
SPECIFICATIONS

1. **PRODUCT NAME** 4 Inch Flat B/W CRT Module (Module)
2. **MODEL** QA2088B
3. **TECHNICAL STANDARD** Q/SXDZ01-2000 equivalent
4. **MAJOR PARTS**

| No. | Parts | MADE IN | Model | Description |
|-----|-------------------------|-----------|-------------|-----------------------------|
| 1 | CRT | GUANGDONG | 4FS8G45 | 4 INCH FLAT CRT |
| 2 | Flight Back Transformer | GUANGDONG | DFT-F100C | Designed for 4FS8G45 |
| 3 | Deflection York | GUANGDONG | SYDY-200A | Designed for 4FS8G45 |
| 4 | Printed Circuit Board | GUANGDONG | VS-2000CN | 1994-V0 No.:CH0021234-97 |
| 5 | FUSE | | 1000mA/250V | CCEE 50T, IEC 127 |

5. ELECTRICAL CHARACTERISTICS

- 1) Rated Voltage DC 12.0V
- 2) Rated Current DC 500mA \pm 5%
- 3) Power Consumption 6.5W
- 4) Input Signal NTSC Standard, Sync Negative Unbalanced
Video/Composite, 1Vp-p/75-Ohm
- 5) Operating Temperature - 5 ~ 40 °C
- 6) Storage Temperature -20 ~ 60 °C
- 7) Relative Humidity 10 ~ 90% (RH)

6. ABSOLUTE MAXIMUM RATINGS

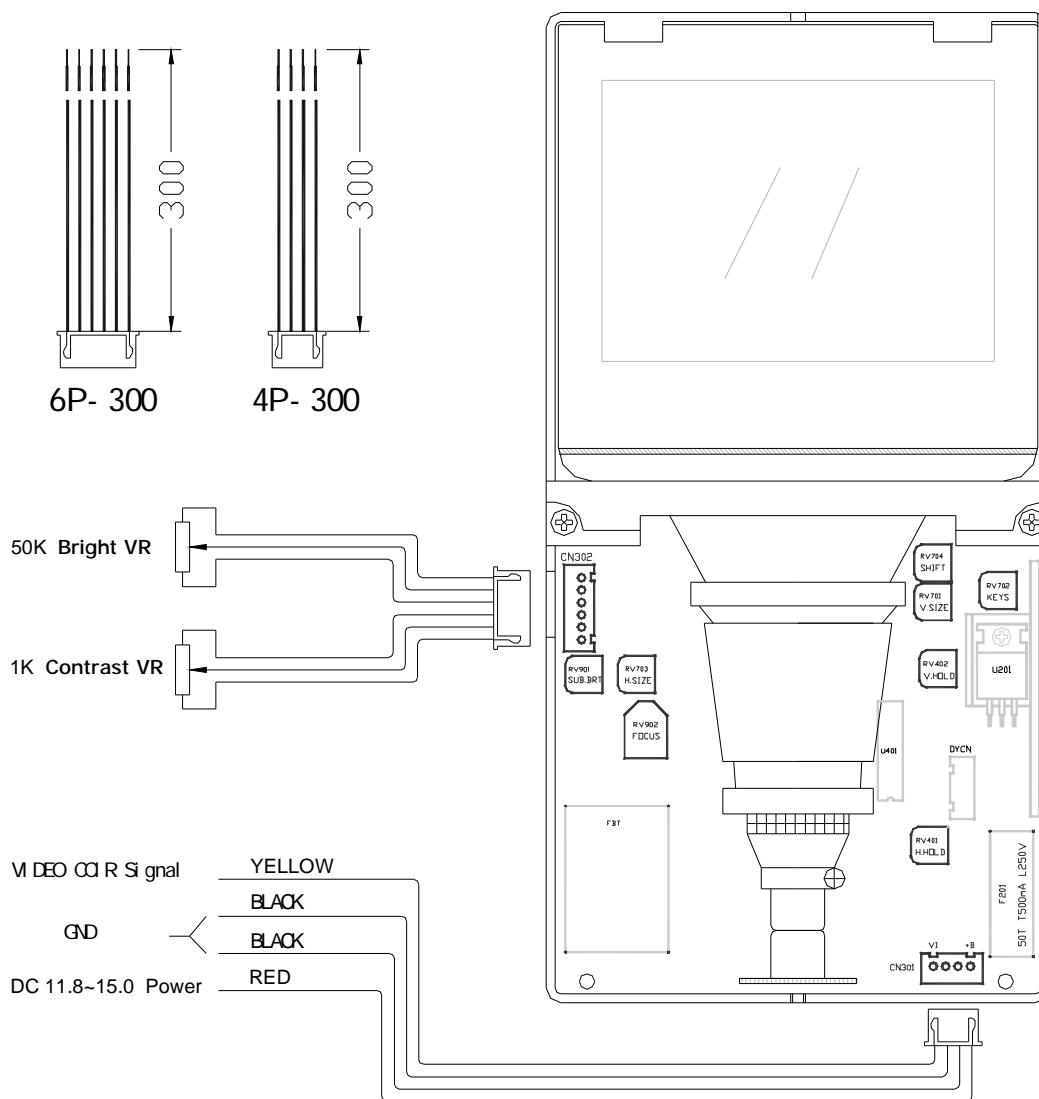
- 1) Power Supply DC 11 .8~ 15.0V Ripple Voltage 0.3V MAX
Ripple Voltage 0.3V MAX
- 2) Video Signal 0.7~ 1.4Vp-p (NTSC Standard, 75-Ohm Termination)

7. EXTERNAL CONNECTIONS(PARTS AND DIAGRAM)

- 1) **CN301** 4-pin Micro Connector (C3, 2.54mm Pitch), for Video and Power

| Pin No. | Color | Usage | Description |
|---------|--------|----------------------|----------------------|
| 1 | RED | Power Positive(+12V) | B+: DC 11.8~15.0V |
| 2 | BLACK | Power Negative(GND) | GND |
| 3 | BLACK | Video GND | GND |
| 4 | YELLOW | Video Input | VI: NTSC,0.7~1.4Vp-p |

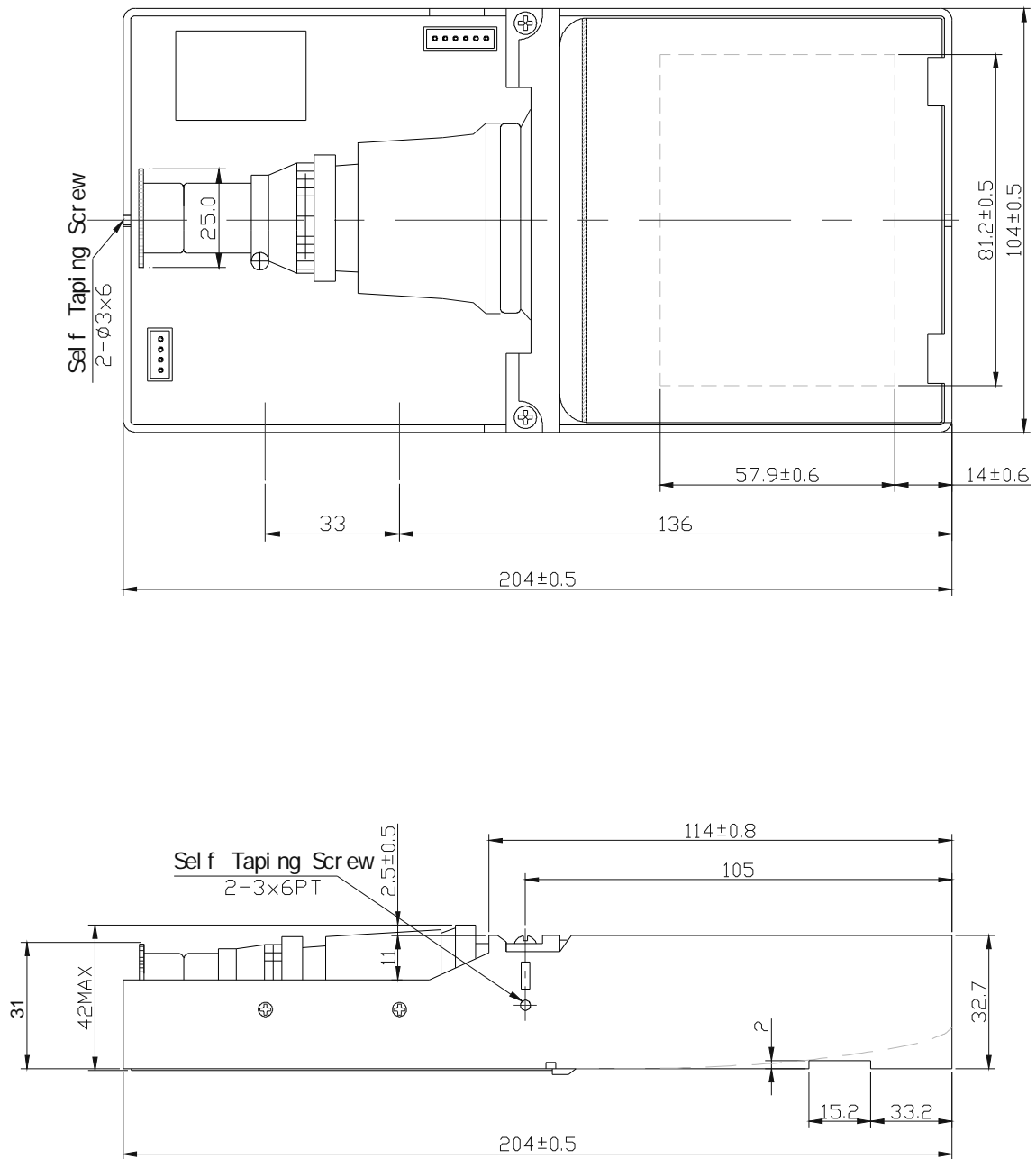
- 2) **CN302** 6-pin Micro Connector (C3, 2.54mm Pitch), for external POT
- 3) **CABLE** C3-4P-300mm, C3-6P-300mm



8. PRODUCT OVERVIEW

DIMENSIONS Approx. 204(L) X 104(W) X 42(H) mm

NET WEIGHT Approx. 550g



9. ELECTRICAL CHARACTERISTICS AND TESTING CONDITION

1) Testing Condition

- a) Temperature: 15 ~ 35 °C
- b) Humidity: 45 ~ 90% (RH)
- c) Position : Standard position, East-ward and Horizontally flat.

2) ELECTRICAL CHARACTERISTICS

| No. | Parameter | Unit | Value or Scale |
|-----|---|-------------------|--|
| 1 | INPUT SIGNAL (75-Ohm Termination) | Vp-p | 0.7 ~ 1.4 |
| 2 | PICTURE RATIO (WIDTH vs. HEIGHT) | \ | 4 : 3 |
| 3 | DISPLAY RATIO | % | ≥ 80 |
| 4 | CENTER OFFSET | % | ≤ 3 |
| 5 | SCREEN MAX. BRIGHTNESS | Cd/m ² | ≥ 100 |
| 6 | BRIGHTNESS ID. CLASS | LEVEL | ≥ 10 |
| 7 | HORIZONTAL RESOLUTION (CENTER) | TV LINES | ≥ 380 |
| 8 | RASTER GEOMETRY DISTORTION | % | ≤ 5 |
| 9 | SCAN LINEARITY DISTORTION | % | ≤ 12 |
| 10 | SCAN FREQUENCY : HORIZONTAL PUT IN SCALE HORIZONTAL HOLD SCALE VERTICAL HOLD SCALE | Hz | 15 734 ± 200 15 734 ± 400 57 ± 3 |
| 11 | ANODE VOLTAGE STABILITY | % | ≤ 10 |
| 12 | AMPLIFIER RESPONSE (+1dB~-3dB) | MHz | ≥ 8 |
| 13 | INPUT VOLTAGE | V | DC 11.8~15.0 |
| 14 | VIDEO INPUT IMPEDANCE | K-Ohm | ≥ 100 |
| 15 | SCREEN CONTRAST | MULTIPLE | ≥ 60 |
| 16 | RASTER MODULATE DISTURBANCE | \ | NO Distinctness |

3) **Testing Method:** Refer to National Standard **GB9384-88**.

4) **Reliability (MTBF):** MTBF > 1 000h

11. PACKING, SHIPPING AND STORAGE

1) PACKING INSTRUCTIONS

DIMENTION 570(L) X 270(W) X 290(H) mm

GROSS WEIGHT 12.0Kg

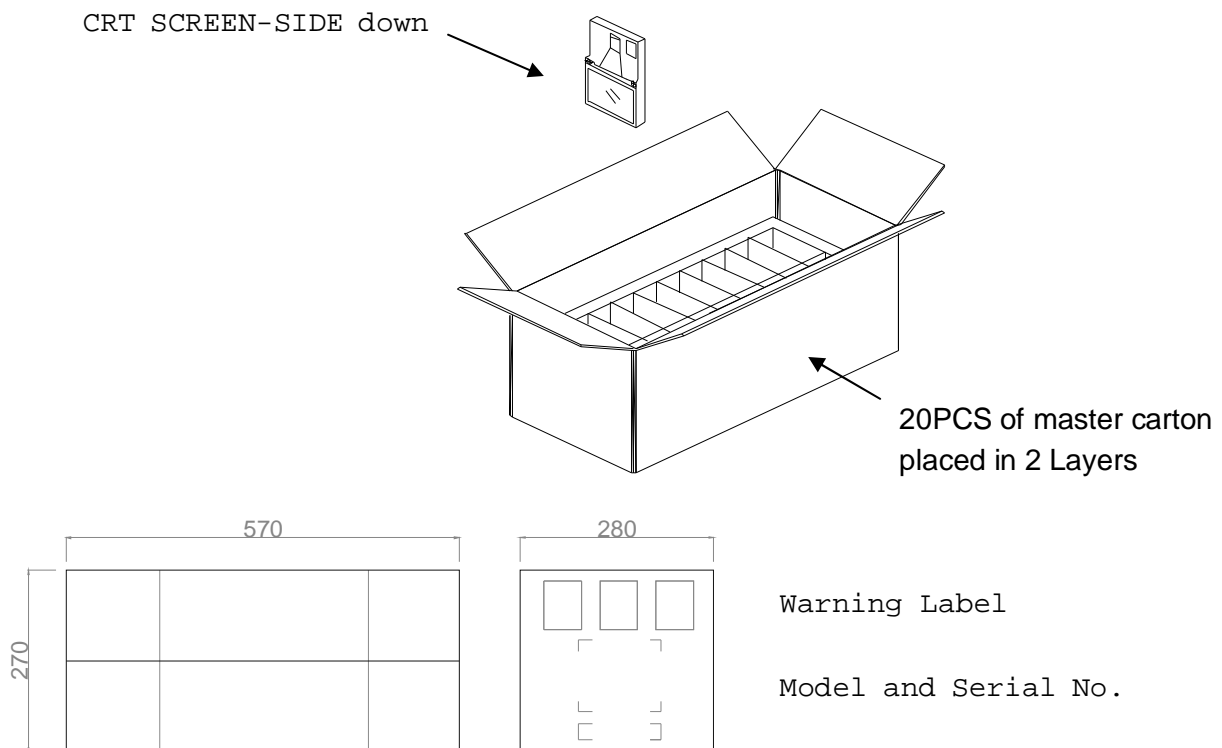
QUANTITY 20 PCS/CARTON

2) Shipping and Storage Condition

AVOID collision, rain or snow.

Storage with chemical or liquid goods STRICTLY PROHIBITED.

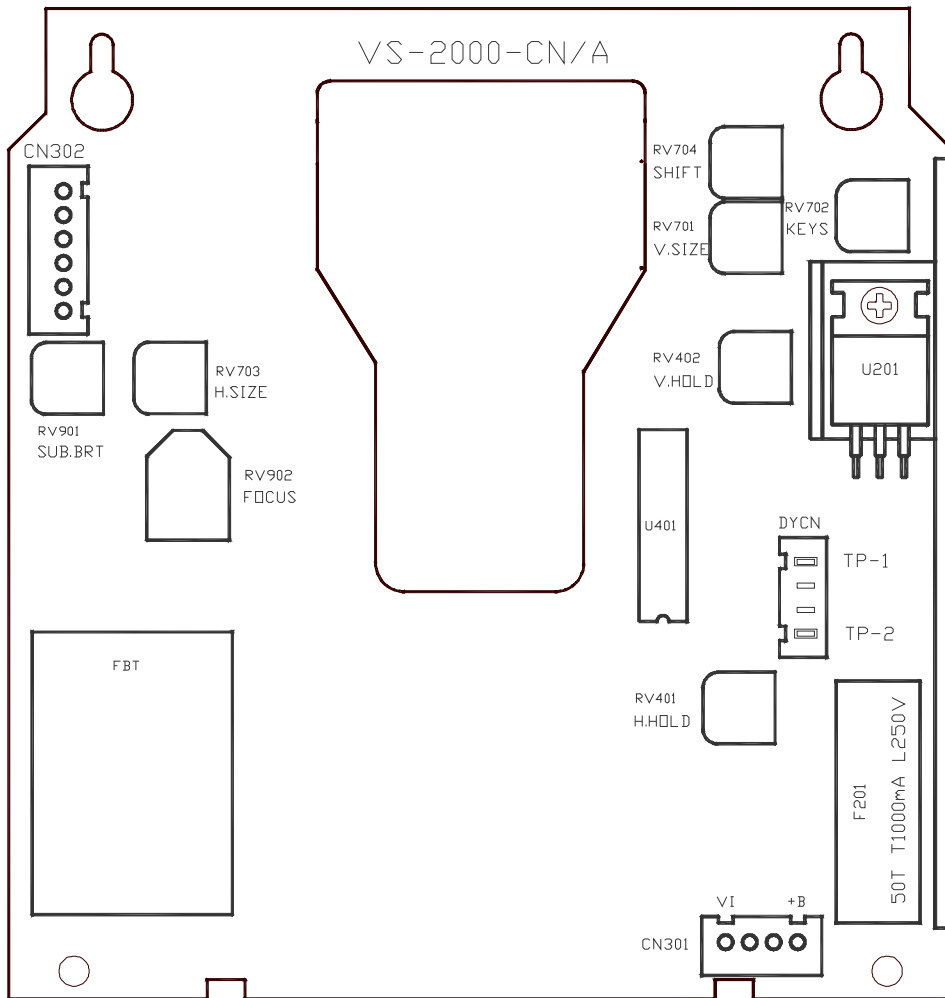
PACKING DIAGRAM



APPENDIX: ADJUSTMENT

1. CRT Module has been optimistically adjusted and tested before shipping. However, due to effects caused by shipping procedure and other unforeseen circumstances, it might need adjustments upon installation.
2. Refer to the diagram of PCB board for any adjustments.

Diagram of PCB Board



3. Adjustment Parameters of Trimmer Potentiometers

| Item | Part | Label | Adjusting Subject | Parameter |
|------|-------|-----------|------------------------|--------------------|
| 1 | RV901 | SUB . BRT | Aux Brightness | 150 ± 20Lux |
| 2 | RV902 | FOCUS | Focus | Picture in focus |
| 3 | RV401 | H . HOLD | Horizontal frequency | 15 734 ± 200 Hz |
| 4 | RV402 | V . HOLD | Vertical frequency | 57 ± 1 Hz |
| 5 | RV703 | H . SIZE | Horizontal extent size | Picture in minimum |
| 6 | RV701 | V . SIZE | Vertical extent size | |

| | | | | |
|---|-------|-------|------------------|------------|
| 7 | RV704 | SHIFT | Vertical offset | distortion |
| 8 | RV702 | KEYS | Raster trapezium | |

4. Before adjusting, connect external power and video input, set brightness and contrast potentiometers to middle position. After adjusting ,check the adjusting result by switching the power on and off several times.