



§ **SPECIFICATION APPROVAL SHEET** §

Fdt Tech Module No **LP035V2P~~XX~~-F~~X~~R**

Description: **3.5" Digital TFT-LCD Module**

SPEC No.: **SAS-1010004**

Version: **1.1**

Issue Date: **May 4, 2012**

※ This approval sheet contains 35 pages including the cover and appendix.

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| Customer: | APPROVED BY: |
| Date: / / 12 | |

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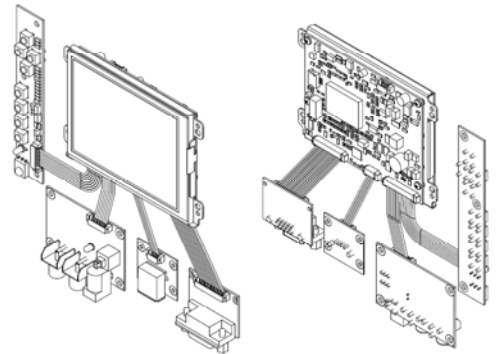
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FLAT DISPLAY TECHNOLOGY

3.5" Digital TFT-LCD Module



■ LP035V2Pxx-FxR

1. General Description

1.1 Features

- Fit Prime View PD035VX2 3.5" Digital TFT LCD
- Ultra Compact
- DC/ DC & LED Backlight Driver & Video Decoder All In One
- NTSC / PAL / SECAM Video System Auto Switching
- Single Operation Voltage +12V
- CVBS / S-Video (Option) / Analog RGB (PC Mode) Signal Input
- All Functions can be controlled by UART
- Support Touch Screen Function (Option)

1.2 Applications

- Video Game Display
- Security
- Portable TV
- Office Electronics
- Industrial
- Instrument Display

1.3 Application Precautions

Do not use the products herein for the following equipment which demands extremely high performance in terms of functionality, reliability, or accuracy.

- Aerospace equipment
- Communication equipment for trunk lines.
- Control equipment for the nuclear power industry.
- Medical equipment related to life support, etc.

The other application that demands high reliability and functionality should first contact a sales representative.



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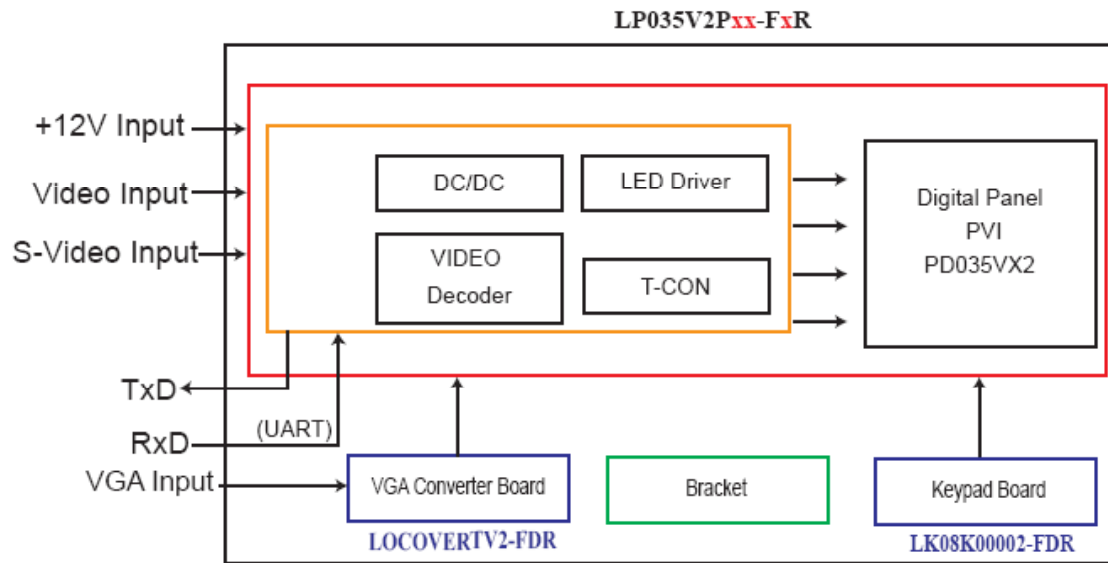
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3. Block Diagram

3.1 Block Diagram



4. TFT-LCD Information

4.1 TFT-LCD Mechanical Specifications

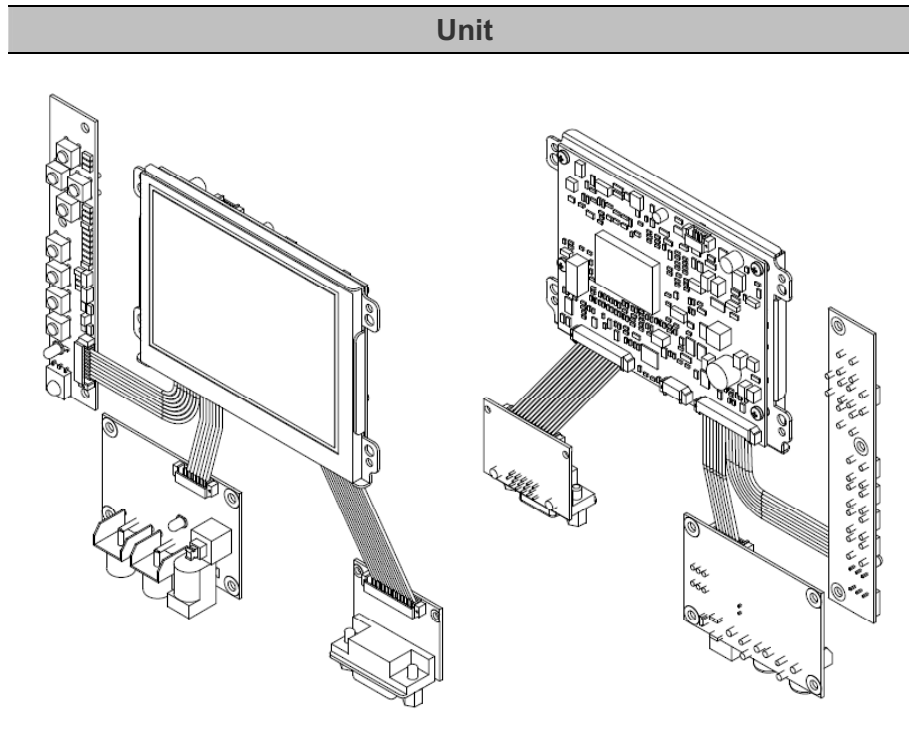
| Parameter | Specifications | Unit |
|---------------------|---|------|
| Screen Size | 3.5(diagonal) | inch |
| Display Format | 640 x (R.G.B) x 480 | dot |
| Active Area | 72 (H) x 52.56 (V) | mm |
| Pixel Pitch | 0.1125 (H) x 0.1095 (V) | mm |
| Pixel Configuration | Stripe | |
| Outline Dimension | 84.03 (W) x 65.24 (H) x 3.45 (D) (Typ.) | mm |
| Weight | 40±5 | g |
| Surface Treatment | Anti-Glare | |

4.2 TFT-LCD Optical Characteristics

| Parameter | Symbol | Condition | Min | Typ | Max | Unit | Remark |
|--------------------|------------|----------------------------|------|-------|------|-------------------|--------|
| Viewing Angle | Horizontal | Left | 45 | 50 | - | deg | |
| | | Right | 45 | 50 | - | deg | |
| | Vertical | Top | 10 | 15 | - | deg | |
| | | Bottom | 30 | 35 | - | deg | |
| Contrast Ratio | CR | At optimized Viewing angle | 200 | 400 | - | | |
| Response time | Rise Fall | Tr | - | 15 | 30 | ms | |
| | | Tf | - | 25 | 50 | ms | |
| Uniformity | U | | 70 | 75 | - | % | |
| Brightness | | | 200 | 250 | - | Cd/m ² | |
| White Chromaticity | x | | 0.28 | 0.31 | 0.34 | | |
| | y | | 0.30 | 0.33 | 0.36 | | |
| LED Life Time | | Ta=+25°C | - | 30000 | - | Hrs | |

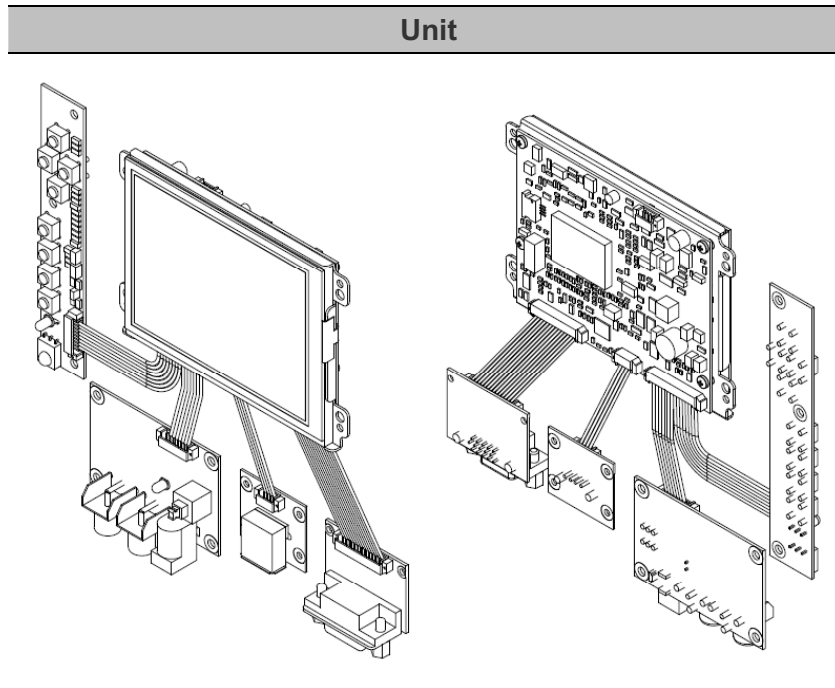
5. Order Information

5.1 Unit (CVBS1/CVBS2/PC)



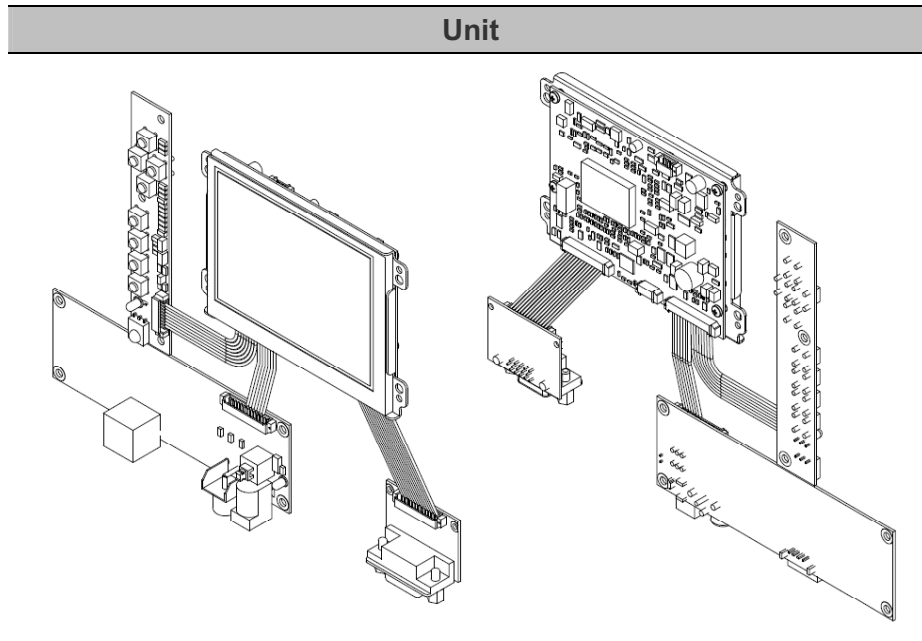
| Parameter | LP035V2PB1-FHR | LP035V2PB1-FDR | Unit |
|---|----------------|----------------|------|
| CVBS | 2 | 2 | |
| VGA | D-Sub15 | D-Sub15 | |
| Key Board (LK08K00002-FDR) | ⊙ | ⊙ | |
| VGA Converter Board (LOCOVERTV2-FDR) | ⊙ | ⊙ | |
| AC to DC Adapter 12V/2.5A (LASTD12025-FDR) | ⊙ | - | |
| Power Cord Plug Type B for USA (LAAC818000-FDR) | ⊙ | - | |
| Video Cable (LAVDO18000-FDR) | ⊙ | - | |
| VGA Cable (LAVGA16000-FDR) | ⊙ | - | |

5.2 Unit (CVBS1/CVBS2/PC/4W TSP)



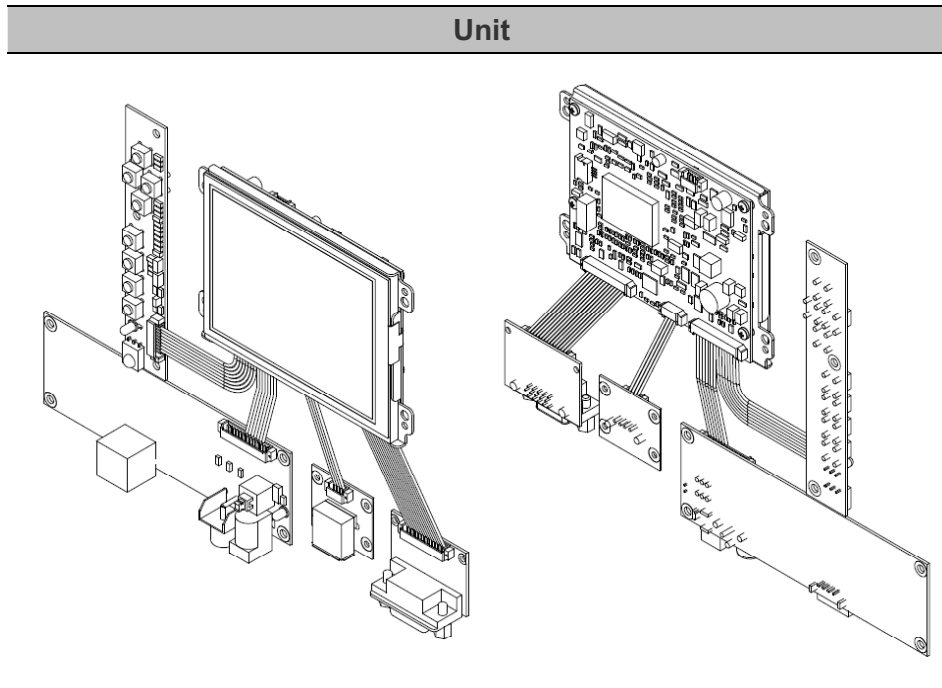
| Parameter | LP035V2PB4-FHR | LP035V2PB5-FHR | LP035V2PB4-FDR | LP035V2PB5-FDR | Unit |
|---|----------------|----------------|----------------|----------------|------|
| CVBS | 2 | 2 | 2 | 2 | |
| VGA | D-Sub15 | D-Sub15 | D-Sub15 | D-Sub15 | |
| Touch Panel Type | 4W Resistive | 4W Resistive | 4W Resistive | 4W Resistive | |
| Touch Screen Interface | USB | RS232 | USB | RS232 | |
| Key Board (LK08K00002-FDR) | ⊙ | ⊙ | ⊙ | ⊙ | |
| VGA Converter Board (LOCOVERTV2-FDR) | ⊙ | ⊙ | ⊙ | ⊙ | |
| AC to DC Adapter 12V/2.5A (LASTD12025-FDR) | ⊙ | ⊙ | - | - | |
| Power Cord Plug Type B for USA (LAAC818000-FDR) | ⊙ | ⊙ | - | - | |
| Video Cable (LAVDO18000-FDR) | ⊙ | ⊙ | - | - | |
| VGA Cable (LAVGA16000-FDR) | ⊙ | ⊙ | - | - | |
| USB Cable (LAUSB18000-FDR) | ⊙ | - | - | - | |
| RS-232 Cable (LARS218000-FDR) | - | ⊙ | - | - | |
| Touch Screen Driver CD Disk | ⊙ | ⊙ | ⊙ | ⊙ | |

5.3 Unit (CVBS/S-Video/PC)



| Parameter | LP035V2PT1-FHR | LP035V2PT1-FDR | Unit |
|---|----------------|----------------|------|
| CVBS | 1 | 1 | |
| S-Video | 1 | 1 | |
| VGA | D-Sub15 | D-Sub15 | |
| Key Board (LK08K00002-FDR) | ⊙ | ⊙ | |
| VGA Converter Board (LOCOVERTV2-FDR) | ⊙ | ⊙ | |
| AC to DC Adapter 12V/2.5A (LASTD12025-FDR) | ⊙ | - | |
| Power Cord Plug Type B for USA (LAAC818000-FDR) | ⊙ | - | |
| Video Cable (LAVDO18000-FDR) | ⊙ | - | |
| S-Video Cable (LASVO18000-FDR) | ⊙ | - | |
| VGA Cable (LAVGA16000-FDR) | ⊙ | - | |

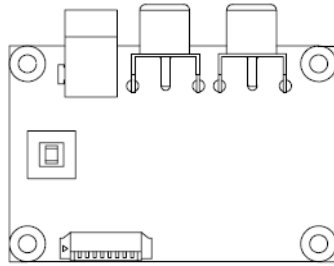
5.4 Unit (CVBS/S-Video/PC/4W TSP)



| Parameter | LP035V2PT4-FHR | LP035V2PT5-FHR | LP035V2PT4-FDR | LP035V2PT5-FDR | Unit |
|---|----------------|----------------|----------------|----------------|------|
| CVBS | 1 | 1 | 1 | 1 | |
| S-Video | 1 | 1 | 1 | 1 | |
| VGA | D-Sub15 | D-Sub15 | D-Sub15 | D-Sub15 | |
| Touch Panel Type | 4W Resistive | 4W Resistive | 4W Resistive | 4W Resistive | |
| Touch Screen Interface | USB | RS232 | USB | RS232 | |
| Key Board (LK08K00002-FDR) | ⊙ | ⊙ | ⊙ | ⊙ | |
| VGA Converter Board (LOCOVERTV2-FDR) | ⊙ | ⊙ | ⊙ | ⊙ | |
| AC to DC Adapter 12V/2.5A (LASTD12025-FDR) | ⊙ | ⊙ | - | - | |
| Power Cord Plug Type B for USA (LAAC818000-FDR) | ⊙ | ⊙ | - | - | |
| Video Cable (LAVDO18000-FDR) | ⊙ | ⊙ | - | - | |
| S-Video Cable (LASVO18000-FDR) | ⊙ | ⊙ | - | - | |
| VGA Cable (LAVGA16000-FDR) | ⊙ | ⊙ | - | - | |
| USB Cable (LAUSB18000-FDR) | ⊙ | - | - | - | |
| RS-232 Cable (LARS218000-FDR) | - | ⊙ | - | - | |
| Touch Screen Driver CD Disk | ⊙ | ⊙ | ⊙ | ⊙ | |

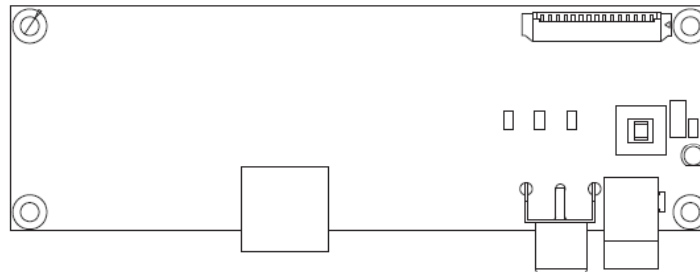
5.5 Demo Board (Option)

Demo Board



| Order Part Number | Part Number | Remark |
|-------------------|---------------------------------|--|
| MDSM208001-FDR | Cable: 15P-9P-8P 1.25mm L:100mm | For LP035V2PB x -F x R |

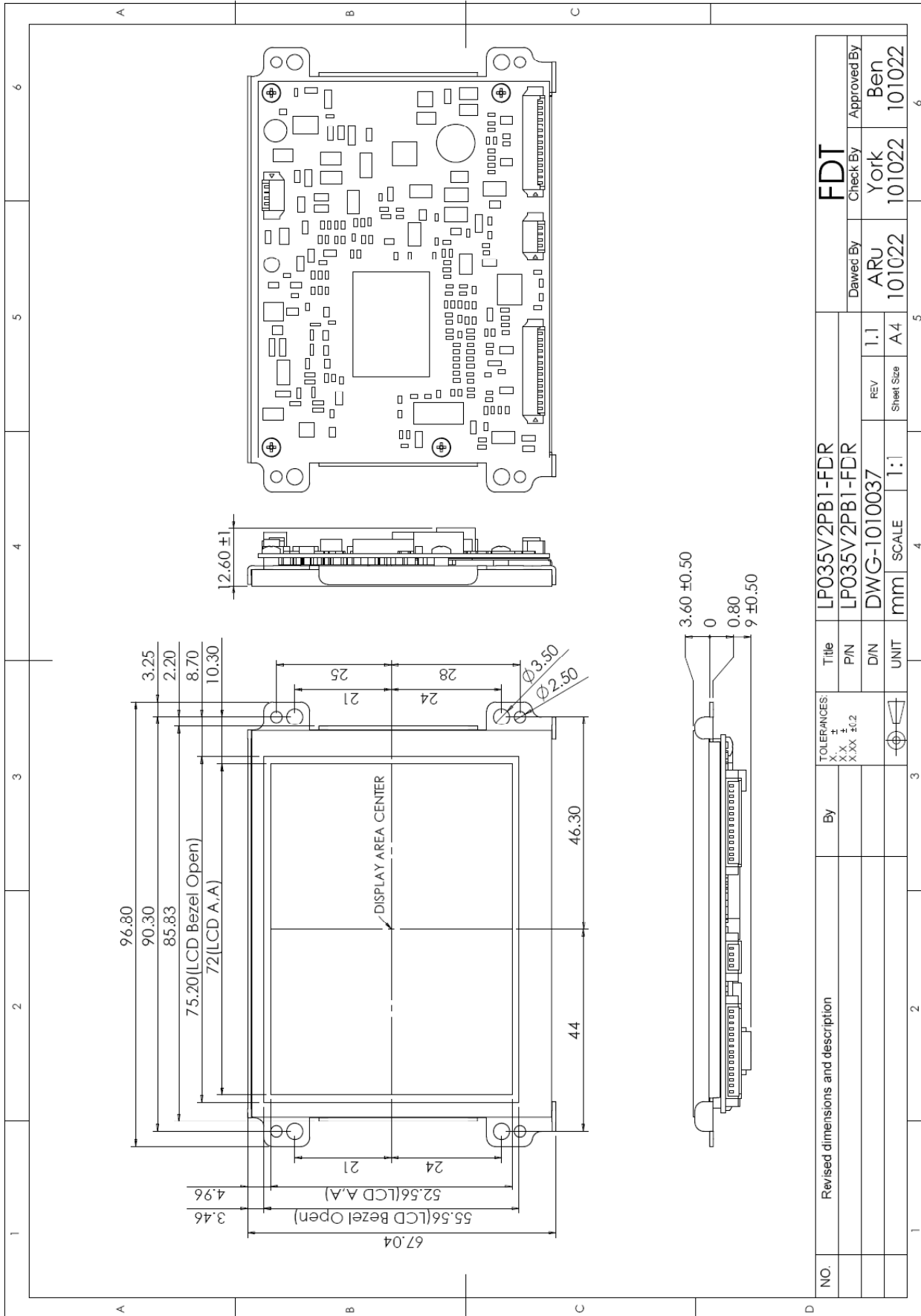
Demo Board



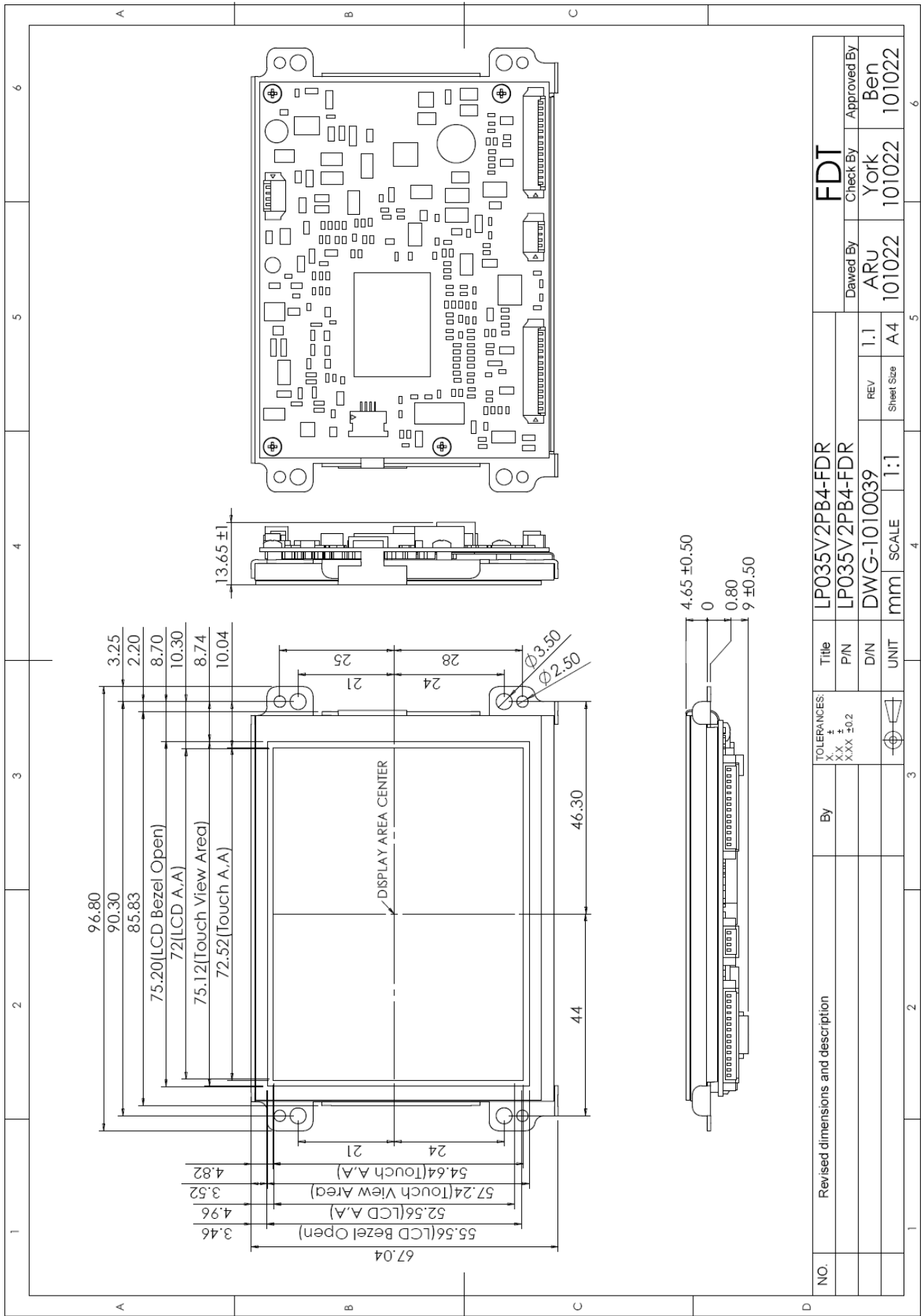
| Order Part Number | Part Number | Remark |
|-------------------|----------------------------------|--|
| MDM20E1001-FDR | Cable: 15P-14P-9P 1.25mm L:100mm | For LP035V2PT x -F x R |

6. Dimension Information

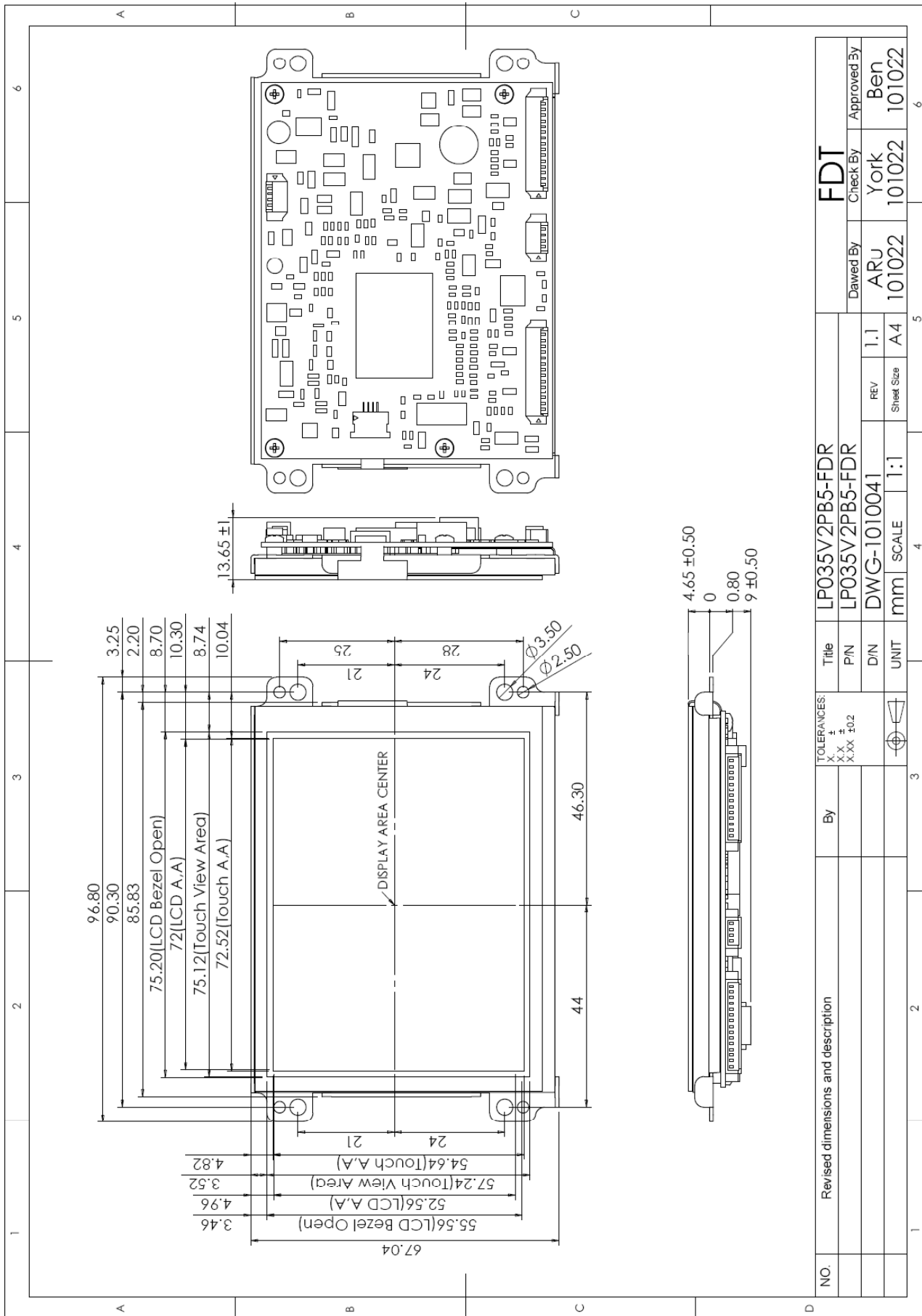
6.1 Unit (LP035V2PB1-FDR)



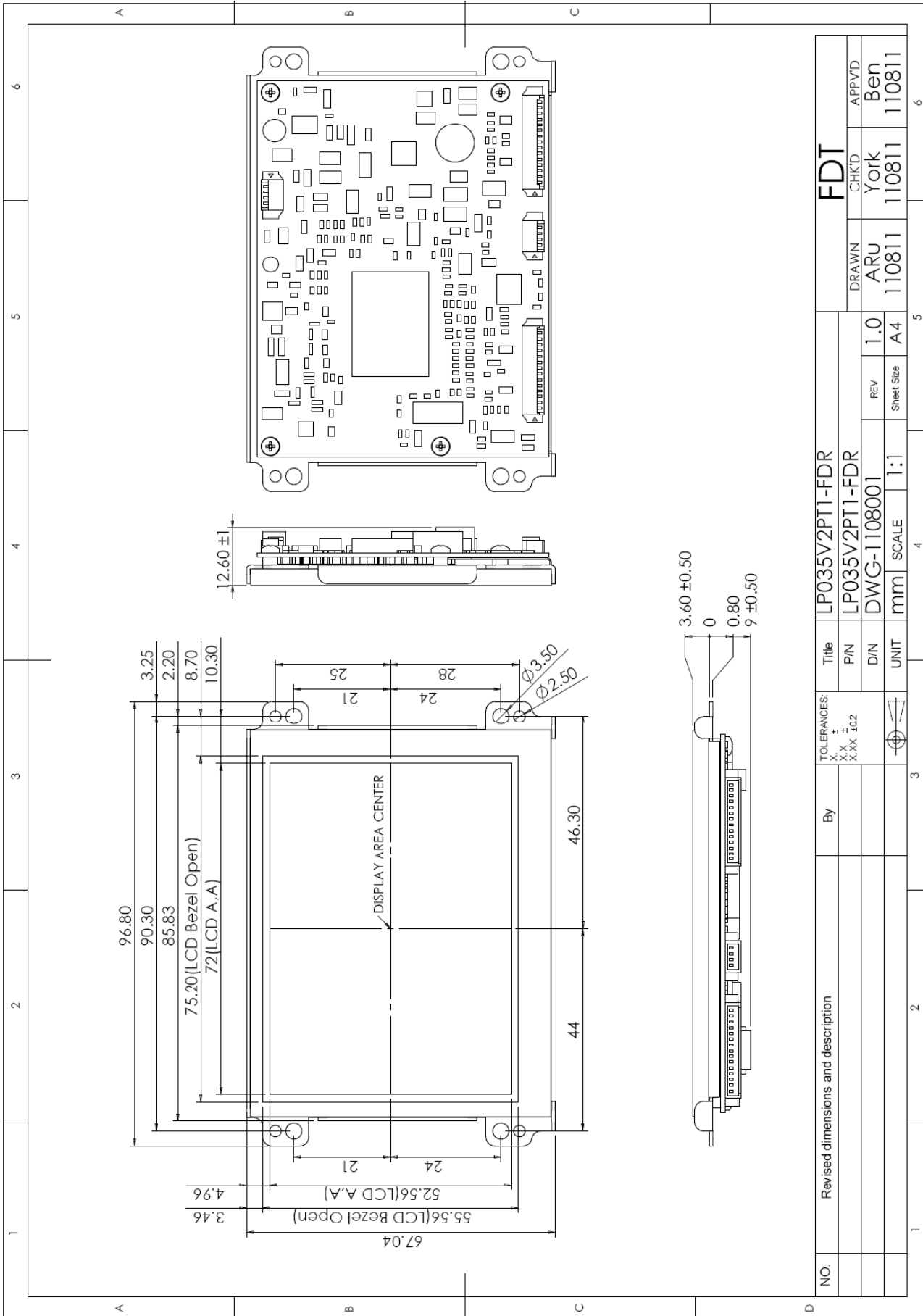
6.2 Unit (LP035V2PB4-FDR)



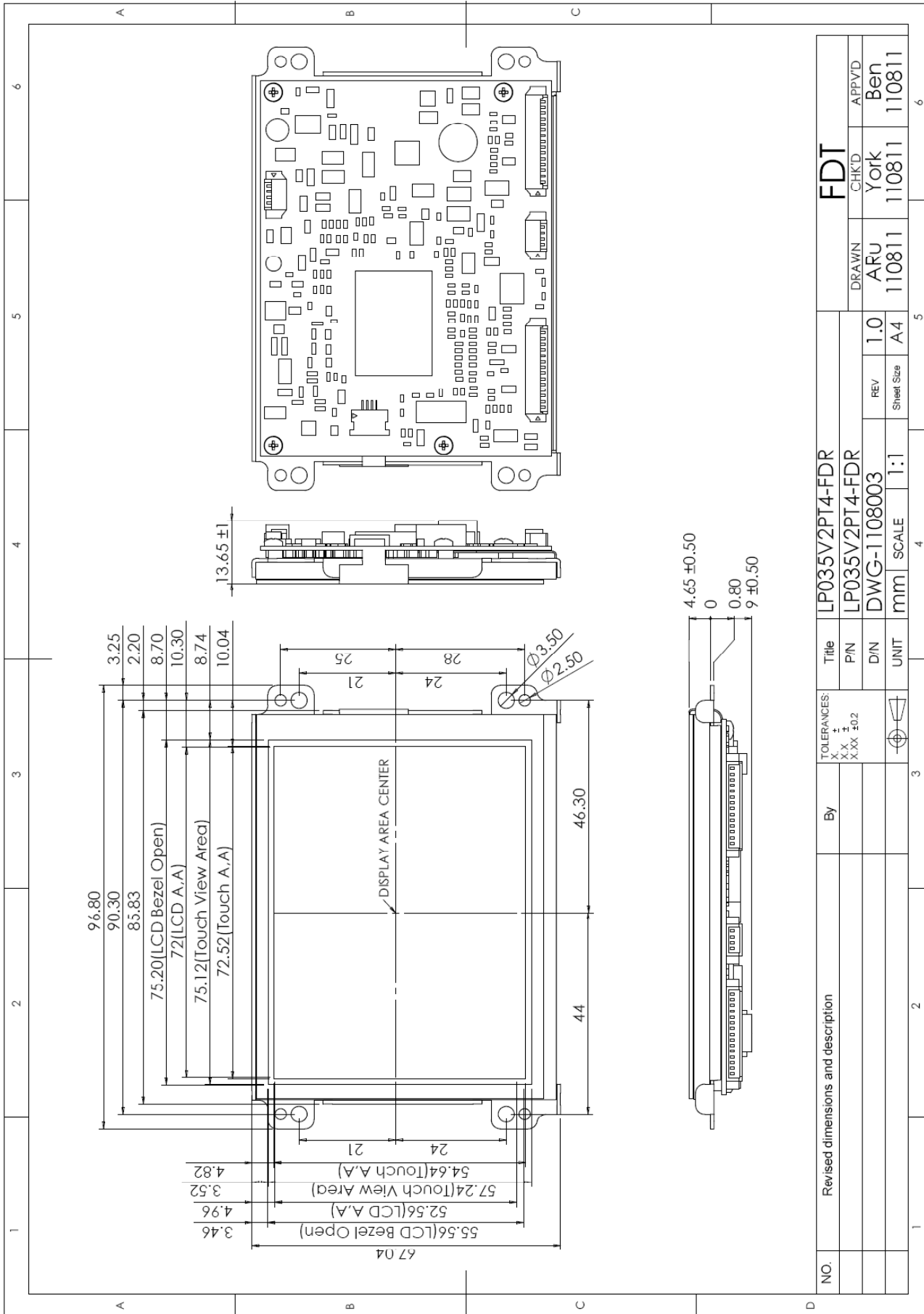
6.3 Unit (LP035V2PB5-FDR)



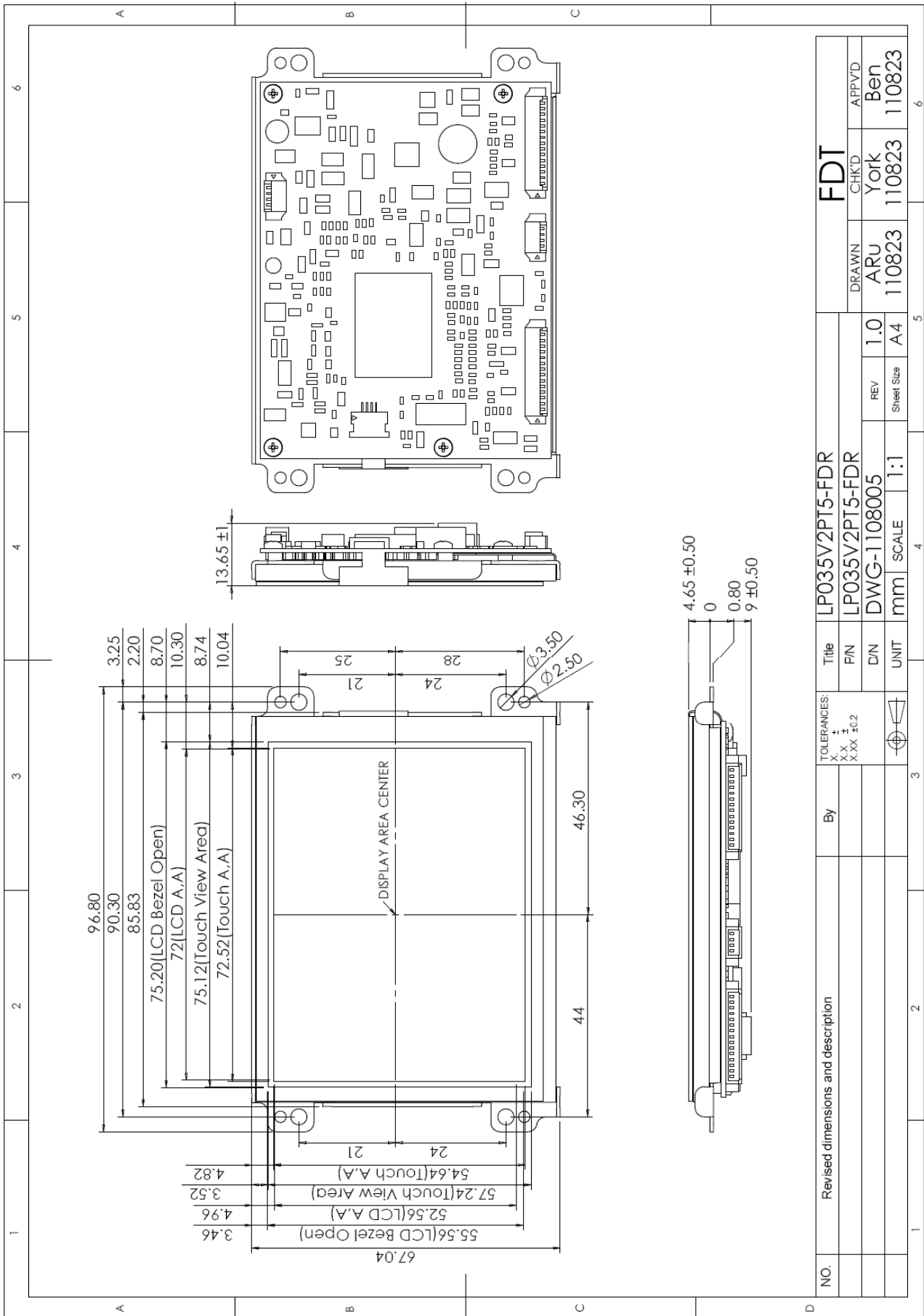
6.4 Unit (LP035V2PT1-FDR)



6.5 Unit (LP035V2PT4-FDR)



6.6 Unit (LP035V2PT5-FDR)



7.Pin Description

7.1 J105: LCD Panel I/O Terminal (FPC 0.5mm 50Pin, Up Contact Type)

| Pin No | Symbol | I/O | Description | Remark |
|--------|--------|-----|---|--------|
| 1 | DIO1 | I/O | Horizontal Start Pulse Signal Input Or Output 1 | |
| 2 | VSS2 | I | Ground | |
| 3 | VDD1 | I | Power Supply | |
| 4 | CLK | I | Horizontal Shift Clock | |
| 5 | R/L | I | Left/Right Selection | |
| 6 | R0 | I | Red Data (LSB) | |
| 7 | R1 | I | Red Data | |
| 8 | R2 | I | Red Data | |
| 9 | R3 | I | Red Data | |
| 10 | R4 | I | Red Data | |
| 11 | R5 | I | Red Data (MSB) | |
| 12 | VSS2 | I | Ground | |
| 13 | G0 | I | Green Data (LSB) | |
| 14 | G1 | I | Green Data | |
| 15 | G2 | I | Green Data | |
| 16 | G3 | I | Green Data | |
| 17 | G4 | I | Green Data | |
| 18 | G5 | I | Green Data (MSB) | |
| 19 | B0 | I | Blue Data (LSB) | |
| 20 | B1 | I | Blue Data | |
| 21 | B2 | I | Blue Data | |
| 22 | B3 | I | Blue Data | |
| 23 | B4 | I | Blue Data | |
| 24 | B5 | I | Blue Data (MSB) | |
| 25 | LD | I | Load Output Signal | |
| 26 | REV | I | Data Invert Control | |
| 27 | POL | I | Polarity Selection | |
| 28 | DIO2 | I/O | Horizontal Start Pulse Signal Input Or Output | |
| 29 | VSS2 | I | Ground | |
| 30 | V3 | I | Gamma Voltage 3 | |
| 31 | V5 | I | Gamma Voltage 5 | |
| 32 | V7 | I | Gamma Voltage 7 | |
| 33 | V8 | I | Gamma Voltage 8 | |
| 34 | V10 | I | Gamma Voltage 10 | |
| 35 | V12 | I | Gamma Voltage 12 | |
| 36 | VSS2 | I | Ground | |
| 37 | VDD2 | I | Voltage For Analog Circuit | |

| Pin No | Symbol | I/O | Description | Remark |
|--------|--------|-----|---|--------|
| 38 | VCOM | I | Common Voltage | |
| 39 | OE | I | Output Enable | |
| 40 | U/D | I | Up/Down Selection | |
| 41 | CKV | I | Vertical Shift Clock | |
| 42 | STVU | I/O | Vertical Shift Pulse Signal Input Or Output | |
| 43 | STVD | I/O | Vertical Shift Pulse Signal Input Or Output | |
| 44 | VGG | I | Gate On Voltage | |
| 45 | VSS1 | I | Ground | |
| 46 | VCC | I | Voltage For Logic Circuit | |
| 47 | VEE | I | Gate Off Voltage | |
| 48 | VLED | - | Supply Voltage For LED Backlight | |
| 49 | GLED2 | - | Ground For LED Backlight | |
| 50 | GLED1 | - | Ground For LED Backlight | |

7.2 J101: Pin Assignment of Signal Input (Pitch 1.25mm 15Pin, Side Entry Type)

- ※ FDT Connector Part No.: MS240115R (STM) [Same as 53261-1519 (MOLEX)] ;
 FDT Matching Connector Part No.: P240115 (STM) [Same as 51021-1500 (MOLEX)].

| Pin No | Symbol | I/O | Description | Remark |
|--------|------------|-----|---|--------|
| 1 | DC-IN | - | DC Input Voltage | |
| 2 | GND_D | - | Power Ground | |
| 3 | GND_A | - | Signal Ground | |
| 4 | VIDEO1 / Y | I | VIDEO1 Signal Input Or Analog Luma Input of S-Video | |
| 5 | VIDEO2 | I | VIDEO2 Signal Input | |
| 6 | GND_A | - | Signal Ground | |
| 7 | CA/B | I | Analog Chroma Input for S-Video | |
| 8 | GND_A | - | Signal Ground | |
| 9 | VDD | - | VDD Output Voltage | |
| 10 | KEY_ADC1 | I | KEY ADC Input 1 | |
| 11 | KEY_ADC0 | I | KEY ADC Input 0 | |
| 12 | LED_G | O | Index Green LED For Power On Control | |
| 13 | LED_R | O | Index Red LED For Power Off Control | |
| 14 | IR_DATA | I | Data of IR Receiver | |
| 15 | GND_A | - | Signal Ground | |

7.3 J102: Pin Assignment of Analog RGB Input (Pitch 1.25mm 14Pin, Side Entry Type)

- ※ FDT Connector Part No.: MS240114R (STM) [Same as 53261-1419 (MOLEX)] ;
- FDT Matching Connector Part No.: P240114 (STM) [Same as 51021-1400 (MOLEX)].

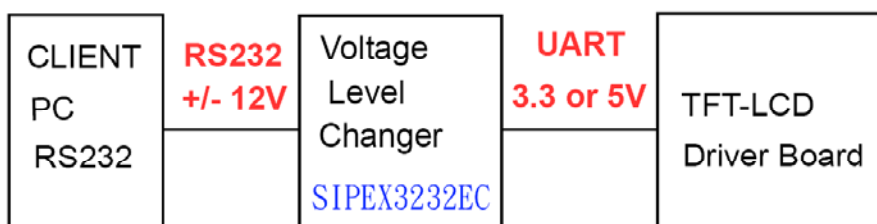
| Pin No | Symbol | I/O | Description | Remark |
|--------|---------|-----|----------------------|--------|
| 1 | VGA-Det | I | VGA Detect | |
| 2 | NC | - | No Connect | |
| 3 | NC | - | No Connect | |
| 4 | GND | - | Ground | |
| 5 | VGA5V | - | VGA +5V Input | |
| 6 | VS_IN | I | TTL Vertical sync. | |
| 7 | HS_IN | I | TTL Horizontal sync. | |
| 8 | AGND | - | Analog Ground | |
| 9 | RI+ | I | Analog Red Signal | |
| 10 | AGND | - | Analog Ground | |
| 11 | GI+ | I | Analog Green Signal | |
| 12 | AGND | - | Analog Ground | |
| 13 | BI+ | I | Analog Blue Signal | |
| 14 | GND | - | Ground | |

7.4 J301: Pin Assignment of UART (Pitch 1.25mm 4Pin, Side Entry Type)

- ※ FDT Connector Part No.: MS24014R (STM) [Same as 53261-0419 (MOLEX)] ;
- FDT Matching Connector Part No.: P24014 (STM) [Same as 51021-0400 (MOLEX)].

| Pin No | Symbol | I/O | Description | Remark |
|--------|--------|-----|------------------------|--------|
| 1 | TX | O | UART Transmission Data | |
| 2 | RX | I | UART Receive Data | |
| 3 | GND | - | Ground | |
| 4 | +5VA | O | +5V Output Voltage | |

Note: About UART command list please contact FDT sales.



7.5 J401B : Pin Assignment of Touch (Pitch 1.25mm 5Pin, Side Entry Type)

- ※ FDT Connector Part No.: MS24015R (STM) [Same as 53261-0519 (MOLEX)] ;
FDT Matching Connector Part No.: P24015 (STM) [Same as 51021-0500 (MOLEX)].

| Pin No | Symbol | I/O | Description | Remark |
|--------|--------|-----|----------------|--------|
| 1 | VBUS | - | USB VCC | |
| 2 | D- | - | DATA (-) | |
| 3 | D+ | - | DATA (+) | |
| 4 | DGND | - | Digital Ground | |
| 5 | NC | - | No Connect | |

Note: For LP035V2Px4-FxR

7.6 J401B : Pin Assignment of Touch (Pitch 1.25mm 5Pin, Side Entry Type)

- ※ FDT Connector Part No.: MS24015R (STM) [Same as 53261-0519 (MOLEX)] ;
FDT Matching Connector Part No.: P24015 (STM) [Same as 51021-0500 (MOLEX)].

| Pin No | Symbol | I/O | Description | Remark |
|--------|--------|-----|----------------|--------|
| 1 | NC | - | No Connection | |
| 2 | RXD | - | Receive Data | |
| 3 | TXD | - | Transmit Data | |
| 4 | DGND | - | Digital Ground | |
| 5 | NC | - | No Connect | |

Note: For LP035V2Px5-FxR

8 Absolute Maximum Ratings

8.1 Absolute Maximum Ratings

| Parameter | Symbol | Min | Max | Unit | Remark |
|--------------------------------|--------|-----|-----|------|--------|
| Input Voltage | Vcc | +9 | +15 | V | |
| Digital Input Signal | TTL | 0.3 | 3.6 | V | |
| Operating Temperature | | -20 | +70 | °C | |
| Storage Temperature | | -20 | +70 | °C | |
| Operating Temperature With TSP | | -10 | +60 | °C | |
| Storage Temperature With TSP | | -20 | +70 | °C | |

9. Recommended Operating Conditions

9.1 Electrical Characteristics

| Parameter | Symbol | Min | Typ | Max | Unit | Note |
|-------------------------------|-----------------|------|---------|-----|------------------|--------|
| Input Voltage | V _{in} | +10 | +12 | +14 | V | |
| Input Current Without TSP | I _{in} | | 190 | | mA | @+12v |
| Input Current With TSP | I _{in} | | 200 | | mA | @+12v |
| Output Voltage | VDD | +3.2 | +3.3 | 3.4 | V | I=10mA |
| Digital Input Signal | TTL | | 3.3 | | | |
| Power Consumption Without TSP | | | 2.28 | | W | |
| Power Consumption With TSP | | | 2.4 | | W | |
| Signal input Voltage | Video in | | 1 | | V _{p-p} | @75Ω |
| VGA Input Format | | | 640*480 | | | |

9.2 VGA Mode Characteristics

| Dots per inch | H | Unit | Polarity | V | Unit | Polarity | Note |
|---------------|--------|------|----------|--------|------|----------|------|
| 640*480 | 31.469 | KHz | Negative | 59.941 | Hz | Negative | |
| 800*600 | 37.879 | KHz | Positive | 60.317 | Hz | Positive | |
| 1024*768 | 48.363 | KHz | Negative | 60.004 | Hz | Negative | |

9.3 LED Backlight Data

| Parameter | Symbol | Min | Type | Max | Unit | Remark |
|----------------------------------|--------|-----|------|------|-------|--------|
| Supply Voltage For LED Backlight | VLED | - | - | 11.4 | Vrms | |
| Supply Current For LED Backlight | ILED | - | 20 | - | mArms | |
| Backlight Power Consumption | PLED | - | - | 456 | mW | |

10.4W Resistive Touch Panel Characteristics

10.1 Pin assignment (Pitch :1.0 mm)

| Pin No | Symbol | Description | Remark |
|--------|--------|--------------------------------|--------|
| 1 | X1 | Lower electrode X (Left side) | |
| 2 | Y2 | Upper electrode Y (Down side) | |
| 3 | X2 | Lower electrode X (Right side) | |
| 4 | Y1 | Upper electrode Y (Upper side) | |

10.2 Electrical Performance

| Parameter | Symbol | Min | Typ | Max | Unit | Remark |
|----------------------|--------|-----|-----|-----|------------|--------|
| Terminal Resistance | X | 200 | - | 900 | Ω | |
| | Y | 200 | - | 900 | Ω | |
| Input Voltage | VT | 3 | - | 7.0 | V | |
| Linearity | | - | - | 1.5 | % | |
| Insulation Impedance | | 20 | - | - | M Ω | DC 25V |

10.3 Optical Performance

| Parameter | Specifications |
|---------------|------------------|
| Transmittance | $\geq 80\%$ Typ. |

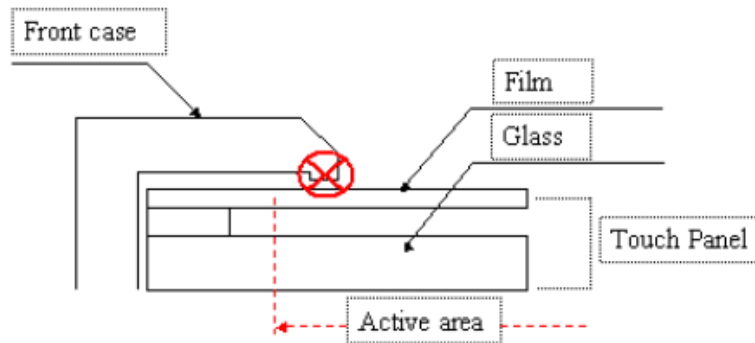
10.4 Mechanical Performance

| Parameter | Specifications |
|------------------|----------------------|
| Input Method | Finger or stylus pen |
| Operating Force | Max: 50gf |
| Surface Hardness | 3H or more |

10.5 Touch Screen Integration Design Guide

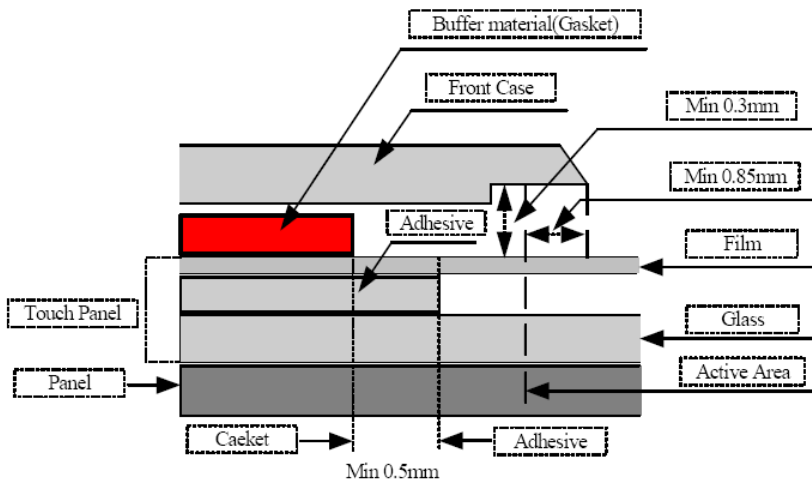
Avoid the design that Front-case overlap and press on the active area of the touch-panel.

Give enough gap (over 0.5mm at compressed) between the front case and touch-panel to protect wrong operating.



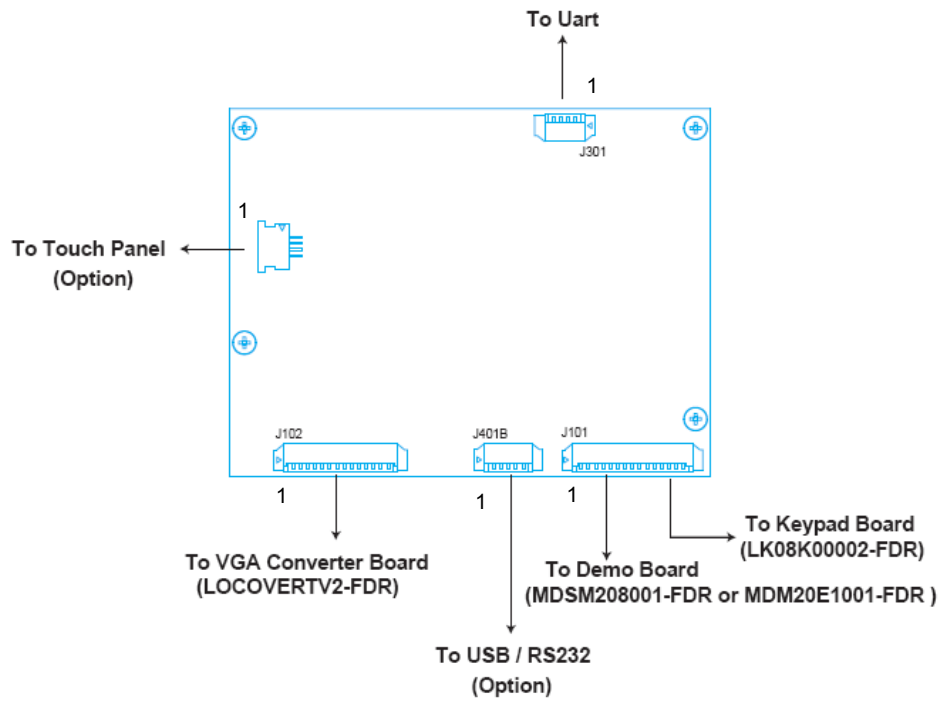
Use a buffer material (Gasket) between the touch-panel and front-case to protect damage and wrong operating.

Avoid the design that buffer material overlap and press on the inside of touch-panel viewing area.

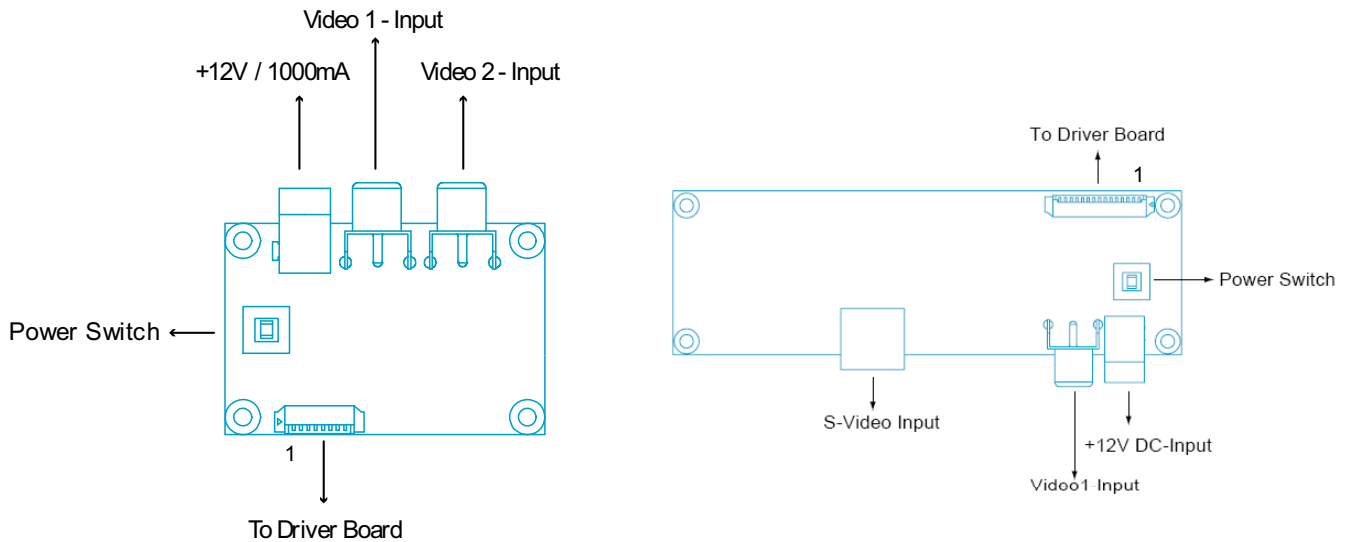


11. Operation Manual / Connection

11.1 Driver Board Manual



11.2 Demo Board Manual (Option)



12. Packing List

Before you begin installing the KIT, please make sure that the following materials have been shipped:



A. LASTD12025-FDR



B. LAACD18000-FDR



C. LAVDO18000-FDR



D. LASVO18000-FDR



E. LAVGA16000-FDR



F. LAUSB18000-FDR



G. LARS218000-FDR



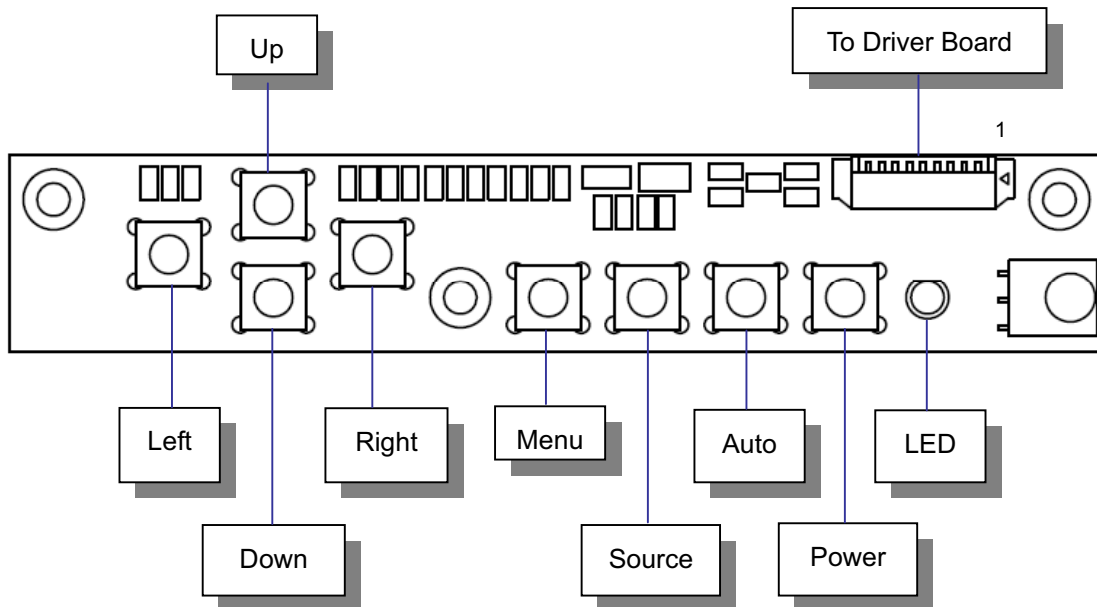
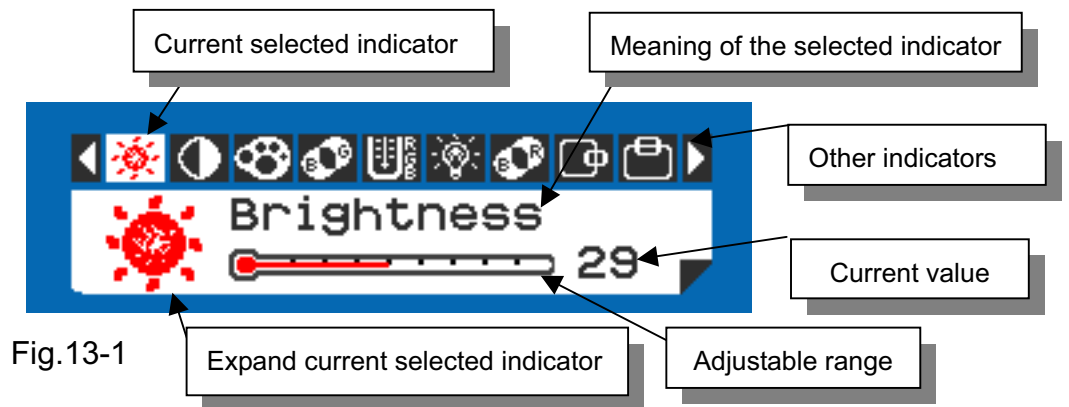
H. Touch Screen Driver CD Disk

- A. AC to DC Adapter (100-240VAC 50-60Hz to +12VDC @ 2.5A)
- B. Power Cord (L:1800mm, Plug Type B for USA)
- C. Video Cable (L:1800mm)
- D. S-Video Cable (L:1800mm)
- E. VGA Cable (L:1600mm)
- F. USB Cable (L:1800mm)
- G. RS-232 Cable (L:1800mm)
- H. Touch Screen Driver CD Disk / User Manual

If any of these items are missing or damaged, contact your distributor or sales representative immediately.

13. Key Function by OSD

13.1 Menu Operation



Operations of key board :

1. To navigate the menu, press [MENU]. (Fig.13-1)
2. The indicator lighting up in white color is the selected adjustment item.
3. To Next Item of the menu, press [UP] / [DOWN] again.
4. The operations below are only available when "Menu" is started.
5. Press [LEFT] / [RIGHT] to adjust the value of the selected item.

Overview of the menu :

Firmware Version must be \geq VER 0.26



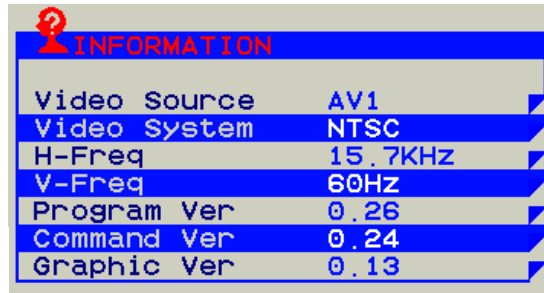
| Indicator | Meaning | Adjustable range | For | Remark |
|---|-------------|------------------------|--------------------|-------------|
|  | Brightness | 0 ~ 64 | AV / S-Video / VGA | Adjust-Bar |
|  | Contrast | 0 ~ 64 | AV / S-Video / VGA | Adjust-Bar |
|  | Color | 0 ~ 64 | AV / S-Video | Adjust-Bar |
|  | Tint | 0 ~ 32 | AV / S-Video | Adjust-Bar |
|  | Sharpness | 0 ~ 16 | AV / S-Video | Adjust-Bar |
|  | Dimmer | 0 ~ 9 | AV / S-Video / VGA | |
|  | Color Tone | Normal / Warm / Cool | AV / S-Video / VGA | |
|  | Mirror | OFF / ON | AV / S-Video / VGA | |
|  | Flip | OFF / ON | AV / S-Video / VGA | |
|  | H-Position | -25 ~ +25 | AV / S-Video / VGA | Balance-Bar |
|  | V-Position | -10 ~ +10 | AV / S-Video / VGA | Balance-Bar |
|  | Auto | | VGA | |
|  | Scan | Over Scan / Under Scan | AV / S-Video | |
|  | Information | | AV / S-Video / VGA | Fig.13-2 |
|  | Setup | | AV / S-Video / VGA | Fig.13-3 |
|  | Factory Set | | AV / S-Video / VGA | |
|  | Exit | | AV / S-Video / VGA | |







Fig.13-2



Setup Menu :



Fig.13-3

| Indicator | Meaning | Adjustable range | Function | Remark |
|---|---------------|---------------------------|--|-------------------------|
|  | Show Status | ON / OFF | Show signal status. | ON: Show OFF: Hidden |
|  | Blue Screen | ON / OFF | If loss signal will put on the blue or black screen. | ON: Blue OFF: Black |
|  | Auto Power On | ON / OFF | Power input module will be auto turn on. | ON: Auto OFF: Manual |
|  | Auto Saving | OFF / 3s / 5s / 15s / 30s | If signal lost over setting times will be power off. | ON: Auto OFF: Normal |
|  | Detect Source | ON / OFF | Auto detection which source is existence and change. | ON: Auto OFF: Normal |
|  | Return | | | |

Note : VGA only type don't have Detect Source function.

13.2 Operations

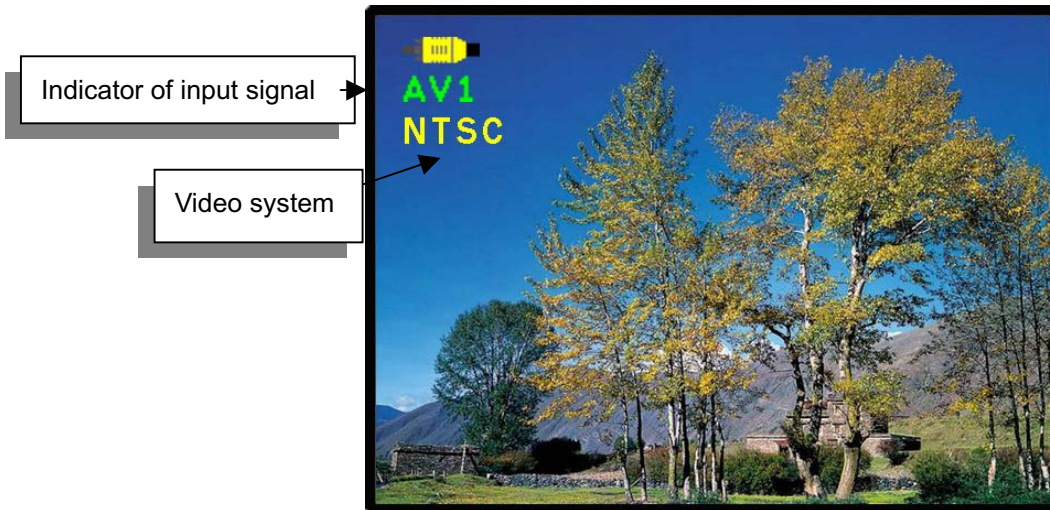






Fig.13-4

[Power] : Monitor power on / off

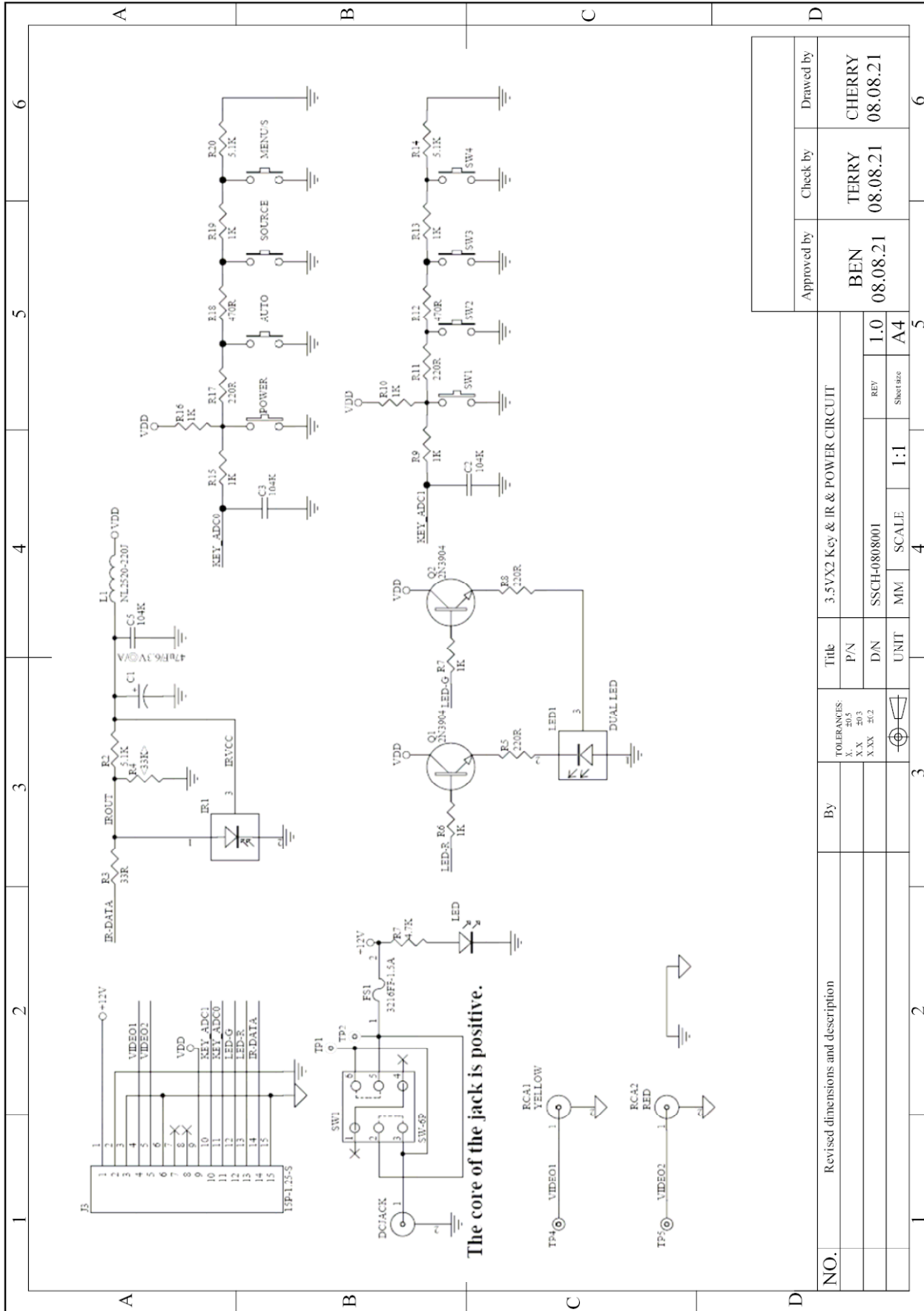
[Source] : Input signal switch

Overview of input signals :

| Indicator | Input signal | Interface | Video system |
|---|--------------|------------|---------------------------------------|
|  | AV1 | Composite | NTSC / PAL / SECAM |
|  | AV2 | Composite | NTSC / PAL / SECAM |
|  | S-Video1 | Y/C | NTSC / PAL / SECAM |
|  | VGA | Analog RGB | 640x480_60 / 800x600_60 / 1024x768_60 |

14. Application Schematic Diagram

14.1 Key and IR and Power Circuit

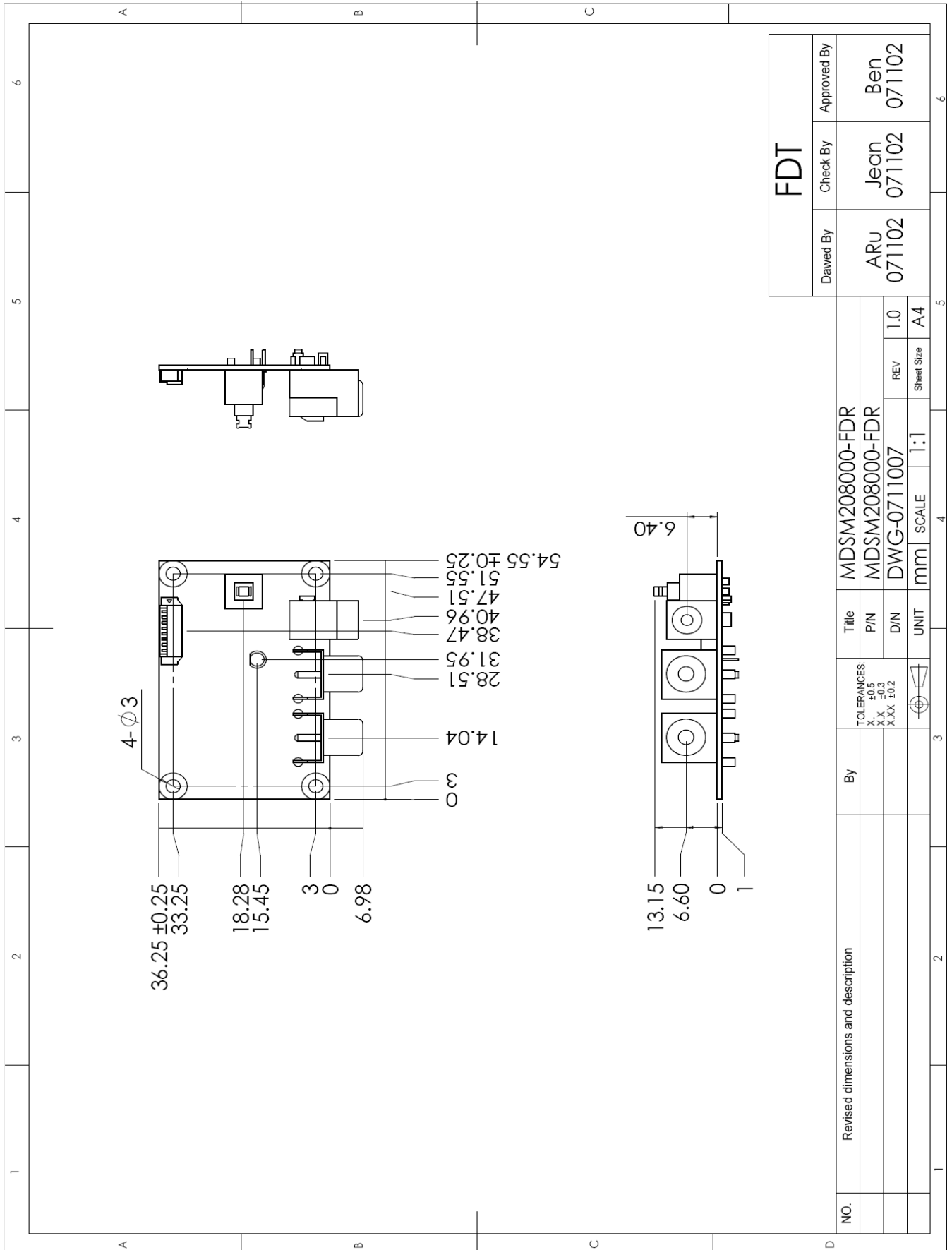


VER :B



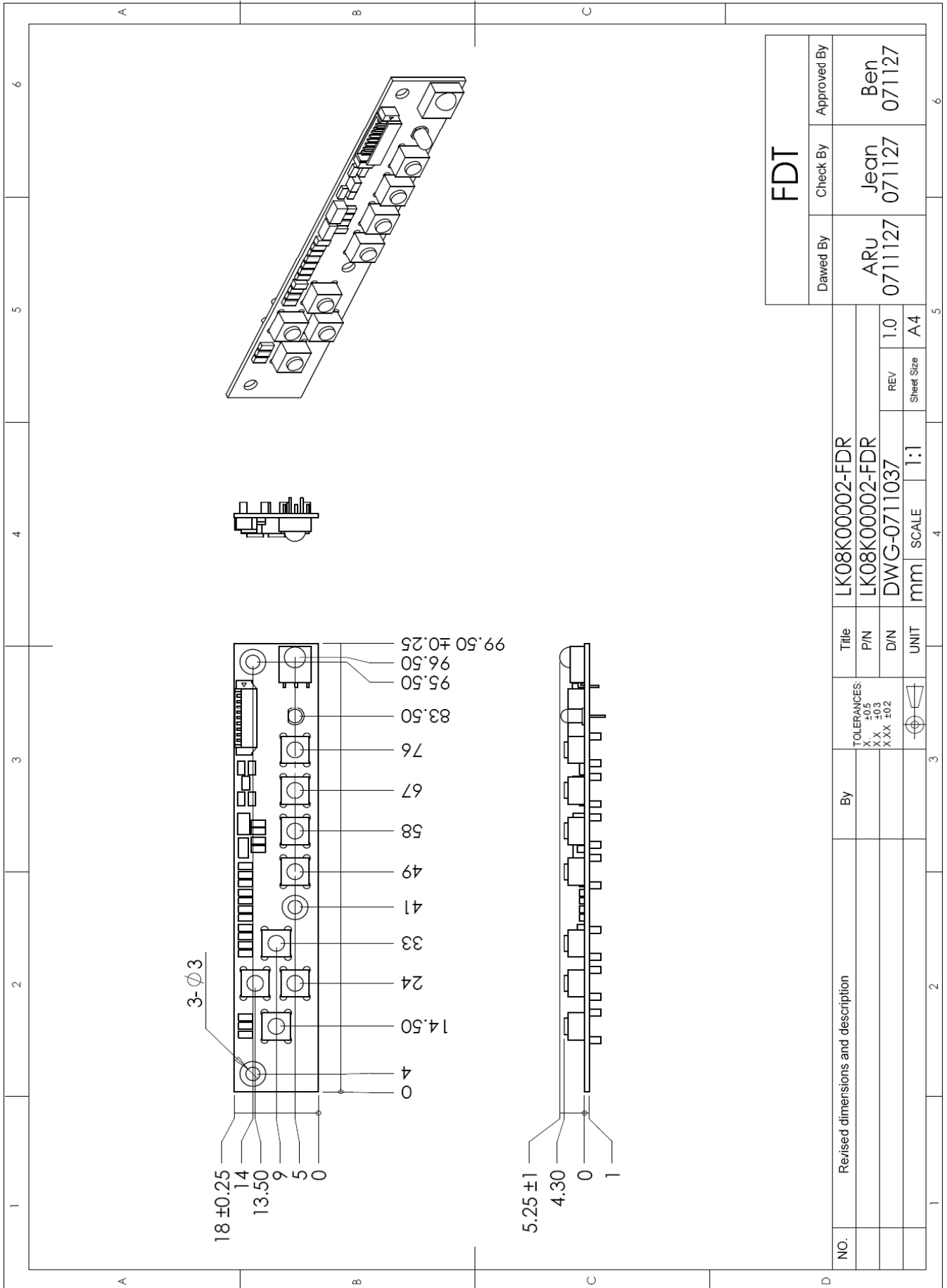
15. Accessory

15.1 MDSM208001-FDR (Option)

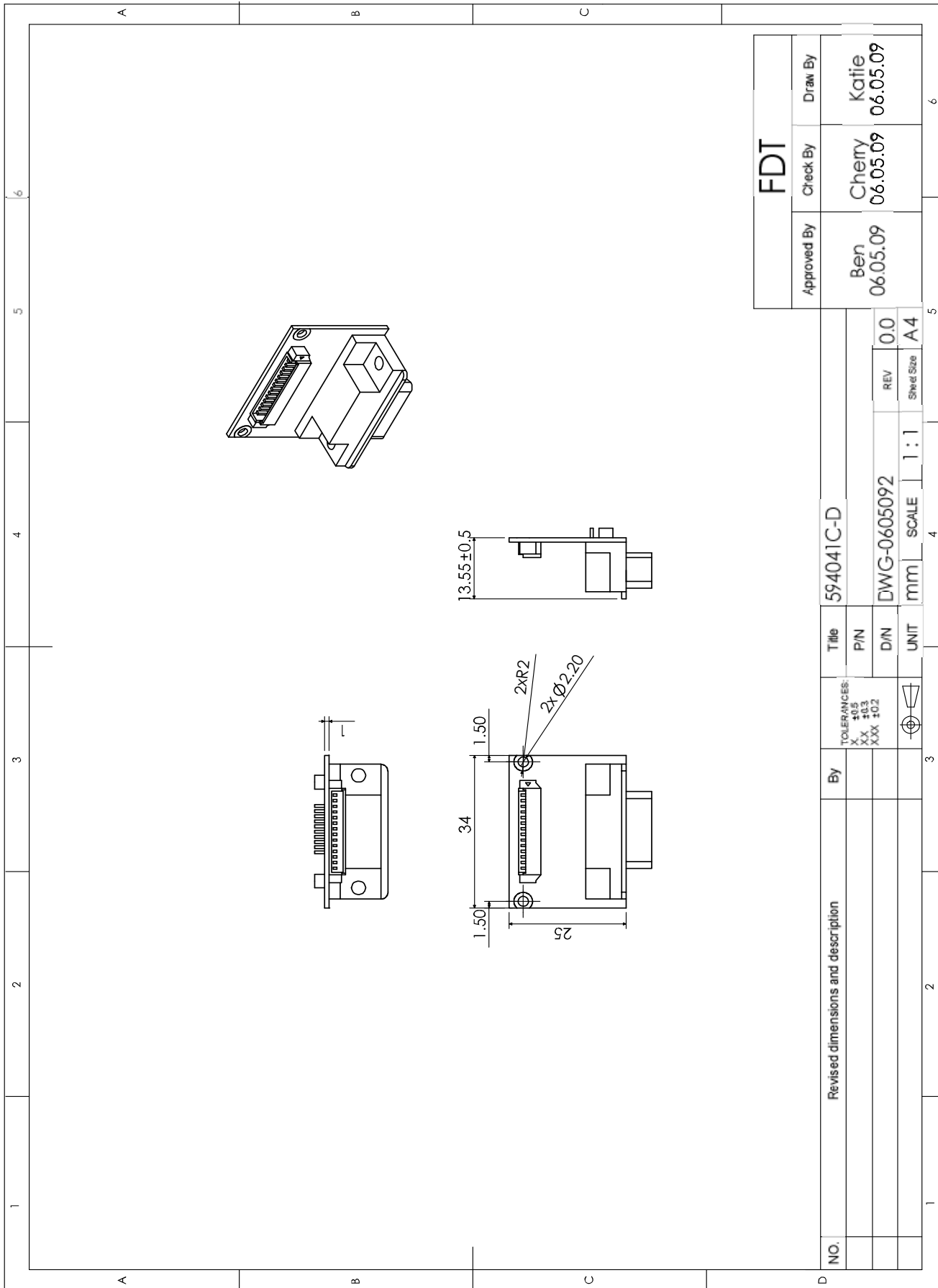


| | | |
|---------------|----------------|---------------|
| FDT | | |
| Drewn By | Check By | Approved By |
| ARU 071102 | Jean 071102 | Ben 071102 |





15.3 LOCOVERTV2-FDR



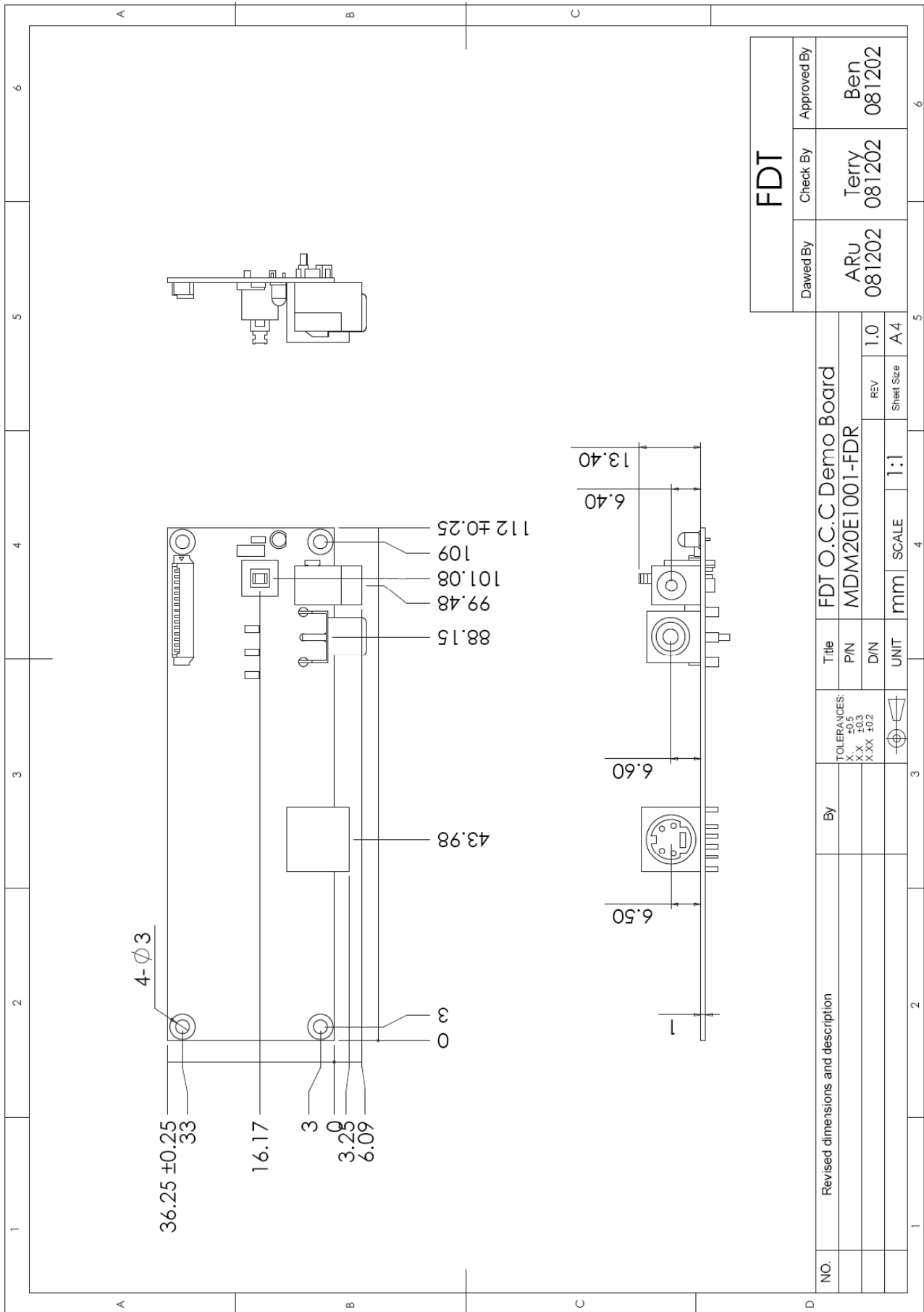
| | | |
|-----------------|-------------------|-------------------|
| FDT | | |
| Approved By | Check By | Draw By |
| Ben 06.05.09 | Chery 06.05.09 | Katie 06.05.09 |

| | | | |
|------------|-----|-------------|-----|
| Title | | 594041C-D | |
| P/N | | | |
| D/W | | DWG-0605092 | |
| REV | 0.0 | SCALE | 1:1 |
| UNIT | | mm | |
| Sheet Size | | A4 | |

| | | | | |
|-----|------------------------------------|----|--|--|
| NO. | Revised dimensions and description | By | TOLERANCES: X ±0.5 XX ±0.3 XXX ±0.2 | |
| | | | ⊕ | |



15.4 MDM20E1001-FDR (Option)



| | | | | | |
|----------|--|-------------------|--|---------------------|--|
| Dated By | | Check By | | Approved By | |
| | | ARU 08/20/2002 | | Terry 08/20/2002 | |

| | | | |
|-------|--|----------------------|-----|
| Title | | FDT O.C.C.Demo Board | |
| P/N | | MDM20E1001-FDR | |
| DIN | | REV | 1.0 |
| UNIT | | SCALE | 1:1 |
| mm | | Sheet Size | A4 |

| | | | |
|-----|------------------------------------|----|-------------|
| NO. | Revised dimensions and description | By | TOLERANCES: |
| | | | X.X ±0.5 |
| | | | X.X ±0.3 |
| | | | X.XX ±0.2 |

| | | | |
|-------|--|----------------------|-----|
| Title | | FDT O.C.C.Demo Board | |
| P/N | | MDM20E1001-FDR | |
| DIN | | REV | 1.0 |
| UNIT | | SCALE | 1:1 |
| mm | | Sheet Size | A4 |

| | | | |
|------------------------------------|--|----|-------------|
| Revised dimensions and description | | By | TOLERANCES: |
| | | | X.X ±0.5 |
| | | | X.X ±0.3 |
| | | | X.XX ±0.2 |

