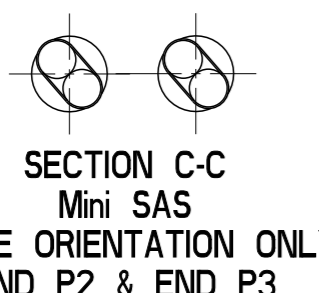


| PRODUCT NUMBER   | DESCRIPTION      | NOTES      |
|------------------|------------------|------------|
| 10117947-XXXXLF  | NON-HF           | SEE SHT. 3 |
| 10117947-XXXXHLF | HALOGEN FREE (H) | SEE SHT. 3 |

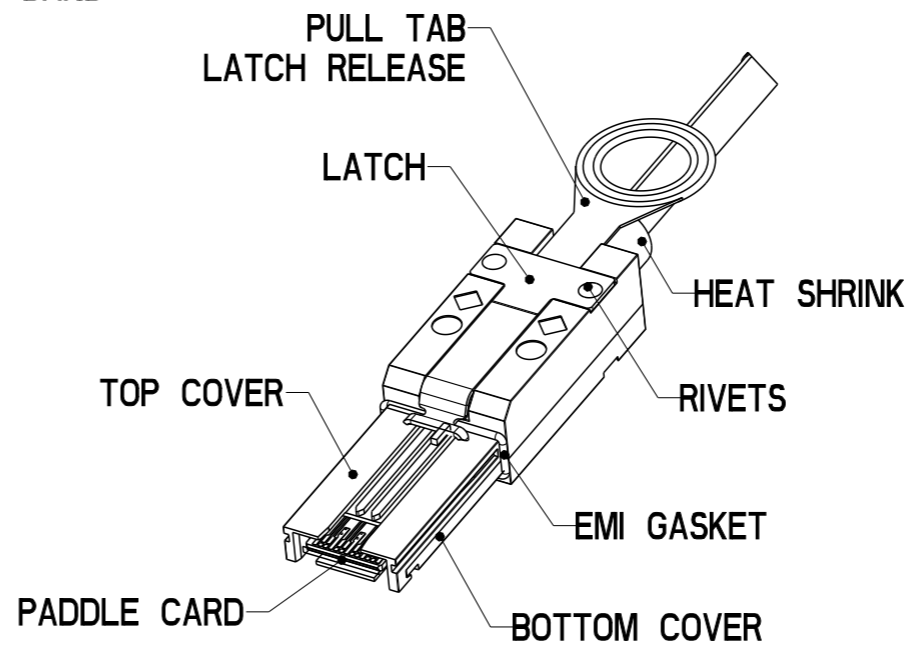


|             |                |                        |                                  |              |           |               |       |          |   |
|-------------|----------------|------------------------|----------------------------------|--------------|-----------|---------------|-------|----------|---|
| dr          | Deborah Ingram | 2011/05/23             | projection                       | mm           | size      | A3            | scale | 1:1      |   |
| eng         | Tommy Lin      | 2014/01/06             |                                  |              | ecn no    | ELX-N-16648-1 |       |          |   |
| chr         | -              | -                      |                                  |              | rel level | Released      |       |          |   |
| appr        | Roger Cheng    | 2014/01/07             | product family                   | MiniSAS/SATA | rev       | D             |       |          |   |
|             |                | title                  | MINI SAS HD 8X TO 2 MINI SAS 2.1 |              | dwg no    | 10117947      |       | cat. no. | - |
| www.fci.com |                | Product - Customer Drw |                                  | sheet 1 of 5 |           |               |       |          |   |

| PRODUCT NUMBER   | DESCRIPTION      | NOTES      |
|------------------|------------------|------------|
| 10117947-XXXXLF  | NON-HF           | SEE SHT. 3 |
| 10117947-XXXXHLF | HALOGEN FREE (H) | SEE SHT. 3 |



END P1  
MINI SAS HD 8X  
ISOMETRIC VIEW



END P2 & END P3  
MINI SAS  
ISOMETRIC VIEW



KEY 3 & KEY SLOT 2, 4 & 6  
○ ◆ UNIVERSAL PORT

END P2 & END P3  
MINI SAS


|             |                |   |                |                        |                    |               |       |     |
|-------------|----------------|---|----------------|------------------------|--------------------|---------------|-------|-----|
| dr          | Deborah Ingram | 2011/05/23  | projection<br> | mm<br>                 | size               | A3            | scale | 4:5 |
| eng         | Tommy Lin      | 2014/01/06  |                |                        | ecn no             | ELX-N-16648-1 |       |     |
| chr         | -              | -   |                |                        | rel level          | Released      |       |     |
| appr        | Roger Cheng    | 2014/01/07  | product family | C&A                    |                    |               |       |     |
|             |                | title<br>MINI SAS HD 8X TO 2 MINI SAS 2.1<br>TRAINED UNIVERSAL FINAL ASSEMBLY (6Gb/s) |                |                        | dwg no<br>10117947 | rev<br>D      |       |     |
| www.fci.com |                | cat. no.  | -              | Product - Customer Drw |                    | sheet 2 of 5  |       |     |



| PRODUCT NUMBER   | DESCRIPTION      | NOTES      |
|------------------|------------------|------------|
| 10117947-XXXXLF  | NON-HF           | SEE SHT. 3 |
| 10117947-XXXXHLF | HALOGEN FREE (H) | SEE SHT. 3 |

| PRODUCT NUMBER<br>(NON-HALOGEN FREE)<br>SEE NOTE 16 | AWG    | "DIM L"<br>LENGTH<br>(Meters) | "DIM M"<br>HEIGHT<br>(mm) |
|---|--------|-------------------------------|---------------------------|
| 10117947-5020LF                                     | 24 AWG | 2 M                           | (20.1)                    |
| 10117947-5030LF                                     | 24 AWG | 3 M                           | (20.1)                    |
| 10117947-5040LF                                     | 24 AWG | 4 M                           | (20.1)                    |
| 10117947-5050LF                                     | 24 AWG | 5 M                           | (20.1)                    |
| 10117947-5060LF                                     | 24 AWG | 6 M                           | (20.1)                    |
| 10117947-5070LF                                     | 24 AWG | 7 M                           | (20.1)                    |
| 10117947-5080LF                                     | 24 AWG | 8 M                           | (20.1)                    |
| 10117947-5090LF                                     | 24 AWG | 9 M                           | (20.1)                    |
| 10117947-5100LF                                     | 24 AWG | 10 M                          | (20.1)                    |
| 10117947-4020LF                                     | 26 AWG | 2 M                           | (20.1)                    |
| 10117947-4030LF                                     | 26 AWG | 3 M                           | (20.1)                    |
| 10117947-4040LF                                     | 26 AWG | 4 M                           | (20.1)                    |
| 10117947-4050LF                                     | 26 AWG | 5 M                           | (20.1)                    |
| 10117947-4060LF                                     | 26 AWG | 6 M                           | (20.1)                    |
| 10117947-4070LF                                     | 26 AWG | 7 M                           | (20.1)                    |
| 10117947-4080LF                                     | 26 AWG | 8 M                           | (20.1)                    |
| 10117947-3010LF                                     | 28 AWG | 1 M                           | (17.3)                    |
| 10117947-3020LF                                     | 28 AWG | 2 M                           | (17.3)                    |
| 10117947-3030LF                                     | 28 AWG | 3 M                           | (17.3)                    |
| 10117947-3040LF                                     | 28 AWG | 4 M                           | (17.3)                    |
| 10117947-3050LF                                     | 28 AWG | 5 M                           | (17.3)                    |
| 10117947-3060LF                                     | 28 AWG | 6 M                           | (17.3)                    |
| 10117947-2005LF                                     | 30 AWG | 0.5 M                         | (17.3)                    |
| 10117947-2010LF                                     | 30 AWG | 1 M                           | (17.3)                    |
| 10117947-2020LF                                     | 30 AWG | 2 M                           | (17.3)                    |
| 10117947-2030LF                                     | 30 AWG | 3 M                           | (17.3)                    |
| 10117947-2040LF                                     | 30 AWG | 4 M                           | (17.3)                    |

| PRODUCT NUMBER<br>(HALOGEN FREE)<br>SEE NOTE 9 AND 16 | AWG    | "DIM L"<br>LENGTH<br>(Meters) | "DIM M"<br>HEIGHT<br>(mm) |
|---|--------|-------------------------------|---------------------------|
| 10117947-5020HLF                                      | 24 AWG | 2 M                           | (20.1)                    |
| 10117947-5030HLF                                      | 24 AWG | 3 M                           | (20.1)                    |
| 10117947-5040HLF                                      | 24 AWG | 4 M                           | (20.1)                    |
| 10117947-5050HLF                                      | 24 AWG | 5 M                           | (20.1)                    |
| 10117947-5060HLF                                      | 24 AWG | 6 M                           | (20.1)                    |
| 10117947-5070HLF                                      | 24 AWG | 7 M                           | (20.1)                    |
| 10117947-5080HLF                                      | 24 AWG | 8 M                           | (20.1)                    |
| 10117947-5090HLF                                      | 24 AWG | 9 M                           | (20.1)                    |
| 10117947-5100HLF                                      | 24 AWG | 10 M                          | (20.1)                    |
| 10117947-4020HLF                                      | 26 AWG | 2 M                           | (20.1)                    |
| 10117947-4030HLF                                      | 26 AWG | 3 M                           | (20.1)                    |
| 10117947-4040HLF                                      | 26 AWG | 4 M                           | (20.1)                    |
| 10117947-4045HLF                                      | 26 AWG | 5 M                           | (20.1)                    |
| 10117947-4060HLF                                      | 26 AWG | 6 M                           | (20.1)                    |
| 10117947-4070HLF                                      | 26 AWG | 7 M                           | (20.1)                    |
| 10117947-4080HLF                                      | 26 AWG | 8 M                           | (20.1)                    |
| 10117947-3010HLF                                      | 28 AWG | 1 M                           | (17.3)                    |
| 10117947-3020HLF                                      | 28 AWG | 2 M                           | (17.3)                    |
| 10117947-3030HLF                                      | 28 AWG | 3 M                           | (17.3)                    |
| 10117947-3040HLF                                      | 28 AWG | 4 M                           | (17.3)                    |
| 10117947-3050HLF                                      | 28 AWG | 5 M                           | (17.3)                    |
| 10117947-3060HLF                                      | 28 AWG | 6 M                           | (17.3)                    |
| 10117947-2005HLF                                      | 30 AWG | 0.5 M                         | (17.3)                    |
| 10117947-2010HLF                                      | 30 AWG | 1 M                           | (17.3)                    |
| 10117947-2020HLF                                      | 30 AWG | 2 M                           | (17.3)                    |
| 10117947-2030HLF                                      | 30 AWG | 3 M                           | (17.3)                    |
| 10117947-2040HLF                                      | 30 AWG | 4 M                           | (17.3)                    |

|   |                |            |  |                        |               |              |     |
|---|----------------|------------|--|------------------------|---------------|--------------|-----|
| dr  | Deborah Ingram | 2011/05/23 | <br>projection<br>mm<br> | size                   | A3            | scale        | 1:1 |
| eng   | Tommy Lin      | 2014/01/06 |  | ecn no                 | ELX-N-16648-1 |              |     |
| chr   | -              | -          |  | rel level              | Released      |              |     |
| appr  | Roger Cheng    | 2014/01/07 |  | product family         | C&A           |              |     |
|  |                | title      | MINI SAS HD 8X TO 2 MINI SAS 2.1<br>TRAINED UNIVERSAL FINAL ASSEMBLY (6Gb/s)   | dwg no                 | 10117947      | rev          | D   |
| www.fci.com   |                | cat. no.   | -  | Product - Customer Drw |               | sheet 3 of 5 |     |

| PRODUCT NUMBER   | DESCRIPTION      | NOTES      |
|------------------|------------------|------------|
| 10117947-XXXXLF  | NON-HF           | SEE SHT. 3 |
| 10117947-XXXXHLF | HALOGEN FREE (H) | SEE SHT. 3 |



VIEW A  
SCALE: 2:1



VIEW B  
SCALE: 2:1

LEGEND:



HIGH-SPEED SERIAL DIFFERENTIAL PAIRS



SIGNAL RETURN



POWER AND MANAGEMENT INTERFACE

WIRING LIST (SEE NOTE 7)

| END P1 (B)<br>MINI SAS HD |      | CONDUCTOR #        | END P2<br>(MINI SAS) |        |
|---------------------------|------|--------------------|----------------------|--------|
| SIGNAL                    | PIN# |                    | PIN#                 | SIGNAL |
| GND                       | A9   | PAIR 2             | B7                   | GND    |
| Rx 1-                     | A5   |                    | B6                   | Tx 1-  |
| Rx 1+                     | A4   |                    | B5                   | Tx 1+  |
| GND                       | A3   | PAIR 4             | B4                   | GND    |
| Rx 3-                     | A8   |                    | B12                  | Tx 3-  |
| Rx 3+                     | A7   |                    | B11                  | Tx 3+  |
| GND                       | A6   |                    | B13                  | GND    |
| N/C                       | A1   | NO THRU CONNECTION |                      |        |
| Interrupt                 | A2   |                    |                      |        |
| GND                       | B9   | PAIR 1             |                      | GND    |
| RX 0-                     | B5   |                    | B3                   | TX 0-  |
| RX 0+                     | B4   |                    | B2                   | TX 0+  |
| GND                       | B3   | PAIR 3             | B1                   | GND    |
| RX 2-                     | B8   |                    | B9                   | TX 2-  |
| RX 2+                     | B7   |                    | B8                   | TX 2+  |
| GND                       | B6   |                    | B10                  | GND    |
| N/C                       | B1   | NO THRU CONNECTION |                      |        |
| Mod_PRS_L (GND)           | B2   |                    |                      |        |
| GND                       | C9   |                    | A7                   | GND    |
| TX 1-                     | C5   | PAIR 2             | A6                   | RX 1-  |
| TX 1+                     | C4   |                    | A5                   | RX 1+  |
| GND                       | C3   | PAIR 4             | A4                   | GND    |
| TX 3-                     | C8   |                    | A12                  | RX 3-  |
| TX 3+                     | C7   |                    | A11                  | RX 3+  |
| GND                       | C6   |                    | A13                  | GND    |
| SCL                       | C1   | NO THRU CONNECTION |                      |        |
| SDA                       | C2   |                    |                      |        |
| GND                       | D9   |                    |                      | GND    |
| TX 0-                     | D5   | PAIR 1             | A3                   | RX 0-  |
| TX 0+                     | D4   |                    | A2                   | RX 0+  |
| GND                       | D3   | PAIR 3             | A1                   | GND    |
| TX 2-                     | D8   |                    | A9                   | RX 2-  |
| TX 2+                     | D7   |                    | A8                   | RX 2+  |
| GND                       | D6   |                    | A10                  | GND    |
| N/C                       | D1   | NO THRU CONNECTION |                      |        |
| V+3.3 for EEPROM          | D2   |                    |                      |        |
| SHELL                     |      | BRAID              |                      | SHELL  |

SHIELD-----SHIELD

WIRING LIST (SEE NOTE 7)

| END P1 (A)<br>MINI SAS HD |      | CONDUCTOR #        | END P3<br>(MINI SAS) |        |
|---------------------------|------|--------------------|----------------------|--------|
| SIGNAL                    | PIN# |                    | PIN#                 | SIGNAL |
| GND                       | A9   | PAIR 2             | B7                   | GND    |
| Rx 1-                     | A5   |                    | B6                   | Tx 1-  |
| Rx 1+                     | A4   |                    | B5                   | Tx 1+  |
| GND                       | A3   | PAIR 4             | B4                   | GND    |
| Rx 3-                     | A8   |                    | B12                  | Tx 3-  |
| Rx 3+                     | A7   |                    | B11                  | Tx 3+  |
| GND                       | A6   |                    | B13                  | GND    |
| N/C                       | A1   | NO THRU CONNECTION |                      |        |
| Interrupt                 | A2   |                    |                      |        |
| GND                       | B9   | PAIR 1             |                      | GND    |
| RX 0-                     | B5   |                    | B3                   | TX 0-  |
| RX 0+                     | B4   |                    | B2                   | TX 0+  |
| GND                       | B3   | PAIR 3             | B1                   | GND    |
| RX 2-                     | B8   |                    | B9                   | TX 2-  |
| RX 2+                     | B7   |                    | B8                   | TX 2+  |
| GND                       | B6   |                    | B10                  | GND    |
| N/C                       | B1   | NO THRU CONNECTION |                      |        |
| Mod_PRS_L (GND)           | B2   |                    |                      |        |
| GND                       | C9   |                    | A7                   | GND    |
| TX 1-                     | C5   | PAIR 2             | A6                   | RX 1-  |
| TX 1+                     | C4   |                    | A5                   | RX 1+  |
| GND                       | C3   | PAIR 4             | A4                   | GND    |
| TX 3-                     | C8   |                    | A12                  | RX 3-  |
| TX 3+                     | C7   |                    | A11                  | RX 3+  |
| GND                       | C6   |                    | A13                  | GND    |
| SCL                       | C1   | NO THRU CONNECTION |                      |        |
| SDA                       | C2   |                    |                      |        |
| GND                       | D9   |                    |                      | GND    |
| TX 0-                     | D5   | PAIR 1             | A3                   | RX 0-  |
| TX 0+                     | D4   |                    | A2                   | RX 0+  |
| GND                       | D3   | PAIR 3             | A1                   | GND    |
| TX 2-                     | D8   |                    | A9                   | RX 2-  |
| TX 2+                     | D7   |                    | A8                   | RX 2+  |
| GND                       | D6   |                    | A10                  | GND    |
| N/C                       | D1   | NO THRU CONNECTION |                      |        |
| V+3.3 for EEPROM          | D2   |                    |                      |        |
| SHELL                     |      | BRAID              |                      | SHELL  |

SHIELD-----SHIELD

|             |                |            |                                  |     |        |               |                        |          |
|-------------|----------------|------------|----------------------------------|-----|--------|---------------|------------------------|----------|
| dr          | Deborah Ingram | 2011/05/23 | projection                       | mm  | size   | A3            | scale                  | 1:2      |
| eng         | Tommy Lin      | 2014/01/06 |                                  |     | ecn no | ELX-N-16648-1 | rel level              | Released |
| chr         | -              | -          |                                  |     |        |               |                        |          |
| appr        | Roger Cheng    | 2014/01/07 | product family                   | C&A |        |               |                        |          |
|             |                |            | MINI SAS HD 8X TO 2 MINI SAS 2.1 |     | dwg no |               | 10117947               |          |
| www.fci.com |                |            | cat. no.                         |     | -      |               | Product - Customer Drw |          |
|             |                |            | sheet 4 of 5                     |     |        |               | rev                    |          |
|             |                |            | D                                |     |        |               |                        |          |

| PRODUCT NUMBER   | DESCRIPTION      | NOTES      |
|------------------|------------------|------------|
| 10117947-XXXXLF  | NON-HF           | SEE SHT. 3 |
| 10117947-XXXXHLF | HALOGEN FREE (H) | SEE SHT. 3 |

NOTES:

1. MATERIALS MINI SAS HD (END P1)  
 BACK SHELLS: ZINC DIE CAST/ COPPER UNDER PLATE/NICKEL OVER PLATE  
 PULL TAB: THERMOPLASTIC POLYMER  
 LATCH: STAINLESS STEEL  
 FERRULE: BRASS  
 EMI GASKETS: STAINLESS STEEL  
 LOCTITE  
 HEAT SHRINK: HIGH POLYMER  
 PADDLE CARD: PRINTED CIRCUIT SUBSTRATE

MATERIALS MINI SAS (END P2 & END P3)  
 BACK SHELLS: ZINC DIE CAST  
 PULL TAB: THERMOPLASTIC POLYMER  
 LATCH: STAINLESS STEEL  
 JET MELT: POLYAMIDE POLYMER  
 HEAT SHRINK: POLYOLEFIN  
 PADDLE CARD: PRINTED CIRCUIT SUBSTRATE

2. ELECTRICAL PERFORMANCE PER CURRENT REVISION: T10/SAS-2.1

3. THIS PRODUCT MEETS THE RESTRICTION OF HAZARDOUS SUBSTANCES IN ELECTRICAL AND ELECTRONIC EQUIPMENT (RoHS) DIRECTIVE (2011/65/EU)

4. PRODUCT SPECIFICATIONS: Mini SAS HD GS-12-651, MINI SAS 2.1 GS-12-548

5. UNLESS OTHERWISE SPECIFIED ASSEMBLED LENGTH TOLERANCE IS TO BE:  
 "DIM L" < 1 METERS = ±25mm  
 "DIM L" 1 METER TO 10 METER = 2% OF "DIM L"

6. LABEL DETAILS:

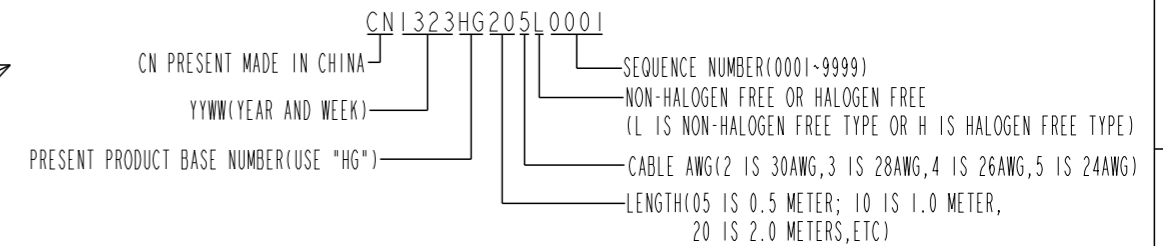
FCI CHINA  
 FCI P/N  
 FCI CUSTOMER DRAWING REVISION  
 FCI SERIAL NUMBER

FONT SHALL BE CLEARLY VISIBLE AND BLACK IN COLOR

△ LABEL EXAMPLE

FCI CHINA  
 10117947-5020LF  
 REV.D  
 CN1323HG205L0001

FCI SERIAL NUMBER IS ONLY FOR TRACKING PRODUCT, DEFINED AS BELOW:



7. ALL CABLE ASSEMBLIES SHALL BE 100% TESTED FOR CONTINUITY AS DEFINED IN WIRING LIST.

8. PACKAGING OF LEAD FREE PRODUCTS MEETS LABELING AND PACKAGING PER SPECIFICATION GS-14-920. PACKAGE CABLE ASSEMBLIES PER GS-14-1272. DUST COVER IS TO BE APPLIED TO MINI SAS HD CONNECTOR PRIOR TO SHIPPING. FCI PACKAGE TRACKING BAG LABEL IS ONLY FOR REFERENCE.

9. "H" PRODUCT NUMBERS DESIGNATE THE USE OF HALOGEN FREE RAW CABLE.

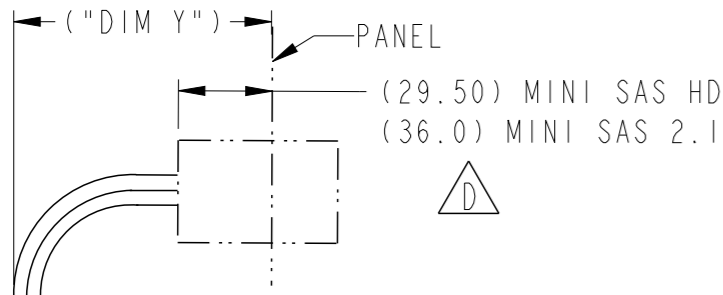
10. THIS DIMENSION IS A FINISHED PRODUCT LENGTH.

11. A "△" SYMBOL WILL BE NEXT TO ANY DIMENSION, VIEW, OR NOTE WHICH HAS BEEN MODIFIED WITH THE CURRENT DRAWING REVISION. THE CURRENT REVISION WILL BE SHOWN IN THE SYMBOL.

12. MEETS ELECTRICAL PERFORMANCE REQUIREMENTS OF SAS 2.1.

13. MATES WITH SERIES: MINI SAS HS - 100112627 or 10112628  
 MINI SAS 2.1 - BOARD CONNECTOR 100988870 AND CAGE 10098872

14. PLACE A CABLE TIE EVERY 0.5 METERS ON ASSEMBLIES. IN THE CASE OF A 0.5 METER CABLE LENGTH, PLACE THE CABLE TIE MIDWAY BETWEEN CONNECTORS.



PEND RADIUS  
 TOP VIEW OF CONNECTOR

MINI SAS HD P1  
 MINIMUM CABLE BEND TABLE

| CABLE  | ("DIM Y")<br>HF | ("DIM Y")<br>NON-HF |
|--------|-----------------|---------------------|
| 24 AWG | 101.1           | 100.6               |
| 26 AWG | 100.0           | 99.7                |
| 28 AWG | 99.1            | 98.7                |
| 30 AWG | 98.5            | 97.9                |

MINI SAS 2.1 P2 & P3  
 MINIMUM CABLE BEND TABLE  
 PER CONNECTOR

| CABLE  | ("DIM Y")<br>HF | ("DIM Y")<br>NON-HF |
|--------|-----------------|---------------------|
| 24 AWG | 90.6            | 88.3                |
| 26 AWG | 85.3            | 82.9                |
| 28 AWG | 79.3            | 76.9                |
| 30 AWG | 75.7            | 72.1                |



NOTES CONTINUED

15. EEPROM INFORMATION OF MSHD SIDE REFER TO FCI LATEST PRODUCT SPEC. GS-12-651

16. CABLE IS OPTIONAL, WHICH HAD BEEN QUALIFIED BY FCI AND MEET FCI PRODUCT SPEC. GS-12-651/548

|             |                |            |  |    |               |    |                        |              |
|-------------|----------------|------------|--|----|---------------|----|------------------------|--------------|
| dr          | Deborah Ingram | 2011/05/23 | projection   | mm | size          | A3 | scale                  | 1:1          |
| eng         | Tommy Lin      | 2014/01/06 |  |    | ecn no        |    |                        |              |
| chr         | -              | -          |  |    | ELX-N-16648-1 |    |                        |              |
| appr        | Roger Cheng    | 2014/01/07 | product family   | -  | rel level     |    |                        |              |
| www.fci.com |                |            | MINI SAS HD 8X TO 2 MINI SAS 2.1<br>TRAINED UNIVERSAL FINAL ASSEMBLY (6Gb/s) |    | cat. no.      | -  | Product - Customer Drw | sheet 5 of 5 |



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.