 觀 ( Appearance )        | 黃 色 澄 清      |        |
| 2.色 數 ( Color No.)          | < 5          |        |
| 3.固成份 ( N.V.)               | 49.30        | %      |
| 4.黏 度 ( Viscosity )         | 4800         | cps    |
| 5.初期黏著力 ( Tack )            | 14           | 球號     |
| 6.接著力 ( 180° Adhesion )     | 1.44-1.48    | 公斤 / 吋 |
| 7.保持力 ( 0° Holding )        | 1.2 ( 1/2" ) | 小時     |
| 8.膠 粒 ( Particle )          | P            |        |
| 9.耐溶劑性 ( Solvent Resisance) | 8            |        |
| 10.總厚度                      | 5uM          |        |

備 註：

- 1.乾膜 ( Dry Thickness ) \_\_\_\_\_ um
- 2.烘乾條件 ( Curing Condition ) \_\_\_\_\_ 93 \_\_\_\_\_ °C \_\_\_\_\_ 2 \_\_\_\_\_ mins
- 3.基材 ( Substrate ) \_\_\_\_\_ 厚度 ( Thickness ) \_\_\_\_\_ um
4. ☐ 特採：項目 \_\_\_\_\_

注意事項：

1. 本產品於分裝或調制過程中請務必選用適合之包裝方式，以避免造成膠性改變或變黃現象。
2. 請保持在室溫 22 °C 、通風乾燥處，且勿重壓。
3. 保存期限：自出廠日起六個月。

原始物性僅供參考，基材不同需另檢測，製造商不負保證責任。

Date :

Our Spec. No. WS06-M091

MESSRS.

SPECIFICATION

FOR

HIGH FREQUENCY COAXIAL CABLE

“ KHCX - 32AWG - SB - TA”

UL STYLE 11032 (80 , 30V)

SHOWA DEVICE TECHNOLOGY CO., LTD.

TORANOMON

TOKYO JAPAN



T. Mori  
General Manager of Development Dept.  
Electronic Wire Business Unit

## 1. 適用(SCOPE)

本仕様書は、UL Style 11032(80 , 30V)に適合し、電子機器などの内部配線に使用される細径同軸ケーブル “ KHCX-32AWG-SB-TA ” の構造と特性について定める。

This specification covers the construction and characteristics of coaxial cable “KHCX-32AWG-SB-TA” for internal wiring of electronic equipment. This cable is approved UL Style 11032 (80 , 30V).

## 2. ケーブル型名の説明 ( EXPLANATION OF CABLE TYPE )

KHCX - 32AWG - SB - TA

( 1 )    ( 2 )    ( 3 )

( 1 ) ケーブル略称 ( Cable Abbreviation )

( 2 ) 導体サイズ ( Conductor Size )

( 3 ) 外部導体タイプ ( Outer Conductor Type )

## 3. 構造(CONSTRUCTION)

| 項目<br>Item               |                  | 要求特性<br>Requirement                                   |
|--------------------------|------------------|-------------------------------------------------------|
| 内部導体<br>Inner conductor  | 材質<br>Material   | 銀めつき軟銅線<br>Silver coated annealed copper wire         |
|                          | 構成<br>Stranding  | 7/0.08mm                                              |
|                          | 外径<br>Diameter   | 標準 0.24mm<br>Nom. 0.24mm                              |
| 絶縁体<br>Insulation        | 材質<br>Material   | FEP                                                   |
|                          | 色別<br>Color      | 自然色<br>Natural                                        |
|                          | 厚さ<br>Thickness  | 標準 0.23mm<br>Nom. 0.23mm                              |
|                          | 外径<br>Diameter   | 0.70 +0.04/ -0.04mm                                   |
| 外部導体<br>Outer conductor  | 材質<br>Material   | 錫めつき軟銅線編組<br>Tinned annealed copper wire braid shield |
|                          | 構成<br>Stranding  | 16/4/0.05 mm                                          |
|                          | 編組密度<br>Coverage | Approx. 90%                                           |
| シース<br>Sheath            | 材質<br>Material   | MFA                                                   |
|                          | 色別<br>Color      | 灰・白・黒<br>Gray・White・Black                             |
|                          | 厚さ<br>Thickness  | 標準 0.10mm<br>Nom. 0.10mm                              |
| 仕上外径<br>Overall diameter |                  | 1.13mm +0.08/ -0.05mm                                 |
| 概算質量<br>Approximate mass |                  | 3 kg/km                                               |

4 . 特性 ( CHARACTERISTICS )

| 項目<br>Item                            | 単位<br>Unit | 要求特性<br>Requirements                                                                                                                                           |
|---------------------------------------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 導体抵抗<br>Conductor Resistance          | Ω/km       | 597 以下 (20 )<br>Max. 597 (at 20 )                                                                                                                              |
| 絶縁抵抗<br>Insulation Resistance         | MΩkm       | 1,500 以上 ( DC 500V 1 分間充電後,20 )<br>Min. 1,500 (After charge DC 500V for 1 min. at 20 )                                                                         |
| 耐電圧<br>Dielectric Strength            | -          | 内部導体-外部導体間：AC.500V/ 1 分間<br>No breakdown at AC.500V for 1 min between inner conductor and outer conductor.                                                     |
| 静電容量<br>Capacitance                   | pF/m       | 標準 98 (at 1kHz)<br>Nom. 98 (at 1kHz)                                                                                                                           |
| 特性インピーダンス<br>Characteristic Impedance | Ω          | 50 ± 2 (at TDR)                                                                                                                                                |
| 減衰量<br>Attenuation                    | dB/m       | 2.0GHz : 2.9 以下 Max.2.9<br>2.4GHz : 3.2 以下 Max.3.2<br>3.0GHz : 3.7 以下 Max.3.7<br>4.0GHz : 4.3 以下 Max.4.3<br>5.0GHz : 4.8 以下 Max.4.8<br>6.0GHz : 5.3 以下 Max.5.3 |
| VSWR                                  | --         | 2.4 ~ 2.5GHz : 1.20 以下 Max.1.20<br>4.8 ~ 6.0GHz: 1.40 以下 Max.1.40                                                                                              |

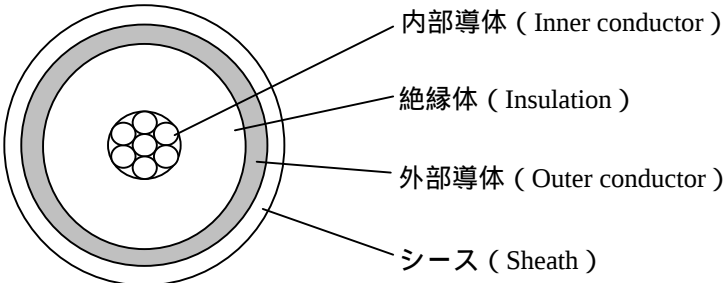


図 1 .ケーブル構造図  
Fig.1. Cable Cross-Section

5 . 難燃性： VW - 1  
Flammability rating: VW-1

6 . UL USE  
Internal wiring.

7. 梱包及び荷札の表示 (PACKING AND MARKING ON TAG)

完成品は運送中及び保管中に損傷を生じぬ荷造りをする。また、以下の表示を行う。

The completed cables shall be coiled and packed in such a manner as to be adequately protected from the damage during packing, shipping, and normal handling. The following items shall be marked to the products.

- 1) 品名 (Type of Cable)
- 2) 導体サイズ (Conductor size)
- 3) 条長 (Length)
- 4) 製造者名または略称 (Manufacturer's name or trade mark)
- 5) 製造年月またはロット番号 (Manufactured year and month, or Lot. No.)

尚、完成品にはジョイントを有する場合がある。その場合は条長明細を記載する。

Note : The joints may be contained in the spool. In that case, the detail of length is indicated.

UL ラベルを添付のこと

UL Label is attached to each reel.

# RoHS REPORT INDEX

|     | NAME                     | 供應商                                 | RoHS report       |
|-----|--------------------------|-------------------------------------|-------------------|
| 1   | 鐵片                       |                                     |                   |
| 1-1 | 不銹鋼片                     | 唐榮鐵工廠股份有限公司                         | KA/2010/11633A-01 |
| 1-2 | NICKEL PLATING           | 福業電子股份有限公司                          | CE/2009/C4166     |
| 2   | 特諾                       |                                     |                   |
| 2-1 | contact                  | KUNSHAN JIAHUA ELECTRONICS CO.,LTD. | SHAEC1015207703   |
| 2-2 | Housing(BLACK)           | KUNSHAN JIAHUA ELECTRONICS CO.,LTD. | SHAEC1015207701   |
| 2-3 | Shell(OD1.13)            | KUNSHAN JIAHUA ELECTRONICS CO.,LTD. | SHAEC1015207704   |
| 3   | 背膠                       | 巨原企業有限公司                            | CE/2011/31896A    |
| 4   | COAXIAL CABLE KHCX-Ø1.13 |                                     |                   |
| 4-1 | 外被                       | SWCC SHOWA CABLE SYSTEMS CO.,LTD    | RLSHD000745510006 |
| 4-2 | 芯線                       | SWCC SHOWA CABLE SYSTEMS CO.,LTD    | RLSHD000745510003 |
| 4-3 | FEP                      | SWCC SHOWA CABLE SYSTEMS CO.,LTD    | RLSHD000745510002 |
| 4-4 | 外網                       | SWCC SHOWA CABLE SYSTEMS CO.,LTD    | RLSHD000745510004 |