

Customer:\_\_\_\_\_ / \_\_\_\_\_

# 承 認 書

|              |                  |
|--------------|------------------|
| Discription  | HDMI CABLE ASS'Y |
| Customer P/N | 371.01057.005    |
| Foxconn P/N  | CUJA02A-CG021-DF |
| Rev.         | X3               |

|           |                         |                        |                       |
|-----------|-------------------------|------------------------|-----------------------|
| Customer  | Approval By             | Check By               | Prepared By           |
|           |                         |                        |                       |
| New Ocean | Approval By             | Check By               | Prepared By           |
|           | Corey Hsu<br>2019/03/22 | Tiger Qi<br>2019/03/22 | Min Lei<br>2019/03/22 |



**FOXCONN®**

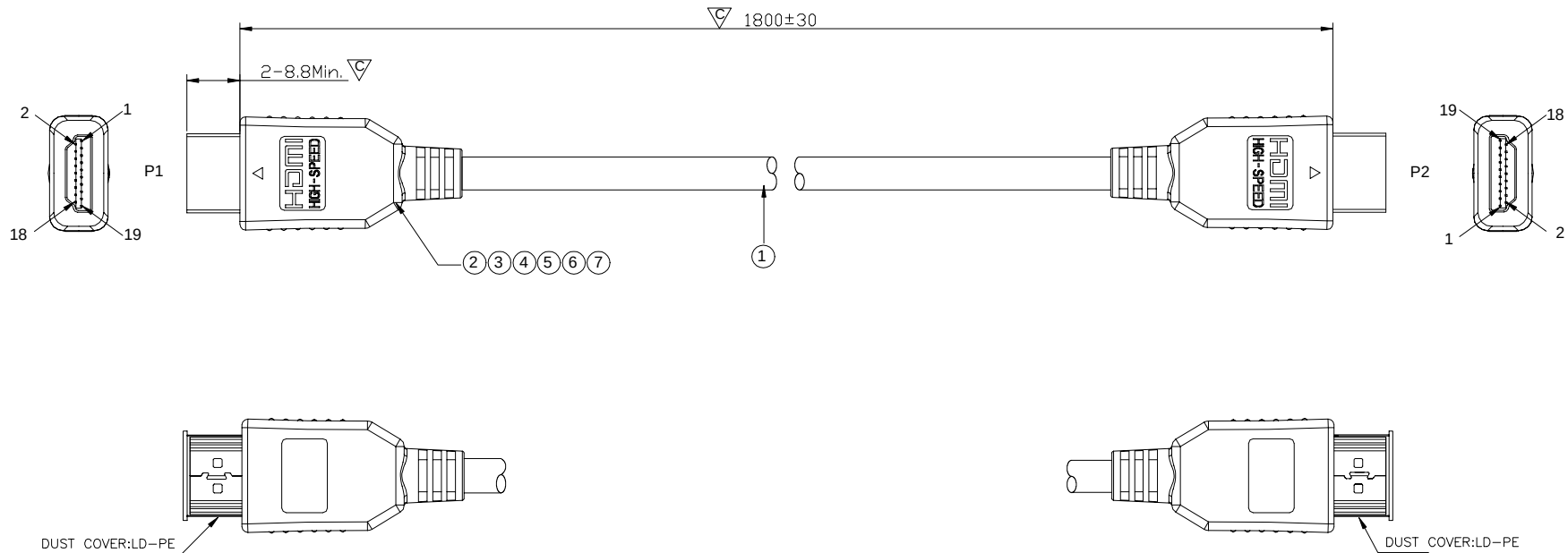
**Factory name : New Ocean Precision Component(JiangXi)  
Co.LTD.**

Jian Nan Road 99,FengCheng City, JiangXi Province.China.

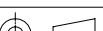
TEL:86-0795-2078888

FAX:86-0795-2078888-21169

| REV. | ECN. NO.     | APPD.              |
|------|--------------|--------------------|
| X1   | BS-19-003833 | Jin Lin 02/21'19   |
| X2   | BS-19-00**** | Jin Lin 02/22'19   |
| X3   | BS-19-00**** | Corey Hsu 03/21'19 |



|    |                  |                                                                                                |      |
|----|------------------|------------------------------------------------------------------------------------------------|------|
| ⑩  | LABEL            | L*W=30*8mm                                                                                     | 1PC  |
| ⑨  | PE BAG           | LDPE                                                                                           | 1PC  |
| ⑧  | Cable Tie        | Cable Tie                                                                                      | 2PCS |
| ⑦  | OUTER MOLD       | PVC 45Pa Black                                                                                 | A/R  |
| ⑥  | INNER MOLD       | LDPE                                                                                           | A/R  |
| ⑤  | HOLDER           | PLASTIC HOLDER HDMI A TYPE MALE                                                                | 2PCS |
| ④  | HDMI BACK SHELL  | HDMI BLACK SHELL, NICKEL PLATING                                                               | 2PCS |
| ③  | HDMI FRONT SHELL | HDMI FRONT SHELL, NICKEL PLATING                                                               | 2PCS |
| ②  | HDMI A CONN      | HDMI CONN, PIN GOLD PLATING 1u"Min.                                                            | 2PCS |
| ①  | RAW CABLE        | HDMI 2.0 UL20276 5P*(32AWG+EAM)<br>+4C*32AWG PVC Jacket Black OD:5.0MM<br>Coverage>85% (AL/MG) | A/R  |
| NO | PART NAME        | SPECIFICATION                                                                                  | Q'TY |

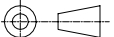
|                                                                                                                                                                                                                                       |        |             |                                                                                       |                                                                                                                                |              |            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|--------------|------------|
| X.±1                                                                                                                                                                                                                                  | X.*±   | UNITS<br>mm | NAME(INTENDED USE)<br>Eagle                                                           |  FOXCONN INTERCONNECT TECHNOLOGY LIMITED. |              |            |
| .X±0.8                                                                                                                                                                                                                                | .X*±   | MAT'L       | PART NO.(INTENDED USE)<br>CUJA02A-CG021-DF                                            | CLASS:<br><input type="checkbox"/> CONFIDENTIAL <input type="checkbox"/> SECRET <input checked="" type="checkbox"/> GENERAL    |              |            |
| .XX±0.50                                                                                                                                                                                                                              | .XX*±  |             |                                                                                       |                                                                                                                                |              |            |
| .XXX±0.200                                                                                                                                                                                                                            | .XXX*± | FINISH      | APPD:<br>Corey Hsu03/21'19                                                            | TITLE:HDMI CABLE ASS'Y                                                                                                         |              |            |
| THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF FOXCONN INTERCONNECT TECHNOLOGY LIMITED,AND SHALL NOT BE REPRODUCED, COPIED OR USED IN ANY MANNER WITHOUT THE PRIOR WRITTEN CONSENT OF FOXCONN INTERCONNECT TECHNOLOGY LIMITED. |        | Q'TY        | CHKD: Tiger Qi 03/21'19                                                               | DWG NO.: 605-0000-7289                                                                                                         |              |            |
|                                                                                                                                                                                                                                       |        |             | DRAW: Min Lei 03/21'19                                                                |                                                                                                                                |              |            |
|                                                                                                                                                                                                                                       |        |             |  | SCALE<br>N/A                                                                                                                   | SHEET<br>1/3 | REV.<br>X3 |

## NOTES :

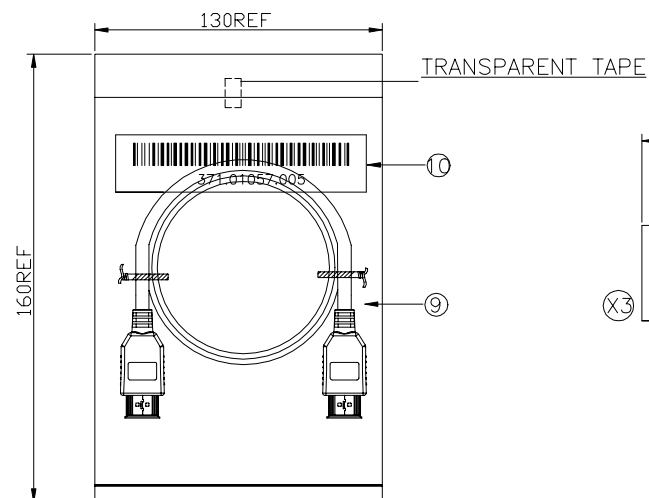
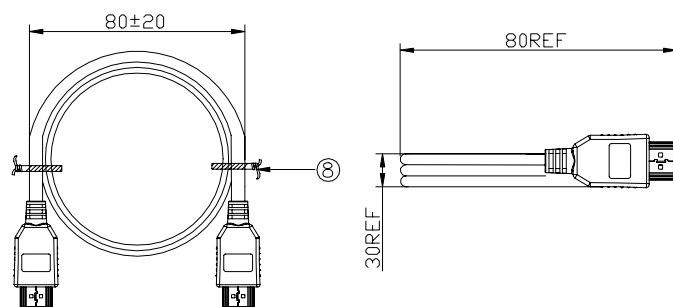
1. ANY OPEN.MISSWIRING &SHORT &INTERMITTENT ARE NOT PERMITTED
2. INSULATION RESISTANCE:10M OHM MIN/300V DC
3. CONDUCTOR RESISTANCE: 2.0 OHMS.
4. HARMFUL MATERIAL CONTROL PLEASE FOLLOW DOC. No.:EPI12.
5. DIMENSIONS MARKED  $\nabla$  SHALL BE CHECKED.
6. DIMENSION SHALL BE INTERPRETED PER ASME Y14.5M-1994.
7. THE MANUFACTURE PROCESS MUST BE LEAD FREE.
8. THE CABLE EMI MUST BE TESTED(REFERENCE -4dB).
9. Certified By The Authorized Testing Center(ATC) .

| SHELL |             | SHELL | SHEILING      |
|-------|-------------|-------|---------------|
| 18    |             | 18    | BROWN WIRE    |
| 16    |             | 16    | ORANGE WIRE   |
| 15    |             | 15    | BLACK WIRE    |
| 19    |             | 19    | BLACK WIRE    |
| 17    |             | 17    | DRAIN WIRE    |
| 14    |             | 14    | WHITE WIRE    |
| 13    |             | 13    | RED WIRE      |
| 12    |             | 12    | WHITE WIRE    |
| 11    |             | 11    | DRAIN WIRE    |
| 10    |             | 10    | RED WIRE      |
| 9     |             | 9     | WHITE WIRE    |
| 8     |             | 8     | DRAIN WIRE    |
| 7     |             | 7     | GREEN WIRE    |
| 6     |             | 6     | WHITE WIRE    |
| 5     |             | 5     | DRAIN WIRE    |
| 4     |             | 4     | YELLOW WIRE   |
| 3     |             | 3     | WHITE WIRE    |
| 2     |             | 2     | DRAIN WIRE    |
| 1     |             | 1     | BLUE WIRE     |
| P1    | WIRE MOTHED | P2    | COLOR OF WIRE |

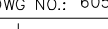
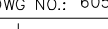
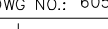
CABLE ASSEMBLY WIRE MOTHED

|                                                                                                                                                                                                                                       |        |             |                                            |                                                                                                                                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------------|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| X.±1                                                                                                                                                                                                                                  | X.*±   | UNITS<br>mm | NAME(INTENDED USE)<br>Eagle                |  FOXCONN INTERCONNECT TECHNOLOGY LIMITED. |
| .X±0.8                                                                                                                                                                                                                                | .X*±   | MAT'L       | PART NO.(INTENDED USE)<br>CUJA02A-CG021-DF |                                                                                                                                |
| .XX±0.50                                                                                                                                                                                                                              | .XX*±  |             |                                            | CLASS:<br><input type="checkbox"/> CONFIDENTIAL <input type="checkbox"/> SECRET <input checked="" type="checkbox"/> GENERAL    |
| .XXX±0.200                                                                                                                                                                                                                            | .XXX*± | FINISH      | APPD:<br>Corey Hsu03/21'19                 | TITLE:HDMI CABLE ASS'Y                                                                                                         |
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|                                                                                                                                                                                                                                       |        |             | DRAW: Min Lei 03/21'19                     |                                                                                                                                |
|                                                                                                                                                                                                                                       |        |             |                                            |  SCALE SHEET REV.<br>N/A 2/3 X3           |

CABLE PACKAGE VIEW



 Label Material:50#Mylar;Character:Arial Regular 4pt;  
Serial No.barcode format:Code 128 Code B Height:4mm.

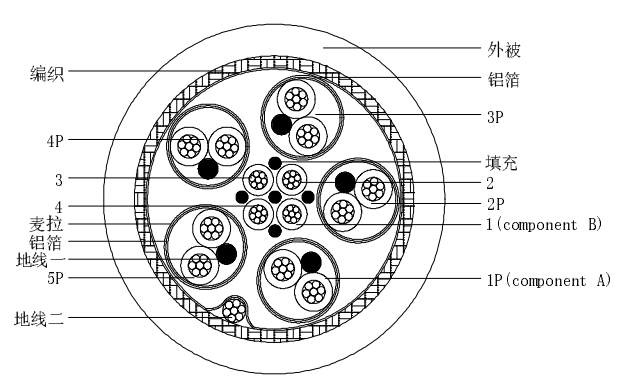
|                                                                                                                                                                                                                                        |        |             |                                                                                       |                                                                                                                                                                                                                         |       |      |                                                                                       |       |       |      |     |     |    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------|---------------------------------------------------------------------------------------|-------|-------|------|-----|-----|----|
| X.±1                                                                                                                                                                                                                                   | X.*±   | UNITS<br>mm | NAME(INTENDED USE)<br>Eagle                                                           |  FOXCONN INTERCONNECT TECHNOLOGY LIMITED.                                                                                          |       |      |                                                                                       |       |       |      |     |     |    |
| .X±0.8                                                                                                                                                                                                                                 | .X*±   | MAT'L       | PART NO.(INTENDED USE)<br>CUJA02A-CG021-DF                                            | CLASS:<br><input type="checkbox"/> CONFIDENTIAL <input type="checkbox"/> SECRET <input checked="" type="checkbox"/> GENERAL                                                                                             |       |      |                                                                                       |       |       |      |     |     |    |
| .XX±0.50                                                                                                                                                                                                                               | .XX*±  |             |                                                                                       |                                                                                                                                                                                                                         |       |      |                                                                                       |       |       |      |     |     |    |
| .XXX±0.200                                                                                                                                                                                                                             | .XXX*± | FINISH      | APPD:<br>Corey Hsu03/21'19                                                            | TITLE:HDMI CABLE ASS'Y                                                                                                                                                                                                  |       |      |                                                                                       |       |       |      |     |     |    |
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|                                                                                                                                                                                                                                        |        |             | DRAW: Min Lei 03/21'19                                                                | <table><tr><td rowspan="2"></td><td>SCALE</td><td>SHEET</td><td>REV.</td></tr><tr><td>N/A</td><td>3/3</td><td>X3</td></tr></table> |       |      |  | SCALE | SHEET | REV. | N/A | 3/3 | X3 |
|                                                                                                                                                                                                                                        |        |             |  | SCALE                                                                                                                                                                                                                   | SHEET | REV. |                                                                                       |       |       |      |     |     |    |
| N/A                                                                                                                                                                                                                                    | 3/3    | X3          |                                                                                       |                                                                                                                                                                                                                         |       |      |                                                                                       |       |       |      |     |     |    |
|                                                                                                                                                                                                                                        |        |             |                                                                                       |                                                                                                                                                                                                                         |       |      |                                                                                       |       |       |      |     |     |    |

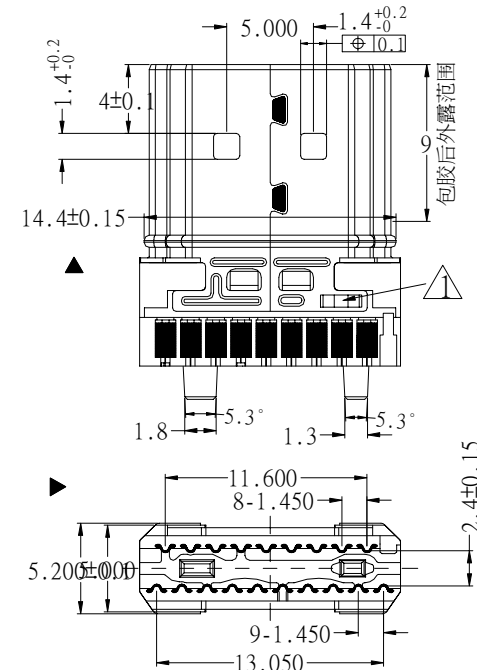
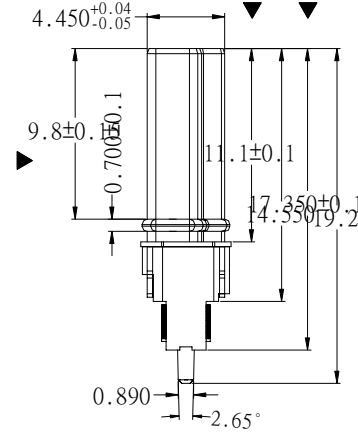
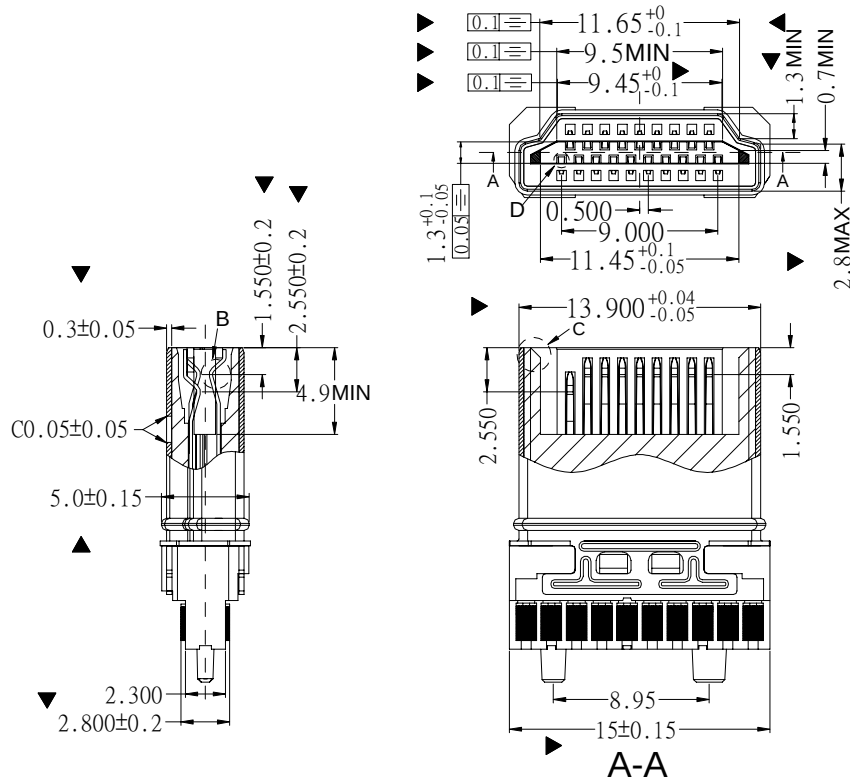
SPECIFICATION

|                                                              |                                                                                           |                  |
|--------------------------------------------------------------|-------------------------------------------------------------------------------------------|------------------|
| STYLE                                                        | UL20276                                                                                   | DATE: 2019/03/07 |
| SIZE                                                         | 32AWG*5P+32AWG*4C                                                                         | FIRST EDITION    |
| 1. STANDARD: /                                               |                                                                                           |                  |
| 2.APPLICATION: INTERNAL WIRING OF ELECTRONIC EQUIPMENT WHERE |                                                                                           |                  |
| NOT EXPOSED TO MOVEMENT OR MECHANICAL.                       |                                                                                           |                  |
| 3. CONSTRUCTION(结构):                                         |                                                                                           |                  |
| CONDUCTOR(导体):                                               |                                                                                           |                  |
| SIZE                                                         | 32AWG*5P                                                                                  | 32AWG*4C         |
| CONSTRUCTION (导体构造)                                          | 32AWG                                                                                     | 32AWG            |
| MATERIAL(材质)                                                 | COPPERED METAL                                                                            | COPPERED METAL   |
| INSULATION(绝缘):                                              |                                                                                           |                  |
| MATERIAL(材质)                                                 | FPE                                                                                       | HDPE             |
| AVG. THICK(平均厚度)                                             | 0.20mm                                                                                    | 0.11mm           |
| DIAMETER (APPROX)(线径)                                        | 0.64±0.05mm                                                                               | 0.45±0.05mm      |
| DRAIN WIRE(地线)：                                              | 32AWG COPPERED METAL                                                                      | /                |
| AL. MYLAR(铝箔麦拉):                                             |                                                                                           |                  |
| COVERAGE(重迭率)                                                | 25% ↑                                                                                     | /                |
| MYLAR(麦拉):                                                   |                                                                                           |                  |
| COVERAGE(重迭率)                                                | 25% ↑                                                                                     | /                |
| CABLING(集合):                                                 |                                                                                           |                  |
| 集合(CABLING)                                                  | 5P+4C                                                                                     |                  |
| AL. MYLAR(铝箔麦拉):                                             |                                                                                           |                  |
| COVERAGE(重迭率)                                                | 25% ↑                                                                                     |                  |
| DRAIN WIRE(地线)：                                              | 28AWG COPPERED METAL                                                                      |                  |
| OUTSIDE-SHIELD(外部屏蔽):                                        |                                                                                           |                  |
| MATERIAL(材质)                                                 | AL-ALLOY                                                                                  |                  |
| SPIRAL SHIELD(缠绕)                                            | 0.12mm                                                                                    |                  |
| COVERAGE(遮蔽率)                                                | 85% ↑                                                                                     |                  |
| JACKET(被覆):                                                  |                                                                                           |                  |
| MATERIAL(材质)                                                 | PVC                                                                                       |                  |
| O.D. (线径)                                                    | 5.0±0.20mm                                                                                |                  |
| COLOR(颜色)                                                    | AS CUSTOMER'S REQUIREMENT                                                                 |                  |
| MARKING(印字)                                                  | High Speed HDMI™ Cable with Ethernet E246588 9J AWM STYLE 20276 80℃ 30V VW-1 SK Broadband |                  |
| 4.ELECTRICAL&PHYSICAL PROPERTIES(电气性能及物理性能)                  |                                                                                           |                  |
| ITEM                                                         | 32AWG*5P                                                                                  | 32AWG*4C         |
| CONDUCTOR RESISTANCE(导体电阻) (20℃)                             | MAX 542Ω/KM                                                                               | MAX 542Ω/KM      |
| INSULATION RESISTANCE(绝缘电阻)                                  | MIN 2MΩ/KM                                                                                | MIN 2MΩ/KM       |
| SPARK TEST(火花测试)                                             | DC 1.5KV / 0.15 Sec NO BREAKING                                                           |                  |
| IMPEDANCE(特性阻抗)                                              | 100±10Ω                                                                                   | /                |

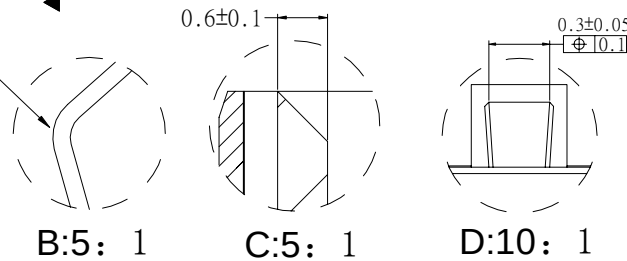
|                            |              |                            |                 |             |
|----------------------------|--------------|----------------------------|-----------------|-------------|
| INSULATION<br>(絕緣)         | UNAGED (老化前) | TENSILE STRENGTH<br>(抗張強度) | /               | MIN 2400PSI |
|                            |              | ELONGATION<br>(伸長率)        | /               | MIN 300%    |
| JACKET<br>(被覆)             | UNAGED (老化前) | TENSILE STRENGTH<br>(抗張強度) | MIN 1500PSI     |             |
|                            |              | ELONGATION<br>(伸長率)        | MIN 100%        |             |
|                            | AGED (老化後)   | TENSILE STRENGTH<br>(抗張強度) | MIN 70%         |             |
|                            |              | ELONGATION<br>(伸長率)        | MIN 65%         |             |
| DEFORMATION TEST<br>(加熱變形) |              | JACKET(被覆)                 | MIN 50%         |             |
| COLD BEND TEST(冷彎測試)       |              |                            | -15 ± 1 °C/ 4HR | NO CRACKING |
| HEAT SHOCK TEST(熱衝擊測試)     |              |                            | 121 ± 1 °C/ 1HR | NO CRACKING |
| FLAME TEST(燃燒測試)           |              |                            | PASS VW-1       |             |

5.CONSTRUCTION:

|                                                                                           |                         |      |      |          |      |
|-------------------------------------------------------------------------------------------|-------------------------|------|------|----------|------|
| 構造圖<br> | 芯線顏色表(INSULATION COLOR) |      |      |          |      |
|                                                                                           | 32AWG*5P                |      |      | 32AWG*4C |      |
|                                                                                           | 排列                      | 芯线顏色 | 铝箔顏色 | 排列       | 芯线顏色 |
|                                                                                           | 1P                      | 蓝    | 棕    | 1        | 黑    |
|                                                                                           |                         | 白    |      | 2        | 橙    |
|                                                                                           | 2P                      | 蓝    | 红    | 3        | 白    |
|                                                                                           |                         | 白    |      | 4        | 棕    |
|                                                                                           | 3P                      | 蓝    | 蓝    |          |      |
|                                                                                           |                         | 白    |      |          |      |
|                                                                                           | 4P                      | 蓝    | 绿    |          |      |
|                                                                                           |                         | 白    |      |          |      |
|                                                                                           | 5P                      | 蓝    | 黄    |          |      |
|                                                                                           |                         | 白    |      |          |      |



PIN针为单面刷金,膜厚重点测量部分为接触最高点,金层膜厚为1U"



|    |        |       |                          |                        |
|----|--------|-------|--------------------------|------------------------|
| 4  | 锡      | 19PCS | 直径0.7无铅锡丝,含银含量2.0%       | /                      |
| 3  | PIN针端子 | 19PCS | C5191 HV200-220度 T=0.2mm | 镍底>40U" 锡80-100U",金G/F |
| 2  | 铁壳     | 1PCS  | SPCC HV110-140度 T=0.28mm | 铜底>100U" 镀镍80-100U"    |
| 1  | 前后盖胶芯  | 各1PCS | LCP BLACK                | /                      |
| NO | 零件名称   | 数量    | 简要资料                     | 表面处理                   |

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|                 |                  |
|-----------------|------------------|
| 核准:             |                  |
| 审核:             | TITLE: HDMI - 主體 |
| 绘图:             | CUST P/N:        |
|                 | DWG NO:          |
| 单位<br>mm [INCH] | 页次 1 OF 1        |

- 注:
1. 未标示公差之尺寸依照一般公差。
  2. 标有▲的尺寸为重点检验尺寸。
  3. 4.45和13.9尺寸只量包胶后外露范围。
  4. PIN针端子电镀为半金半锡。

一般公差

0~10  $\pm 0.1$

>10~50  $\pm 0.15$

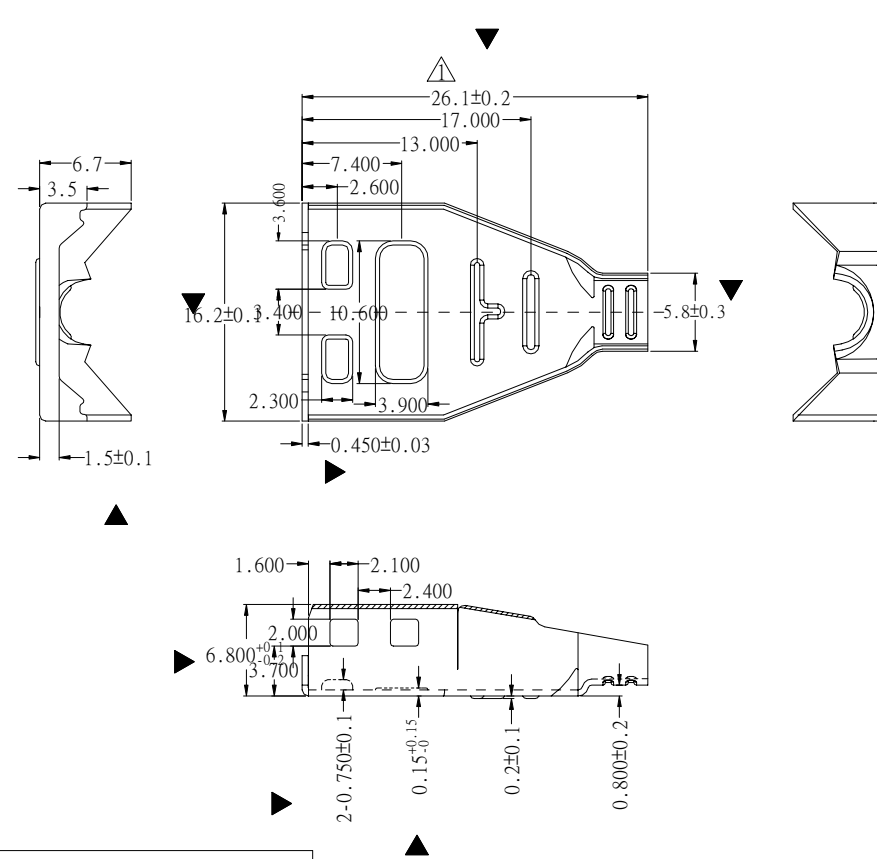
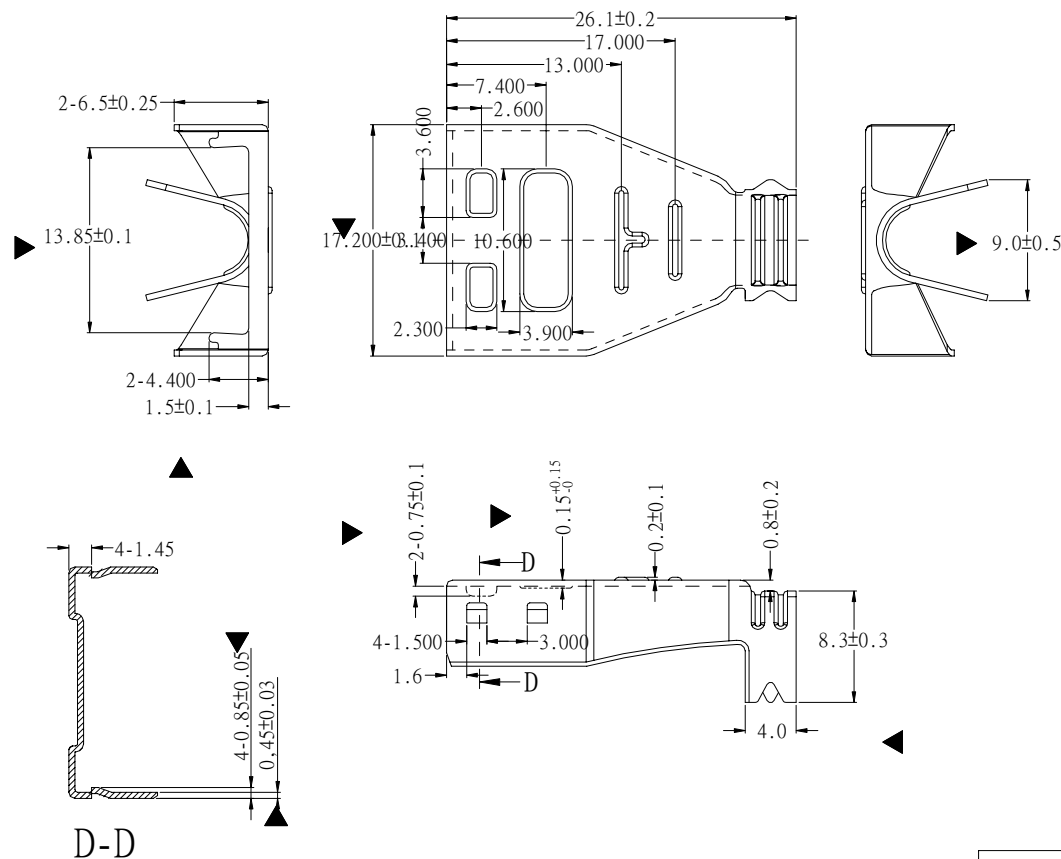
>50~100  $\pm 0.2$

>100~  $\pm 0.3$

ANGULAR  $\pm 2^{\circ}$

上盖图

下盖图



注:

1. 未标示公差之尺寸依照一般公差。
2. 标有▲的尺寸为重点检验尺寸。
3. 表面要求一般,需经防锈处理。
4. 上下盖需易组装,不能轻易脱开。
5. 马口铁锡层厚度为2.8/2.8锡(10-14U")。
6. 马口铁成份:铁>98%

## 一般公差

|          |               |
|----------|---------------|
| 0~4      | $\pm 0.1$     |
| >4~16    | $\pm 0.15$    |
| >16~64   | $\pm 0.25$    |
| >64~250  | $\pm 0.35$    |
| >250~500 | $\pm 0.5$     |
| >500~    | $\pm 0.8$     |
| ANGLE    | $\pm 2^\circ$ |

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核准:

审核:

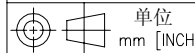
绘图:

TITLE:

CUST P/N:

DWG NO:

HDMI——上下盖

单位  
mm [INCH]

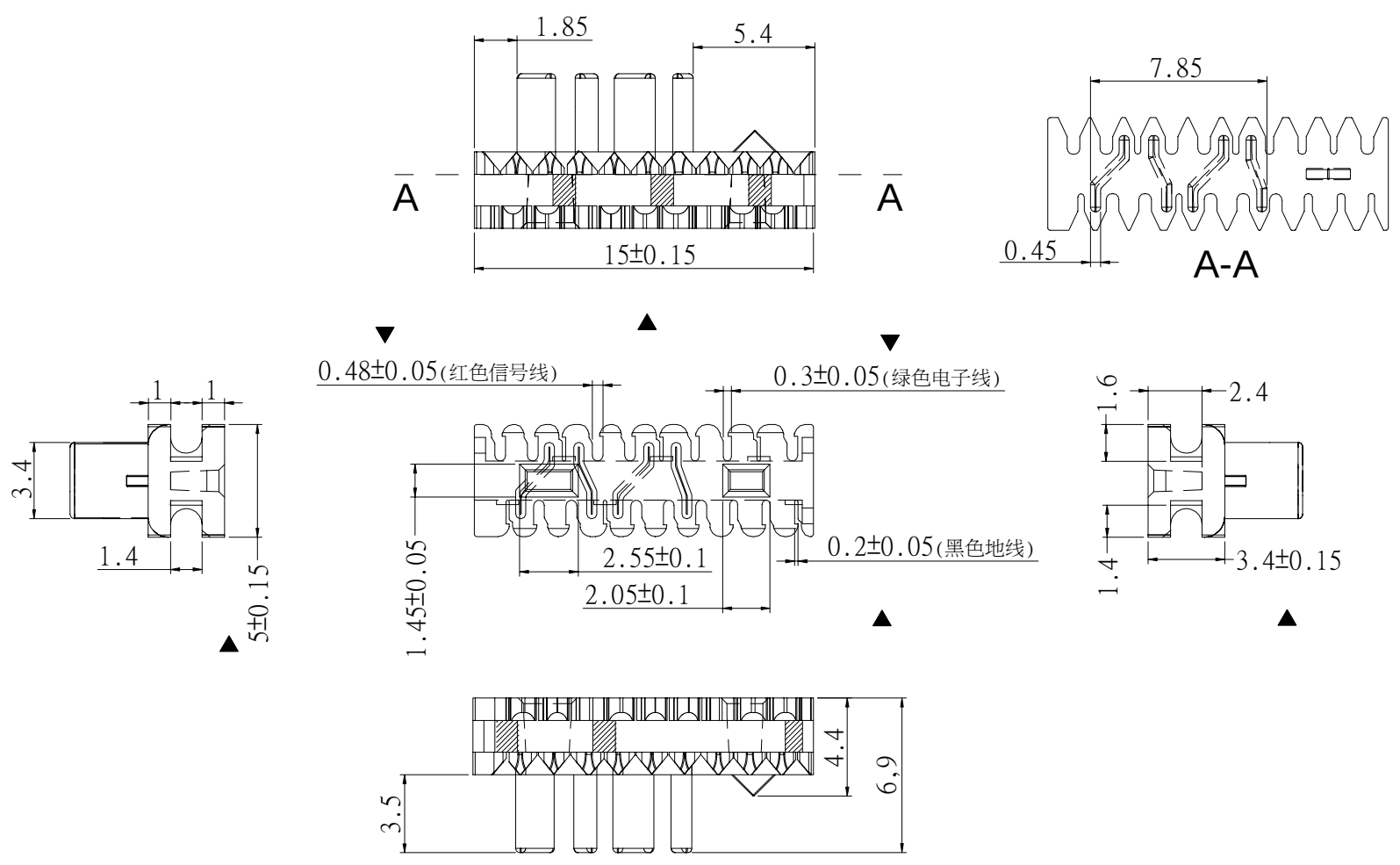
页次

1

OF

1

A  
B  
C  
D  
E  
F



注：  
1. 未标示公差之尺寸依照一般公差。  
2. 标有▲的尺寸为重点检验尺寸。  
3. 产品不可有太大铍锋、毛刺、毛边。  
4. 线槽实配，用手工或机压排好线后不可松动、不可有线没到底，支架不可变形。  
5. 支架后塞孔与胶芯后盖实配需好装，但用手需轻甩不掉。  
6. 泥龙料材质成份：树脂:70% 玻璃纤维:30%

|                 |  |                                                                                                                                                                                                                                                                                                                                                                                       |           |
|-----------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| 一般公差            |  | PROPRIETARY NOTE:<br>THIS DOCUMENT CONTAINS INFORMATION CONFIDENTIAL AND PROPRIETARY TO HOTRON PRECISION ELECTRONIC INDUSTRIAL CO.,LTD AND SHALL NOT BE REPRODUCED OR TRANSFERRED TO OTHER DOCUMENTS OR DISCLOSED TO OTHERS OR USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT WAS OBTAINED WITHOUT THE EXPRESSED WRITTEN CONSENT OF HOTRON PRECISION ELECTRONIC INDUSTRIAL CO.,LTD |           |
| 0~4 ±0.1        |  | 核准:                                                                                                                                                                                                                                                                                                                                                                                   |           |
| >4~16 ±0.15     |  | 审核:                                                                                                                                                                                                                                                                                                                                                                                   | TITLE:    |
| >16~64 ±0.25    |  | 绘图:                                                                                                                                                                                                                                                                                                                                                                                   | CUST P/N: |
| >64~250 ±0.35   |  |                                                                                                                                                                                                                                                                                                                                                                                       | DWG NO:   |
| >250~500 ±0.45  |  |                                                                                                                                                                                                                                                                                                                                                                                       |           |
| >500~ ±0.55     |  |                                                                                                                                                                                                                                                                                                                                                                                       |           |
| ANGLE ±1°       |  |                                                                                                                                                                                                                                                                                                                                                                                       |           |
| 单位<br>mm [INCH] |  |                                                                                                                                                                                                                                                                                                                                                                                       |           |
|                 |  | 页次                                                                                                                                                                                                                                                                                                                                                                                    | 1 OF      |

HDMI - 排线夹

A  
B  
C  
D  
E  
F

**Test Equipment List :**

| Equipment                 | Manufacture | P/N     | S/N        | Description               |
|---------------------------|-------------|---------|------------|---------------------------|
| Network Analyzer          | Agilent     | E5071C  | MY46522067 | 4 Port, 300 kHz to 20 GHz |
| Time Domain Reflectometry | Agilent     | ENA-TDR | MY46522067 |                           |
| Pattern Generator         | Agilent     | ENA-TDR | MY46522067 |                           |

**Device Under Test ( DUT ) & Test Environment Information :**

|                   |               |                 |         |
|-------------------|---------------|-----------------|---------|
| P / N:            | D0008180RFRCM | Specifications: |         |
| DUT Lot:          |               | DUT Bundle:     |         |
| DUT Length(M):    | 1.8           | Test Pair:      | 5 Pairs |
| Temperature( °C): | 20            | Humidity( %):   | 60      |
| Remark:           | 20190301067   |                 |         |

**Test Result Summary:**

|              |                           |      |
|--------------|---------------------------|------|
| 1            | NA Attenuation            | Pass |
| 2            | NA FEXT                   | Pass |
| 3            | NA HEAC Attenuation       | Pass |
| 4            | TDR DifferentialIMPZ      | Pass |
| 5            | TDR ConnectorIMPZ         | Pass |
| 6            | TDR FE ConnectorIMPZ      | Pass |
| 7            | TDT DifferentialDelay     | Pass |
| 8            | TDT IntraPairSkew         | Pass |
| 9            | TDT InterPairSkew         | Pass |
| 10           | TDR HEAC SingleEnd IMPZ   | Pass |
| 11           | TDR HEAC CommonModeIMPZ   | Pass |
| 12           | TDR HEAC DifferentialIMPZ | Pass |
| 13           | TDR HEAC ConnectorIMPZ    | Pass |
| 14           | TDR HEAC FE ConnectorIMPZ | Pass |
| 15           | TDT HEAC IntraPairSkew    | Pass |
| Test Result: |                           | Pass |

## TEST Data Summary Page 1 of 2

### NA Attenuation

| 起始頻率 | 結束頻率 | 規格上限 | 規格下限       | CLK            | D0             | D1             | D2             |
|------|------|------|------------|----------------|----------------|----------------|----------------|
| 0.3  | 0.3  | --   | -5         | <b>-0.119</b>  | <b>-0.120</b>  | <b>-0.128</b>  | <b>-0.120</b>  |
| 825  | 825  | --   | -5         | <b>-4.035</b>  | <b>-4.326</b>  | <b>-4.302</b>  | <b>-4.509</b>  |
| 2475 | 2475 | --   | -12        | <b>-7.962</b>  | <b>-8.606</b>  | <b>-8.137</b>  | <b>-11.058</b> |
| 4125 | 4125 | --   | -20        | <b>-11.311</b> | <b>-11.817</b> | <b>-11.515</b> | <b>-15.718</b> |
| 5100 | 5100 | --   | -25        | <b>-13.569</b> | <b>-14.263</b> | <b>-14.326</b> | <b>-17.566</b> |
| 0.3  | 5100 | --   | 5.00→-25.0 | <b>-4.035</b>  | <b>-4.326</b>  | <b>-4.302</b>  | <b>-12.724</b> |
| MHz  | MHz  | dB   | dB         | <b>Pass</b>    | <b>Pass</b>    | <b>Pass</b>    | <b>Pass</b>    |

### NA FEXT

| 起始頻率 | 結束頻率 | 規格上限 | 規格下限 | CLK-D0         | CLK-D1         | CLK-D2         | D0-D1          | D0-D2          | D1-D2          |
|------|------|------|------|----------------|----------------|----------------|----------------|----------------|----------------|
| 1    | 5100 | -20  | --   | <b>-29.966</b> | <b>-32.313</b> | <b>-38.361</b> | <b>-35.470</b> | <b>-33.673</b> | <b>-29.843</b> |
| MHz  | MHz  | dB   | dB   | <b>Pass</b>    | <b>Pass</b>    | <b>Pass</b>    | <b>Pass</b>    | <b>Pass</b>    | <b>Pass</b>    |

### NA HEAC Attenuation

| 起始頻率 | 結束頻率 | 規格上限 | 規格下限 | HEAC          |
|------|------|------|------|---------------|
| 1    | 10   | --   | -1.6 | <b>-0.437</b> |
| 10   | 100  | --   | -5   | <b>-1.389</b> |
| 100  | 200  | --   | -7.1 | <b>-2.105</b> |
| MHz  | MHz  | dB   | dB   | <b>Pass</b>   |

### TDR DifferentialIMPZ , Tr= 200 ps (10%-90%)

| 對數名稱 | 規格上限 | 規格下限 | 最大阻抗          | 最小阻抗          | 差異值         | 平均值           | 狀態          |
|------|------|------|---------------|---------------|-------------|---------------|-------------|
| CLK  | 110  | 90   | <b>103.63</b> | <b>101.92</b> | <b>1.71</b> | <b>102.78</b> | <b>Pass</b> |
| D0   | 110  | 90   | <b>99.95</b>  | <b>98.92</b>  | <b>1.03</b> | <b>99.44</b>  | <b>Pass</b> |
| D1   | 110  | 90   | <b>103.76</b> | <b>102.72</b> | <b>1.04</b> | <b>103.24</b> | <b>Pass</b> |
| D2   | 110  | 90   | <b>102.2</b>  | <b>101.2</b>  | <b>1.00</b> | <b>101.70</b> | <b>Pass</b> |
| 單位 : | Ohm  | Ohm  | Ohm           | Ohm           | Ohm         | Ohm           | --          |

### TDR ConnectorIMPZ , Tr= 200 ps (10%-90%)

| 對數名稱 | 規格上限        | 規格下限      | 最大阻抗          | 最小阻抗          | 凸點寬度       | 差異值          | 狀態          |
|------|-------------|-----------|---------------|---------------|------------|--------------|-------------|
| CLK  | 125~115,250 | 75~85,250 | <b>111.66</b> | <b>99.94</b>  | <b>0.0</b> | <b>11.72</b> | <b>Pass</b> |
| D0   | 125~115,250 | 75~85,250 | <b>110.78</b> | <b>98.21</b>  | <b>0.0</b> | <b>12.57</b> | <b>Pass</b> |
| D1   | 125~115,250 | 75~85,250 | <b>114.51</b> | <b>101.79</b> | <b>0.0</b> | <b>12.72</b> | <b>Pass</b> |
| D2   | 125~115,250 | 75~85,250 | <b>113.91</b> | <b>100.74</b> | <b>0.0</b> | <b>13.17</b> | <b>Pass</b> |
| 單位 : | Ohm,ps      | Ohm,ps    | Ohm           | Ohm           | ps         | Ohm          | --          |

### TDR FE ConnectorIMPZ , Tr= 200 ps (10%-90%)

| 對數名稱 | 規格上限        | 規格下限      | 最大阻抗          | 最小阻抗          | 凸點寬度       | 差異值          | 狀態          |
|------|-------------|-----------|---------------|---------------|------------|--------------|-------------|
| CLK  | 125~115,250 | 75~85,250 | <b>109.94</b> | <b>100.49</b> | <b>0.0</b> | <b>9.45</b>  | <b>Pass</b> |
| D0   | 125~115,250 | 75~85,250 | <b>110.2</b>  | <b>98.16</b>  | <b>0.0</b> | <b>12.04</b> | <b>Pass</b> |
| D1   | 125~115,250 | 75~85,250 | <b>114.92</b> | <b>101.36</b> | <b>0.0</b> | <b>13.56</b> | <b>Pass</b> |
| D2   | 125~115,250 | 75~85,250 | <b>111.57</b> | <b>99.59</b>  | <b>0.0</b> | <b>11.98</b> | <b>Pass</b> |
| 單位 : | Ohm,ps      | Ohm,ps    | Ohm           | Ohm           | ps         | Ohm          | --          |

### TDI DifferentialDelay , Tr= 200 ps (10%-90%)

| 對數名稱 | 規格上限 | 規格下限 | 延遲值          | 狀態          |
|------|------|------|--------------|-------------|
| CLK  | 5.2  | --   | <b>4.786</b> | <b>Pass</b> |
| D0   | 5.2  | --   | <b>4.934</b> | <b>Pass</b> |
| D1   | 5.2  | --   | <b>4.879</b> | <b>Pass</b> |
| D2   | 5.2  | --   | <b>4.772</b> | <b>Pass</b> |
| 單位 : | ns/M | ns/M | ns/M         | --          |

## TEST Data Summary Page 2 of 2

### TDT IntraPairSkew , Tr= 200 ps (10%-90%)

| 對數名稱 | 規格上限 | 規格下限 | 延遲差值  | 狀態   |
|------|------|------|-------|------|
| CLK  | 112  | --   | 22.81 | Pass |
| D0   | 112  | --   | 13.04 | Pass |
| D1   | 112  | --   | 29.24 | Pass |
| D2   | 112  | --   | 86.45 | Pass |
| 單位：  | ps   | ps   | ps    | --   |

### TDT InterPairSkew , Tr= 200 ps (10%-90%)

| 對數名稱 | 規格上限 | 規格下限 | 延遲差值   | 狀態   |
|------|------|------|--------|------|
| ALL  | 1780 | --   | 405.37 | Pass |
| 單位：  | ps   | ps   | ps     | --   |

### TDR HEAC SingleEnd IMPZ , Tr= 1000 ps (10%-90%)

| 對數名稱 | 規格上限  | 規格下限  | 最大阻抗  | 最小阻抗 | 差異值  | 平均值   | 狀態   |
|------|-------|-------|-------|------|------|-------|------|
| HEAC | 74.25 | 35.75 | 63.17 | 55.1 | 8.07 | 59.14 | Pass |
| 單位：  | Ohm   | Ohm   | Ohm   | Ohm  | Ohm  | Ohm   | --   |

### TDR HEAC CommonModeIMPZ , Tr= 1000 ps (10%-90%)

| 對數名稱 | 規格上限 | 規格下限 | 最大阻抗 | 最小阻抗  | 差異值  | 平均值   | 狀態   |
|------|------|------|------|-------|------|-------|------|
| HEAC | 36   | 24   | 34.1 | 29.53 | 4.57 | 31.82 | Pass |
| 單位：  | Ohm  | Ohm  | Ohm  | Ohm   | Ohm  | Ohm   | --   |

### TDR HEAC DifferiaIMPZ , Tr= 1000 ps (10%-90%)

| 對數名稱 | 規格上限 | 規格下限 | 最大阻抗   | 最小阻抗   | 差異值  | 平均值    | 狀態   |
|------|------|------|--------|--------|------|--------|------|
| HEAC | 110  | 90   | 101.44 | 100.54 | 0.90 | 100.99 | Pass |
| 單位：  | Ohm  | Ohm  | Ohm    | Ohm    | Ohm  | Ohm    | --   |

### TDR HEAC ConnectorIMPZ , Tr= 1000 ps (10%-90%)

| 對數名稱 | 規格上限        | 規格下限      | 最大阻抗   | 最小阻抗   | 凸點寬度 | 差異值   | 狀態   |
|------|-------------|-----------|--------|--------|------|-------|------|
| HEAC | 125~115,250 | 75~85,250 | 112.99 | 101.47 | 0.0  | 11.52 | Pass |
| 單位：  | Ohm,ps      | Ohm,ps    | Ohm    | Ohm    | ps   | Ohm   | --   |

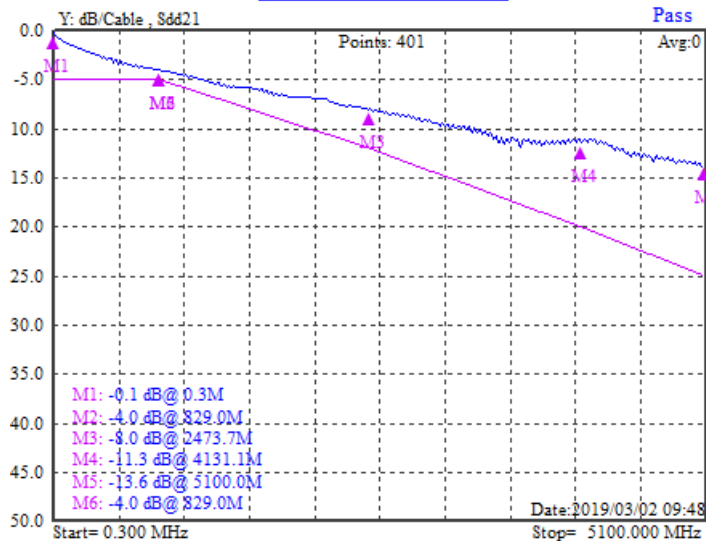
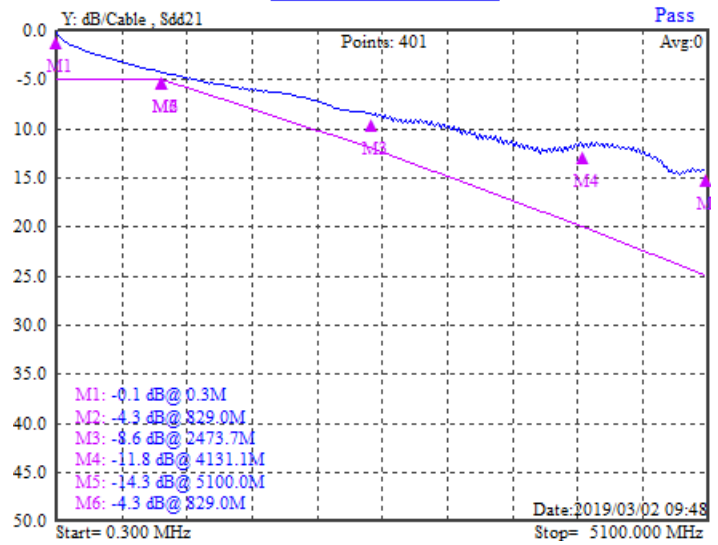
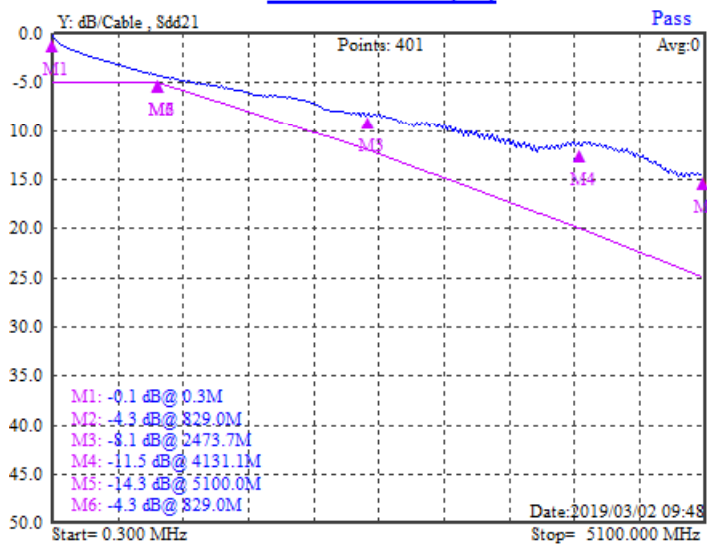
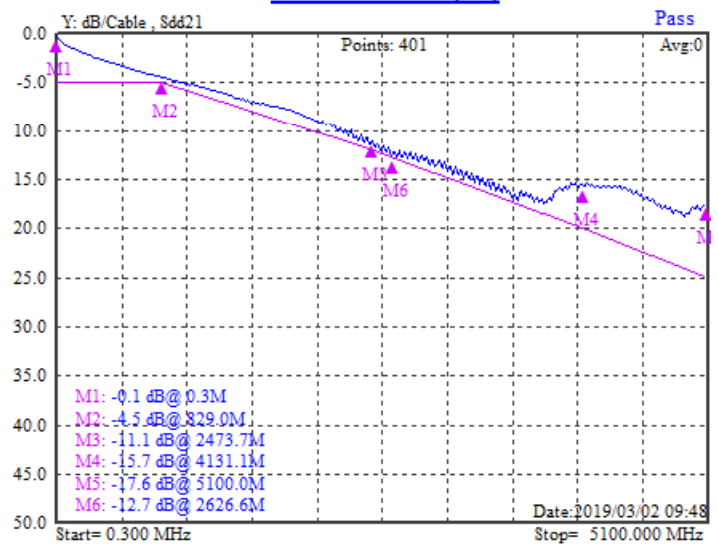
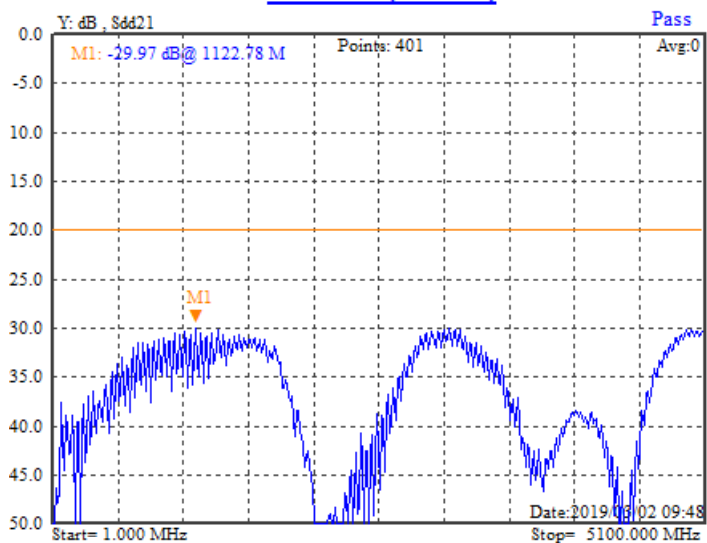
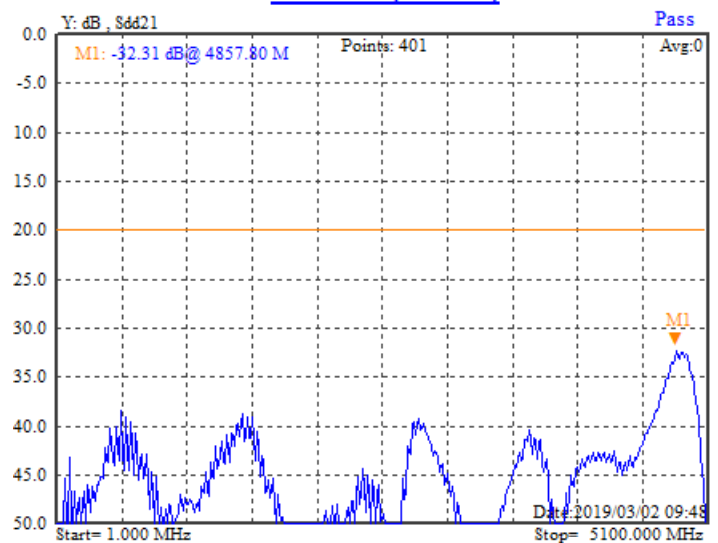
### TDR HEAC FE ConnectorIMPZ , Tr= 1000 ps (10%-90%)

| 對數名稱 | 規格上限        | 規格下限      | 最大阻抗   | 最小阻抗   | 凸點寬度 | 差異值   | 狀態   |
|------|-------------|-----------|--------|--------|------|-------|------|
| HEAC | 125~115,250 | 75~85,250 | 114.68 | 100.08 | 0.0  | 14.60 | Pass |
| 單位：  | Ohm,ps      | Ohm,ps    | Ohm    | Ohm    | ps   | Ohm   | --   |

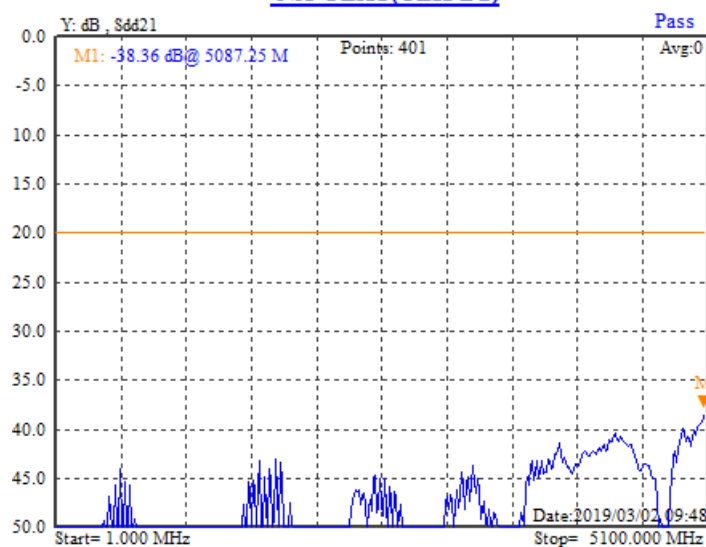
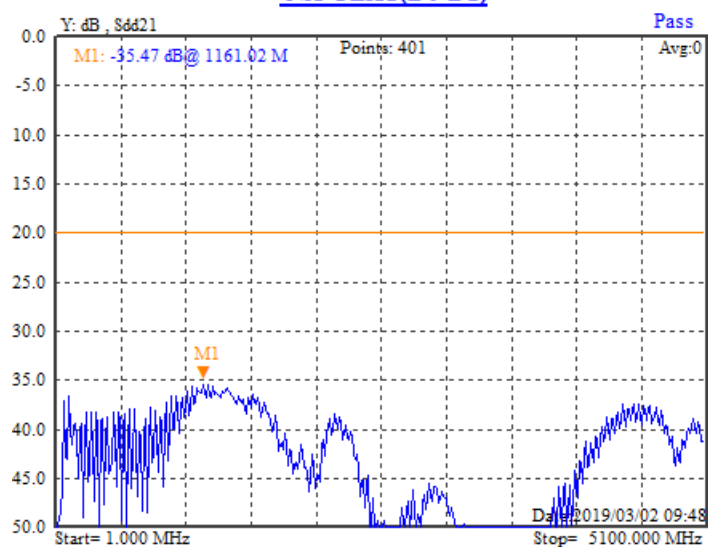
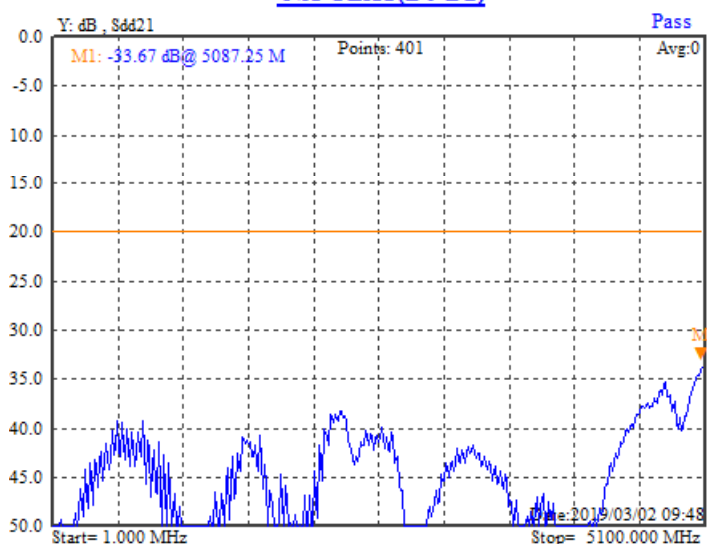
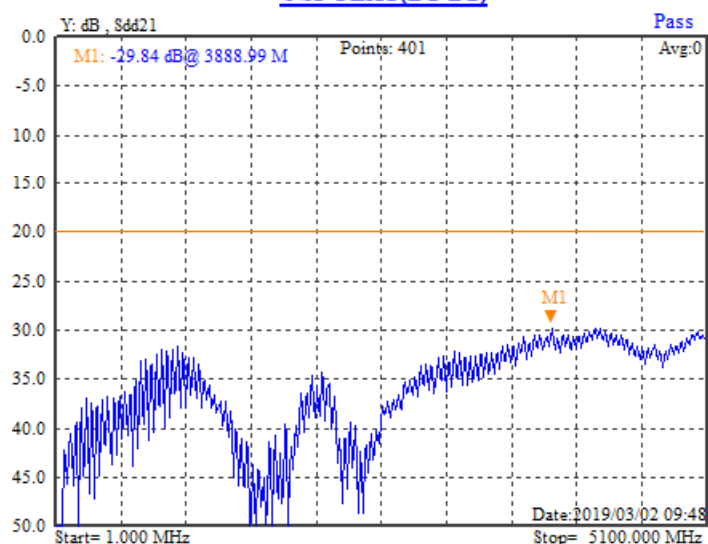
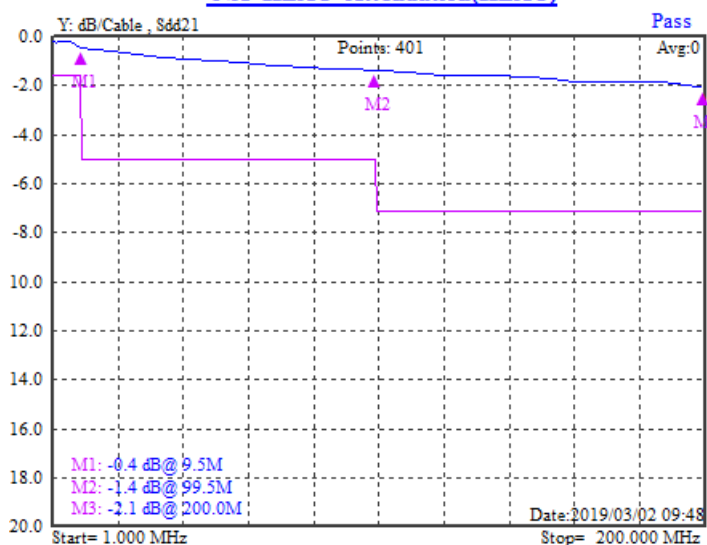
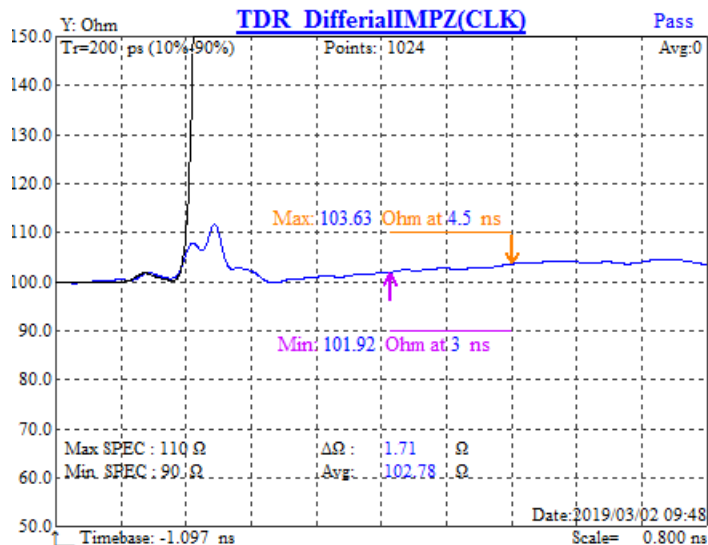
### TDT HEAC IntraPairSkew , Tr= 1000 ps (10%-90%)

| 對數名稱 | 規格上限 | 規格下限 | 延遲差值   | 狀態   |
|------|------|------|--------|------|
| HEAC | 111  | --   | 20.666 | Pass |
| 單位：  | ps   | ps   | ps     | --   |

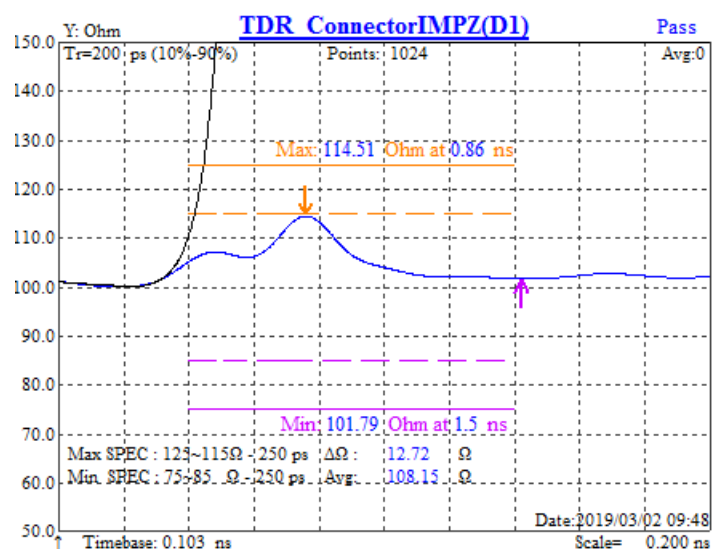
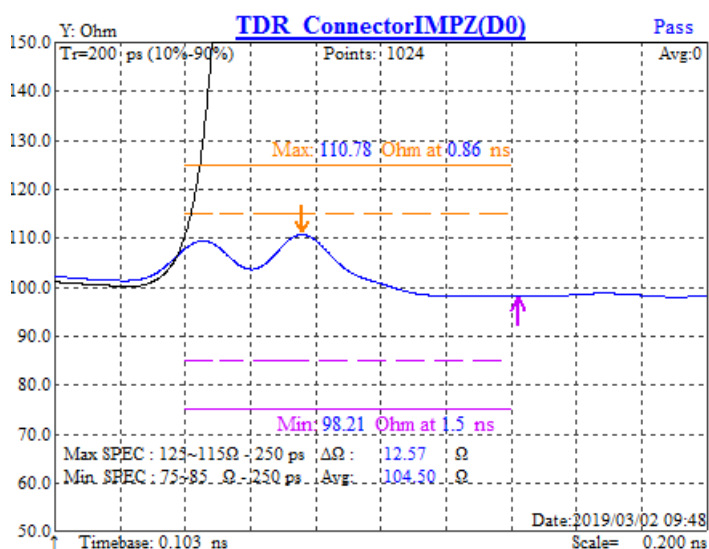
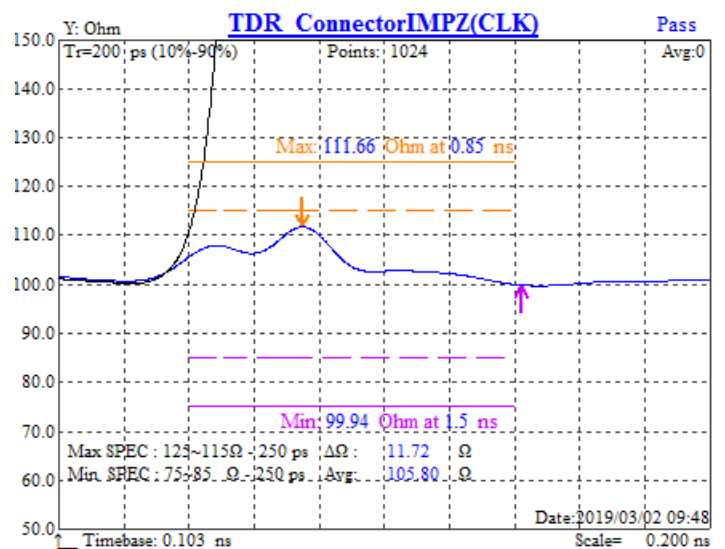
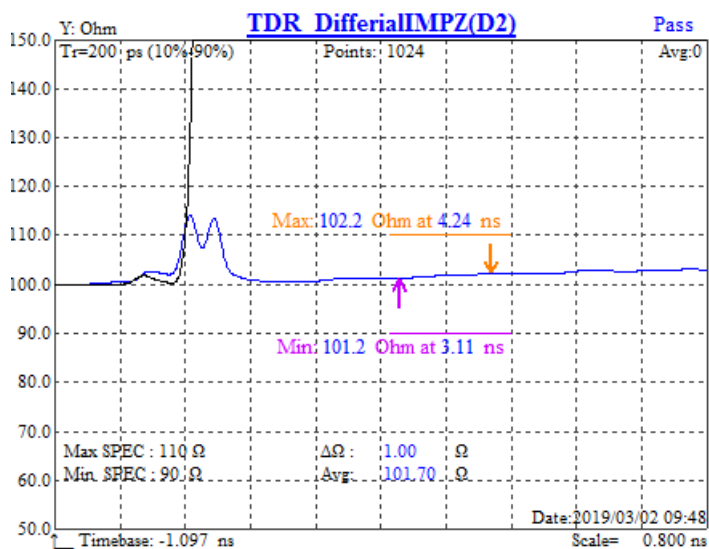
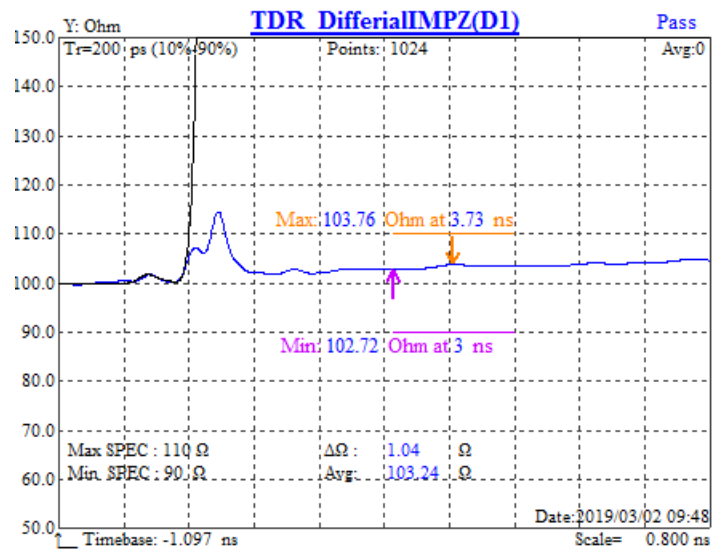
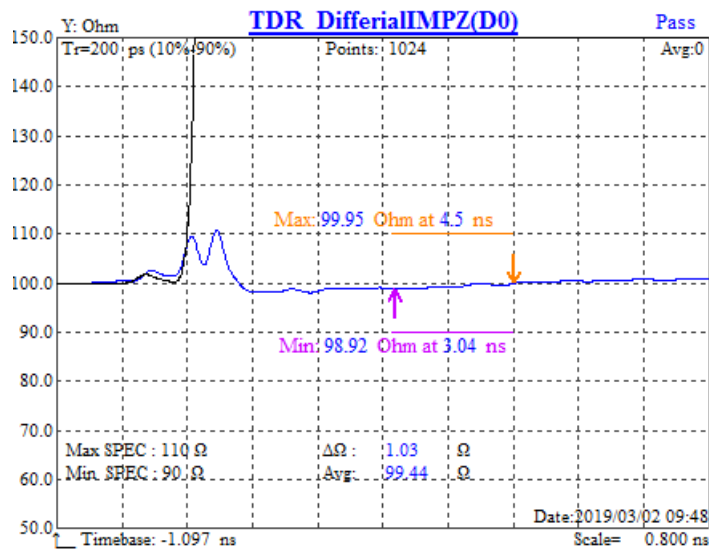
## TEST Graphic Summary Page 1 of 7

NA Attenuation(CLK)NA Attenuation(D0)NA Attenuation(D1)NA Attenuation(D2)NA FEXT(CLK-D0)NA FEXT(CLK-D1)

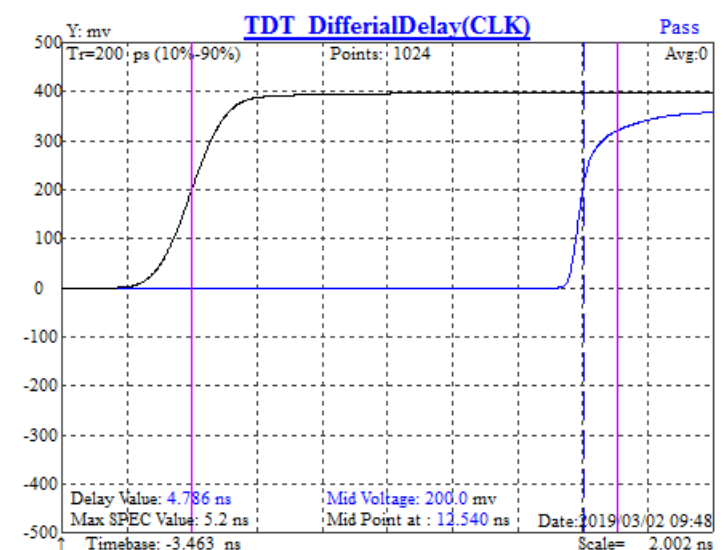
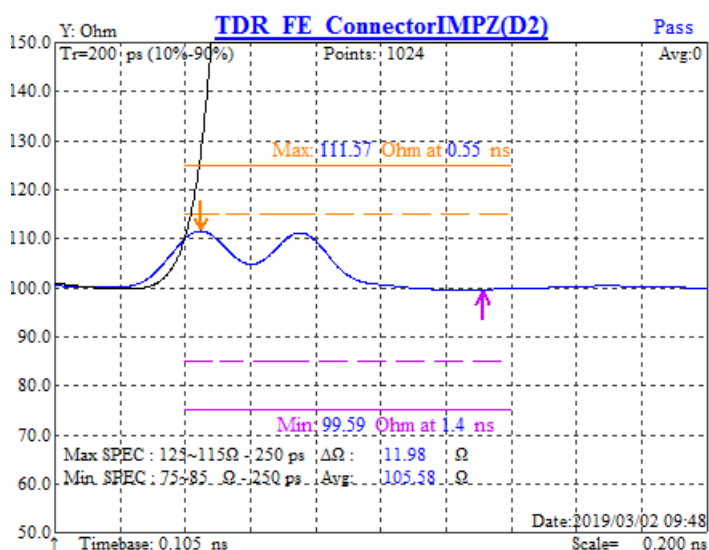
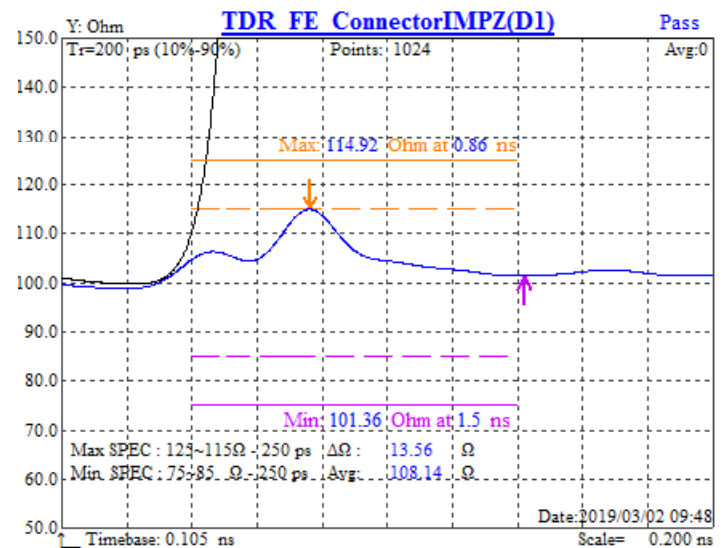
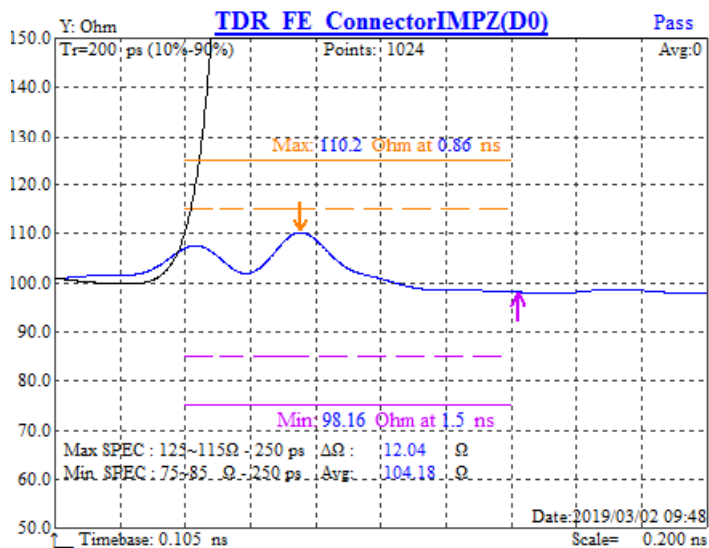
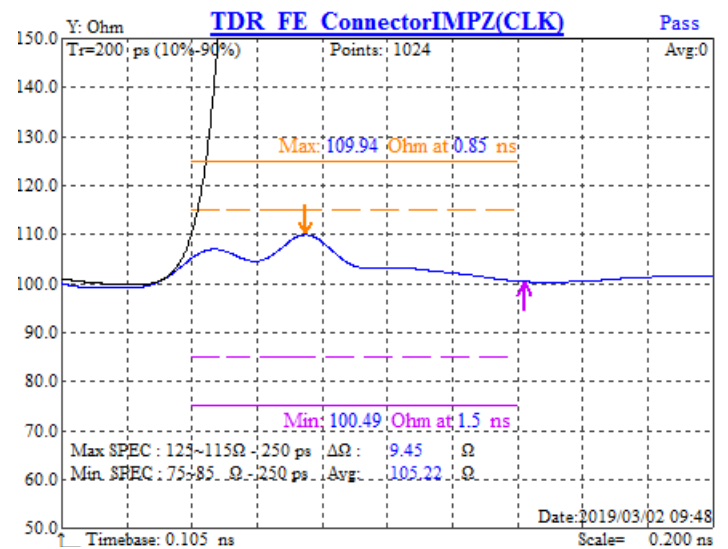
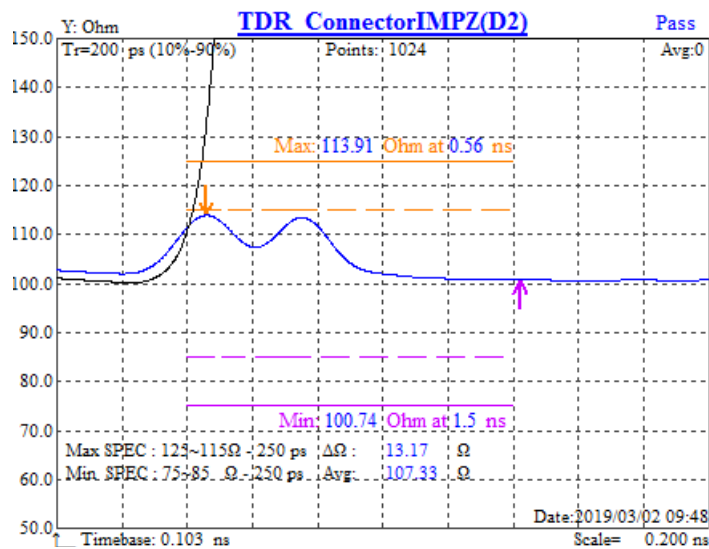
## TEST Graphic Summary Page 2 of 7

NA FEXT(CLK-D2)NA FEXT(D0-D1)NA FEXT(D0-D2)NA FEXT(D1-D2)NA HEAC Attenuation(HEAC)TDR DifferentialIMPZ(CLK)

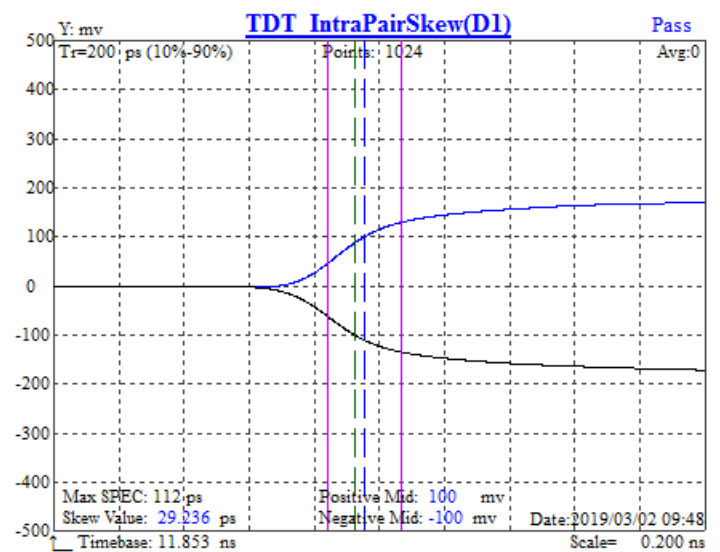
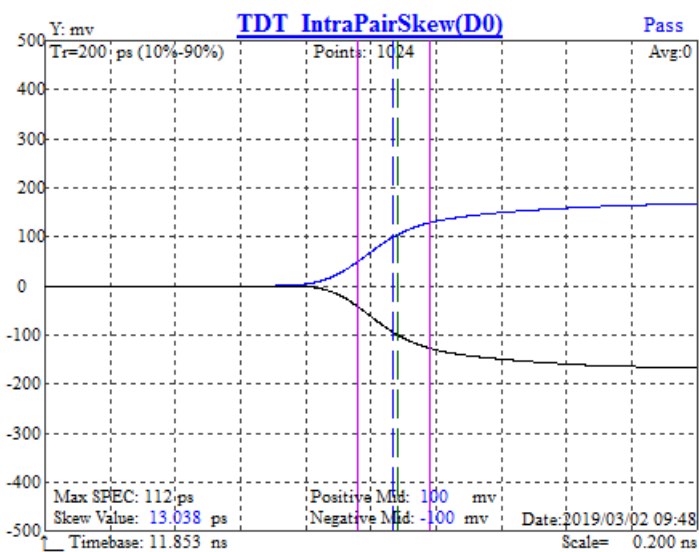
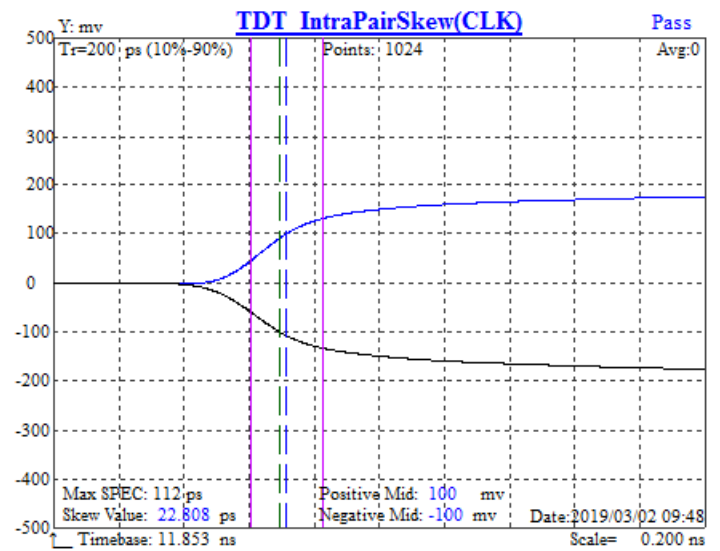
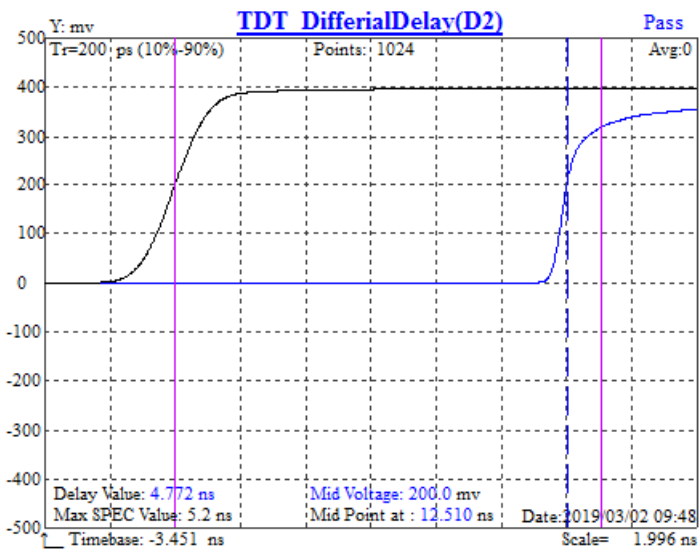
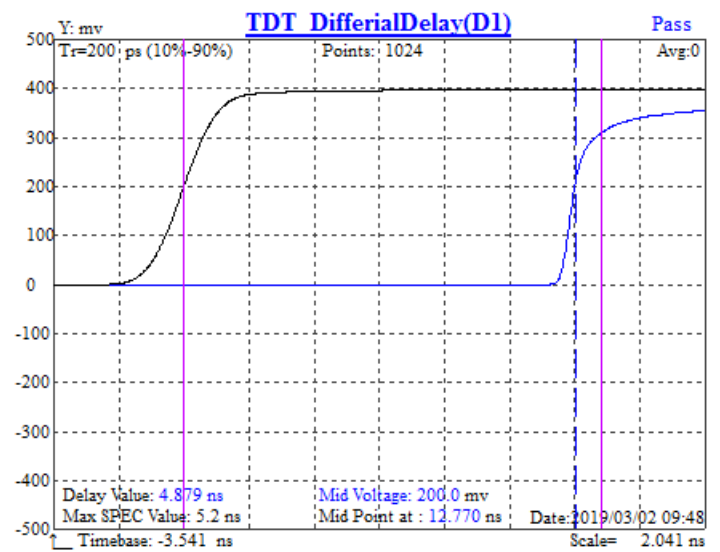
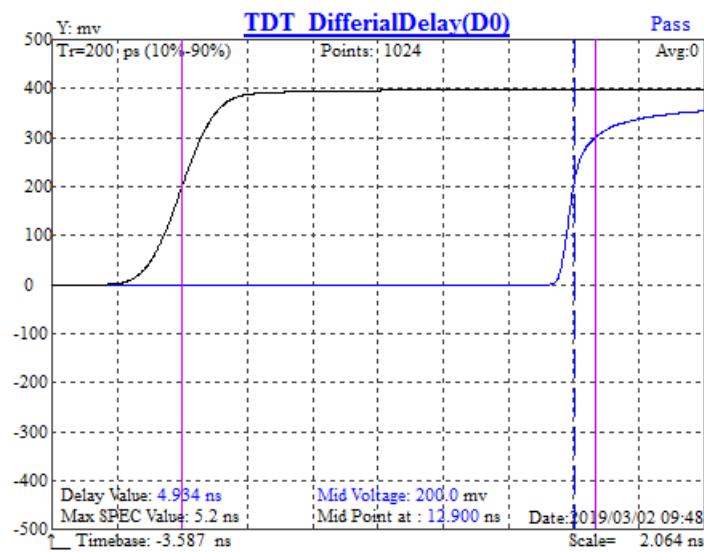
## TEST Graphic Summary Page 3 of 7



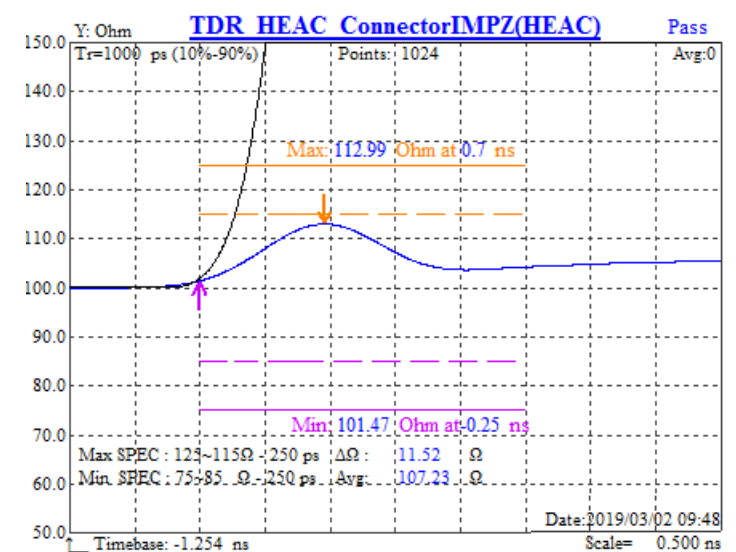
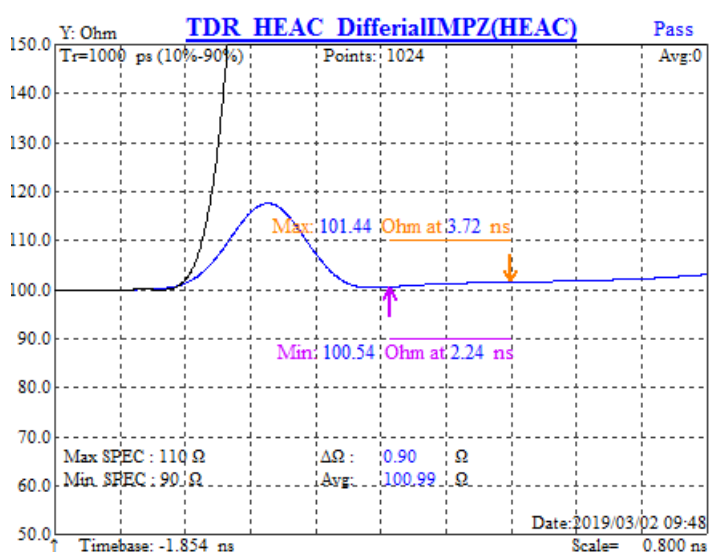
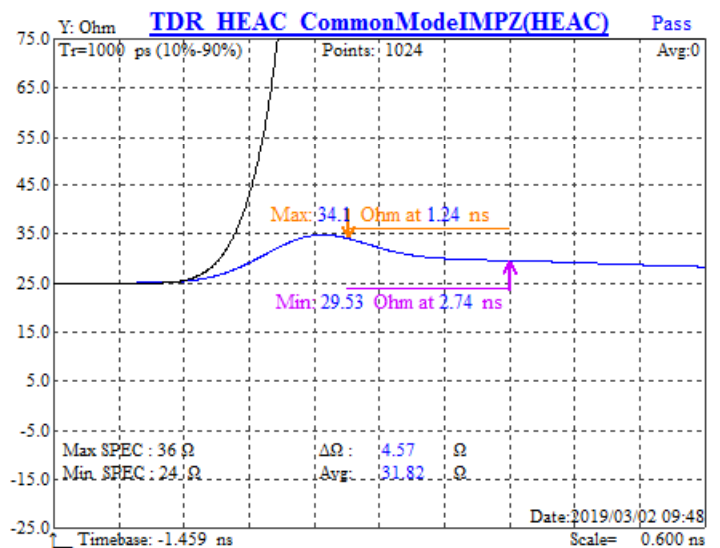
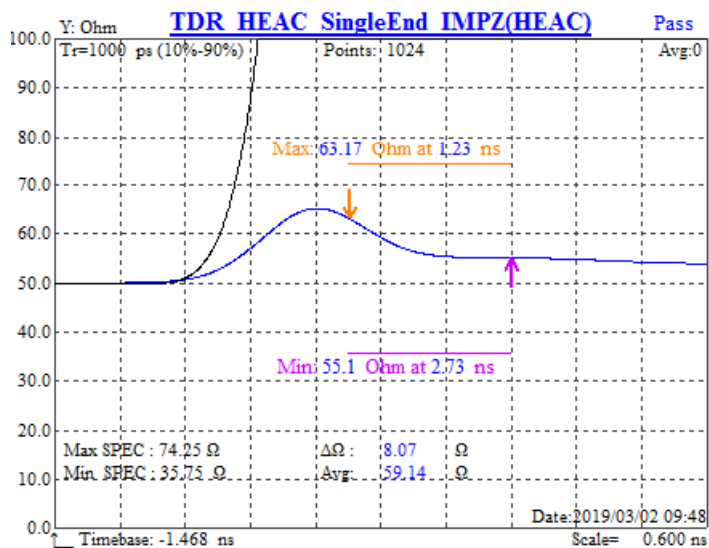
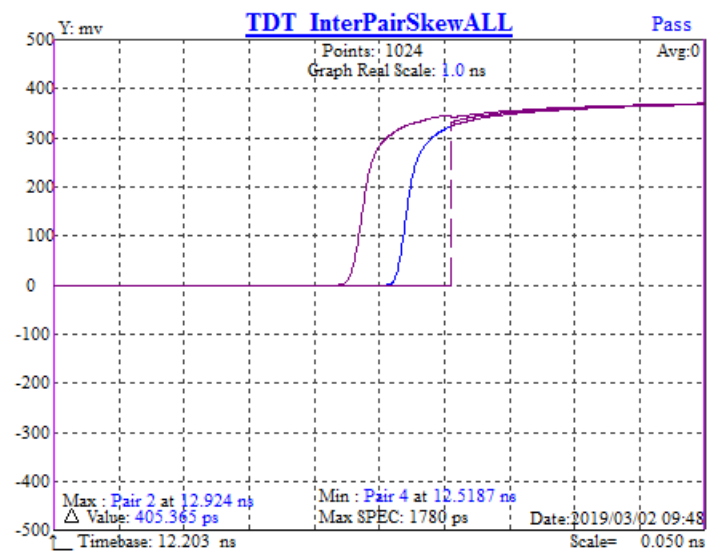
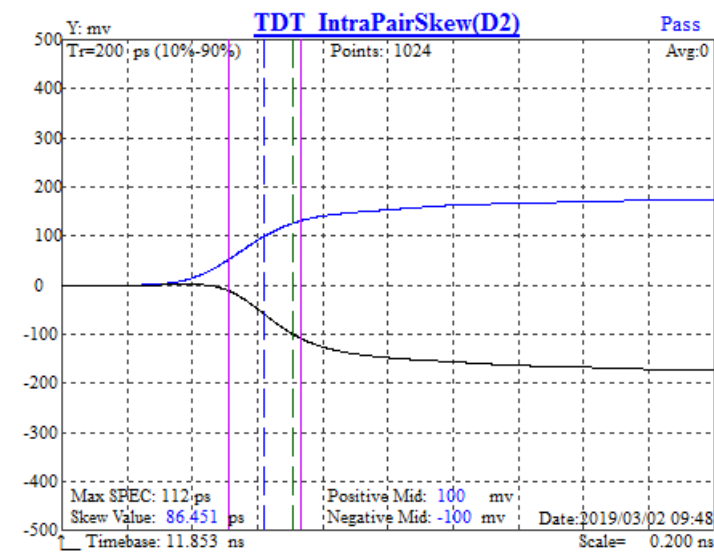
## TEST Graphic Summary Page 4 of 7



## TEST Graphic Summary Page 5 of 7



## TEST Graphic Summary Page 6 of 7



## TEST Graphic Summary Page 7 of 7

