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- **3000**
- **C**
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NOTES:

1. Bond Item #2 (Handle/Cover) to Item #1 (Cover). Use adhesive purchase spec. 4901179.

2. Finish per DEC SPEC 9200151-47.

3. Apply S/N FOLIAGE PAINT.

4. COVER HANDLE NOT TO EXCEED 90° ± 3° ANGLE WHEN BONDED TO COVER, TOP SURFACE "A".

5. Apply Snv Paint:

6. TOP HANDLE COVER

DIMENSIONS IN MILLIMETERS: X.X = ± 0.10, X.X = ± 0.5, X.0 = ± 2

Third Angle Projection

NOTES:

1. Handle/Cover

2. Cover

3. DO NOT SCALE DRAWING

4. SEE NOTE #4

5. SEE NOTE #1

6. SEE NOTE #2

DIMENSIONS:

A

B

C

D

205.0 REF

166.0 REF

230.5 REF

40.0

PAINT ENTIRE FRONT AND 4 SIDES

MILLIMETERS

DECIMALS

ANGLES

ADHESIVE PURCHASE SPEC 4901179

EQUIPMENT CORPORATION

COVER, CASSETTE

INTERIM
NOTES:
1. MASK BOTTOM OF FLANGE BEFORE PAINTING.
2. PAINT THIS SIDE ONLY.
3. ALLOY NO. 700 PREPARED FOR MAXIMUM TENSILE STRENGTH; ALLOYS 807 ARE ACCEPTABLE. ANY HARDNESS CONDITION ACCEPTABLE.
METRIC DIMENSIONS

DIMENSIONAL TOLERANCE

DIMENSIONS ARE MILLIMETERS UNLESS OTHERWISE SPECIFIED

MATERIAL: ALUMINIUM THICKNESS

FINISH: SEAMLESS MICROFINISH 6000 SERIES ALUMINIUM

NOTES:

1. DRILL 0.0500 INCH DIA 1 C HOLE

2. DRILL 0.0500 INCH DIA 1 A HOLE

SEE DETAIL A

1 REF

5.0 X 10.0 SLOT 2 & H H O L E S

X.XX +1/100 X.X +1/100 X.X +1/100

MEASURED AT THE PARTING LINE

DRAWN: DATED: CHECKED: APPROVED:

REV. 1

PARTS LIST

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**DIMENSIONS ARE MILLIMETERS UNLESS OTHERWISE SPECIFIED.**

**TOLERANCES ARE MILLIMETERS UNLESS OTHERWISE SPECIFIED.**

**NOTE:**

- THRU ANGLE BEHIND BURRS AND BREAK SHARP DERMER/SURFACE QUALITY V.
- NEXT HIGHER ASY.
- FINE FINISH SCALE

---

**PARTS LIST**

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**SECTION A-A**

- 2.50 INCH DIAM. INSTALLATION HOLE
- 5.0 Y 10.0 2 HOLE SLOT
- 13.5 Refer INSTALLATION HOLE

---

**TABLE**

- MATERIAL: 2-UF-3/4-2-0
- FINISH: 92018.0-10-0
- SCALE: 1/1
SECTION A-A
SCALE 1/1

2 HOLES

5.00 DIA.

2.5 TYP

9.5

19.0

METRIC DIMENSIONS

TABLE

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<td>MFM..</td>
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<td>Zn.4C.</td>
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NOTES:
1. FOR COORDINATES OF PROFILE CURVE REFER TO DATA LIST P.3 (SHEET #1)
2. TO BE USED FOR CURVE TEMPLATE PURPOSES ONLY
   SCALE OF 1000:1 INCLUDES
   SHELL THICKNESS FACTOR.
NOTES:
1. FOR COORDINATES OF PROFILE CURVE REFER TO DATA LIST - SHEET 84
2. TO BE USED FOR CURVE TEMPLATE PURPOSES ONLY. SCALE OF DRAWING INCLUDES 1/8 SHRINKAGE FACTOR.
SECTION AT Z = 5600

NOTE:
1. FOR COORDINATES OF PROFILE CURVE REFER TO SHEET 127:10 CURVE 99
2. TO BE USED FOR CURVE TEMPLATE PURPOSES ONLY. SCALE OF LINES 1 INCLUDES 2% SHRINKAGE FACTOR.
**NOTES:**

1. **ALL DIMENSIONS ARE NOMINAL FOR A FINISHED PART. 1/1 SCALE DOES NOT INCLUDE SHRINKAGE FACTOR.**
2. **XY COORDINATES ARE THE SAME FOR THE ENTIRE WIDTH OF THE SHELL.**

---

**DATA LIST #2**

SEE FIGURE 2 SHEET 14

---

**METRIC DIMENSIONS**

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**FIGURE:**

- [Diagram of SHELL VT50 with dimensions and notes](image)
### DATA LIST

See Figure 6 SHEET 20

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**NOTES:**

Dimensions are normal for a finished part, 1:1 scale. Does not include shrinkage.

**METRIC DIMENSIONS:**
NOTES:
ALL DIMENSIONS ARE NOMINAL FOR A FINISH PART. 1:1 SCALE DOES NOT INCLUDE SHRINKAGE FACTOR.

DATA LIST 14
SEE FIGURE 14 SHEET 26

METRIC DIMENSIONS
### SHELL VT60

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#### METRIC DIMENSIONS

- All dimensions are nominal. For a finish part, all dimensions should be increased by 0.0025 in. to allow for shrinkage.

- Actual dimensions are subject to change. Please consult the latest revision for accurate measurements.
### NOTES

1. ALL DIMENSIONS ARE NOMINAL FOR A FINISHED PART. 1:1 SCALE DOES NOT INCLUDE SHRINKAGE FACTOR.

### DATA LIST *16

SEE FIGURE 16 SHEET 28

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**FABRICATED EQUIPMENT CORPORATION**

**SHELL VT50**

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES

- SHEET 44
- OR 45°She.

MATERIAL

FINISH

SCALE

DRWDATE

REV.

CODE

NUM

REV.

A

BMD 741540-0-0
**INCOMING INSPECTION PROCEDURE**

**DATE:** 30 JUN 75

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1.0 Inspection by attributes.

1.1 All other dimensions and/or characteristics pertaining to 7411548 that are not listed must be inspected on 20% of the sample size from each lot. All defects must be listed and inspected on the entire A.O.Q. sample. Parts must conform completely to print.

1.2 Applicable document DDC metal quality manual.

### CHARACTERISTICS

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<tr>
<td><strong>1.1</strong> All other dimensions and/or characteristics pertaining to 7411548 that are not listed must be inspected on 20% of the sample size from each lot. All defects must be listed and inspected on the entire A.O.Q. sample. Parts must conform completely to print.</td>
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<tr>
<td><strong>2.0</strong> Applicable document DDC metal quality manual.</td>
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### PROCEDURE

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<td><strong>2.1</strong> Check location of the front bosses (keyboards)</td>
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<tr>
<td><strong>2.2</strong> Check location of the front processor board bosses</td>
</tr>
<tr>
<td><strong>2.3</strong> Check location of the rear processor board bosses</td>
</tr>
<tr>
<td><strong>2.4</strong> Size of holes in bosses</td>
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<tr>
<td><strong>2.5</strong> Mat. thickness</td>
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<tr>
<td><strong>2.6</strong> Redundant opening and location</td>
</tr>
<tr>
<td><strong>2.7</strong> Workmanship</td>
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</tbody>
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#### Inspect for:

- **3.1.1** sink in material
- **3.1.2** flashing/scratches
- **3.1.3** color and texture
- **3.1.4** filled holes
1.0 Inspection by attributes.

1.1 All other dimensions and/or characteristics pertaining to 7411539 that are not listed must be inspected on 2% and the sample size from each lot. All defects must be listed and inspected on the entire AQL sample. Parts must conform completely to print.


2.0 CHARACTERISTICS

2.1 Check location of holes

Use fixture 844-02146-3

2.2 Check holes sizes

Vernier calipers/plug gages

2.3 Material thickness

Vernier calipers

2.4 Workmanship

Visually inspect for:

2.4.1 sink in material

2.4.2 flashing

2.4.3 color and texture

2.4.4 filled bosses
NOTES:
1. DIAMETER IS DRAFT ABOUT THE X X AXIS EXCEPT FOR THE BOSS AT 122.5
2. DRAFT TO BE 1°
3. ALL DIMENSIONS ARE MILLIMETERS
4. TOLERANCE TO BE:
   a. TAPERED 0.10
   b. ALLOW PER VERTICAL 0.01
5. NORMAL WALL THICKNESS TO BE 4 mm (0.16 in)
6. GRIND ALL BURRS FROM ALL CURVATURES. THE RECOMMENDED CHAMFER FOR FOLLOWS, BUT SHARP EDGES ALLOWED
7. TEXTURE TO BE APPLIED WHERE SPECIFIED ON EXTERIOR OF PART ONLY
8. NO TEXTURE ANY INTERIOR SURFACES
9. TEXTURE TO BE AERON METALS C 491
10. NARY TO BE GENERAL ELECTRIC NORYL "SE-100-705"
NOTES:
1. INSTALL ITEM (1) INSERT S PLATES.
2. MAKE 2D WITH SPACING BETWEEN.
3. INSTALL LUGS VARIATION TO DRAWING 5 PLATES.

DETAIL (NOT TO SCALE) 5 PLATES

METRIC DIMENSIONS

TYP, 5-50

SEE NOTE 7

SEED DETAIL X

NOTE-> QUANTITY, VARIATION
TERMINAL TEST AND FAMILIARIZATION

1. Check the Connections
   - Set the DC/AC switch to the 20 mA position. Set switch S1 to position 1 and switch S2 to position C, as shown in the drawing at right.
2. Turn the Power On
   - The On/Off Switch is on the right side of the unit.
3. Wait for the Blinking Cursor
   - After approximately one minute, the cursor should appear at its home position — the upper left corner of the screen.
4. Adjust the Intensity Control
   - If the cursor fails to appear after one minute, its intensity control may be set too low. Similar to the brightness control on a television set, the intensity control is the sliding lever at the back of the unit.
5. Set the VT50 selections described below, and make sure the control codes and Escape Sequences function properly.

6. Connect the VT50 to the Host
   - Use the connection which is attached to the terminal strip to plug the VT50 into an unoccupied socket of the host computer (low-cities S1 and S2 must be changed so that data is entered through the socket pins in the computer rather than through the screen). Whatever the features of the VT50, such as control codes and Escape Sequences, work properly now depends on whether the computer sends back to the screen the information you have typed in. Switches S1 and S2 must be set so that the transmitting and receiving speed of the VT50 matches that of the host.

VT50 FEATURES

Input and Output
- The cursor underlines the position where the next character displayed on the screen will appear. After a character is entered, the cursor moves one character position to the right. Type several selected-size characters and observe how cursor movement.

Seven have additional characters to form a longer line, when the 73rd character is displayed, a buzzer sounds. This buzzer serves the same function as a typewriter bell by alerting the operator to the right margin. The maximum line length (set to 7 margin) is 80 characters.

Deleting More Lines
- When the cursor reaches the extreme right margin, this position will be marked for output and marked by a cursor control command. To move the cursor to the extreme left margin of the last line, press the RETURN key to move the cursor to the left margin of the current line and the LF key clears the entire page. Either key may be used to move the cursor to the left margin of any line.
- If the cursor is not moved from the right margin, each new character entered at the screen will replace the character currently displayed above the cursor. Type additional lines to observe how the right margin limit, continuous typing causes characters to overflow the character replacement.

Move the cursor to the next line and continue typing. After line 40 lines are displayed. When the cursor is below line number 12, an LF (form feed) key will move the cursor to a new line by moving all displayed lines up one line on the screen, leaving space for any new data in the transmission is saved. Moving the cursor to the top line to the bottom line of the screen. Type additional lines and watch the cursor as new line feed moves existing lines up.

Changing Test on the Screen
- Use cursor control commands to move the cursor to a position on the screen where a character is currently displayed. Type a displayable character and verify that this removes the old character.

Notes:
- Switches S1 and S2 are shown set for 600 baud, ohm use.
- There must be a cursor between points A and B and only of the line frequency is 50Hz.
- Enter/Exit of the display will work.
- The contacts on the terminal strip are connected as follows:
  1. 20 mA
  2. Transmit (+ green)
  3. Transmit (- red)
  4. Receiver (+ white)
  5. Receiver (- black)

DESCRIPTION OF S1 AND S2

Switch S2 (speed)       Switch S1 (mode)

A - Set 9600              1 - Off Line
B - 1200 Baud            2 - Full Duplex with Local Comp
C - 600 Baud             3 - Full Duplex
D - 1200 Baud            4 - Full Duplex, 300 Baud
E - 2400 Baud            5 - Full Duplex, 150 Baud
F - 4800 Baud            6 - Full Duplex, 75 Baud
G - 9600 Baud            7 - Full Duplex
H - 19200 Baud           8 - Full Duplex, 1200 Baud

*Chars are selected rather than the speed selected by Switch S8.
*Transmit and receive as the same speed: 300 Baud if Switch S5 is in position 4
75 Baud if Switch S1 is at position 4
75 Baud if Switch S5 is in position 6

For temporary Model 33 compatibility, set S1 to 2 and S2 to 8 (Full Duplex, 1200 Baud)

CONTROL CODES

Ctrl B        ^B
Ctrl H        ^H
Ctrl D        ^D
Ctrl J        ^J
Ctrl K        ^K
Ctrl L        ^L

ESC A          Move cursor up one line
ESC C          Move cursor right one position
ESC H          Move cursor to home position (top left of screen)
ESC J          Move cursor up one position
ESC K          Move cursor to end of screen
ESC R          Exit from cursor to end of line
ESC T          Target move cursor to next line
ESC U          Exit from cursor to end of line
ESC V          Move cursor up one position
ESC W          Enter next screen mode
ESC X          Enter next screen mode
ESC Y          Move cursor to next line
ESC Z          Display a new line (display

HOLD SCREEN MODE COMMANDS

SCRQLL         Display a new line
unit SCROLL    Display a new line
unit SCROLL    Display a new line

3. REQUIREMENTS:

3.1. Materials:
3.1.1. Description: Reference Per Figure 1A and 1B
3.1.2. Yoke Lock: A screen tightened closing ring shall be provided which allows the yoke to be locked both easily and reliably in the desired position.
3.1.3. Workmanship: All units shall be manufactured in a careful and workmanship like manner in accordance with good design and sound practice. All units will be processed in such a manner that they are uniform in quality and free from grades and voids in the case and other defects that will affect the life and proper functioning or appearance.

3.2. Electrical:
3.2.1. Schematic: Reference Per Figure 2
3.2.2. Test Procedures: Reference Per Figure 3
3.2.3. Definition Table: 110 degrees nominal.

A) Connection: Shall be in parallel
B) Insulation: 105°C ± 5°C
C) Resistance: 0Ω ± 10%
D) Sensitivity: 8A ±20% (with 11k ohme possible),
E) Terminal Connections: 4, 8, and 5 or Flying Leads

APPROVED VENDOR

Per Qualified Vendor Listing

VT80

Yoke Insulation:

Dimensions in inches, tolerances are plus or minus ± .05 in, one piece, grade .02, .06, .09 mm (0.254, 0.635, 0.953 mm).
**Equipment Corporation**

**Purchase Specifications**

---

**Inductance, Resistance Bridge**

- Pin 1 and 2
- Pin 6 and 7
- Vertical Coils
- Horizontal Coils

**Test Monitor**

- Yoke Under Test

**Character & Sync Generator**

**Distortion, Sensitivity & Beam Centering**

**Test 1**

- Measure Voltage applied (2 V-P-P) at pins 4, 5, and 6.
- Measure Voltage appearing at pins 1 and 3.

**Test 2**

- For use on 0-1500-2000 Volt Dissociated CRT.
- Vertical Coil

**Test 3 Cross Talk**

**Test Procedures**

---

**ELECTRICAL SCHEMATIC**

**Figure 2**

---

**Figure 4**

---

**Notice!** (Caution: The yoke under test)

A. Place the yoke in an operable VT50 Monitor.
B. With height and width controls set to produce a raster 220mm wide by 176mm high, all distortion shall fall within the 3mm wide frame as shown in Figure 4.
With a raster dimension of 230 x 175mm all distortion will fall within a 3mm wide band on each edge of the raster.

FIGURE 4
DISTORTION
LEGEND

NUMBER
VARIATION
700587-0 USE WITH COVER
700587-0 USE MIGG-UP COVER

NOTES

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS ANGLES ARE IN DEGREES

QUALITY IN

CUSTOMER PREFERRED

TALKING ANGLE PROJECTION DRAWINGS USED ON TITLE BLOCK

SHEET NUMBER 1 OF 3

FINISH --

COPIER COVER PRODUCTION ASSEMBLY

SCRIPT OF REV.

SEE PARTS LIST 2 PD 7010547-0-0
NOTES:
1. MATERIAL TO BE: BERYLLIUM COPPER, V2 HARD.

- KEEP CORNERS PROOF-ADE AND DO NOT SCORCH OR WIZ.

- SCALE 1:1

- DRAWN IN METRIC UNITS

- MATERIAL: BERYLLIUM COPPER, V2 HARD.

- DRAWN IN METRIC UNITS

- MATERIAL: BERYLLIUM COPPER, V2 HARD.
### 115 VOLTS 40 HP

<table>
<thead>
<tr>
<th>NO.</th>
<th>COLOR</th>
<th>FROM</th>
<th>TO</th>
<th>SIGNAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 100/127 VOLTS 200/240 HP

<table>
<thead>
<tr>
<th>NO.</th>
<th>COLOR</th>
<th>FROM</th>
<th>TO</th>
<th>SIGNAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Specifications**

**Title:** Switch Plate

**Part Number:** U50 - AA

**Scale:** A 352 24/24.7:1, 1

---

**Diagram:**

- OFF
- ON

115VAC 60Hz 1a

---

**Table:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Sheet</th>
<th>Date</th>
<th>Rev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>OK</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Review</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inspection</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Notes:**

- This drawing and specifications, herein, are the property of Digital Equipment Corporation and may not be released or reproduced except by express written permission of Digital Equipment Corporation.
ON
OFF
100 VAC 50/60 Hz 1.2a

OFF
ON
127 VAC 50/60 Hz 1a

O.K.

REV.

DATE

INSPECTED BY

CHECK

ENG.

PROJ.

PRODUCT

NEXT HIGHER ASSY.

SCALE

SHEET OF
1.0 General

This document specifies the level of performance the end-user can expect from the VT50.

For the purposes of this specification, the VT50 Operator’s Manual is included as part of this specification.

VT50 Operator’s Manual

DEC-00-0074A-0

VT50 Operator’s Manual

DEC-00-0074A-0

1.1 Overall Specifications

<table>
<thead>
<tr>
<th>CHARACTERISTIC</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEIGHT</td>
<td>360mm (14.1 in.)</td>
</tr>
<tr>
<td>WIDTH</td>
<td>53 cm (20.9 in.)</td>
</tr>
<tr>
<td>DEPTH</td>
<td>600mm (23.6 in.)</td>
</tr>
<tr>
<td>MINIMUM TABLE DEPTH</td>
<td>40mm (1.6 in.)</td>
</tr>
<tr>
<td>WEIGHT</td>
<td>29kg (64 lbs.)</td>
</tr>
<tr>
<td>OPERATING ENVIRONMENT</td>
<td>DEC 2200 CLASS B</td>
</tr>
<tr>
<td>TEMPERATURE</td>
<td>10°C to 40°C (50°F to 100°F)</td>
</tr>
<tr>
<td>HUMIDITY</td>
<td>20% to 80%</td>
</tr>
<tr>
<td>LINE VOLTAGE</td>
<td>U.S. models: 100-120V (115V nominal)</td>
</tr>
<tr>
<td></td>
<td>European model: 200-240V (220-240V nominal)</td>
</tr>
<tr>
<td>POWER LINES AND FILTER</td>
<td>Low leakage - shielding type</td>
</tr>
</tbody>
</table>

1.2 Technical Specifications

<table>
<thead>
<tr>
<th>CHARACTERISTIC</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISPLAY FORMAT</td>
<td>22 lines of 80 characters</td>
</tr>
<tr>
<td>DISPLAY CHARACTER TYPE</td>
<td>EIA Character fonts: 50 when available</td>
</tr>
<tr>
<td>CHARACTER SIZE</td>
<td>Screen size: 75, 150, 300, 600, 1200, 2400, 4800, 9600</td>
</tr>
<tr>
<td>SCREEN SIZE</td>
<td>210mm x 105mm (8 1/2” x 4 1/4”)</td>
</tr>
<tr>
<td>X SIZE</td>
<td>4.0mm (0.16”)</td>
</tr>
<tr>
<td>Y SIZE</td>
<td>4.1mm (0.16”)</td>
</tr>
<tr>
<td>CHARACTER SET</td>
<td>U.S. ASCII, Typewriter Keypunch format</td>
</tr>
<tr>
<td>PLASTIC CASE MATERIAL</td>
<td>Plastic case material</td>
</tr>
<tr>
<td>VIDEO</td>
<td>NTSC SYNCHRONIZED</td>
</tr>
<tr>
<td>VIDEO INPUT</td>
<td>NTSC genlock, None free for horizontal hold and vertical hold adjustments</td>
</tr>
</tbody>
</table>

1.3 Character Set

The character set consists of the following:

- U.S. ASCII
- Typewriter Keypunch format
- Odd parity, parity bit: 5.0V non-linear

1.4 Display Memory

The display memory is 2560 bytes (512 character by 5 characters).

1.5 Interface

The interface is a two-wire, differential line, and is compatible with all standard two-wire, differential line systems.

1.6 Interface Specifications

- Data transmission at 75, 150, 300 baud with exception at 600, 1200, 2400, 4800, 9600 baud
- Switch selectable
- Full Duplex or Full Duplex with Local Copy
- Remote Control
- Local Control
- Audible Tone
- Display Memory
- Operator’s Manual
- Display Memory
- Operator’s Manual
- Display Memory
- Operator’s Manual
- Display Memory
### ENGINEERING SPECIFICATION SHEET

**TITLE**: VT50 ENGINEERING SPECIFICATION

#### DESCRIPTION

**OPERATOR CONTROLS**

- **Right Side**
  - Power ON/OFF switch
  - Brightness control (side control)
  - Scroll speed, full duplex, local control

- **Bottom**
  - Erase key
  - Page up/down

**BREAK KEY**

- When pressed, a 250 milliseconds (approx.)
  - One shot signal is transmitted

**INTERNAL POWER SUPPLY**

- Overcurrent protection
  - +5V : 250mA
  - +12V : 250mA
  - -5V : 120mA

- Reserve power for internal
  - 50mA avg., 60mA peak

**INTERNAL TIMING SOURCE**

- Crystal oscillator 13.824MHz

**TARGETS**

- 5 dot, 4 space to generate well
  - Separated easy-to-read characters

**MINITOR ELECTRONICS**

- 100% solid state

**GRAPHIC DISTORTION**

- 100% solid state

**INTERNAL SET-UP CONTROLS**

- The parameter of a full field of characters shall approach an ideal rectangle to within 2% of the rectangle length

- Vertical height, vertical position, horizontal size, focus, test pattern switch

### CHARACTERISTIC

<table>
<thead>
<tr>
<th>CHARACTERISTIC</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cursor light... EBC 023,103</td>
<td>Move cursor position up one line.</td>
</tr>
<tr>
<td>EBC 103</td>
<td>Move the cursor position to the right one character.</td>
</tr>
<tr>
<td>EBC 104</td>
<td>Move the cursor position to the left one character position.</td>
</tr>
<tr>
<td>EBC 016</td>
<td>Move the cursor position down one line.</td>
</tr>
<tr>
<td>EBC 015</td>
<td>Move the cursor position up one line.</td>
</tr>
<tr>
<td>Blank (a)</td>
<td>Move the cursor position to the right one character.</td>
</tr>
<tr>
<td>Blank (b)</td>
<td>Move the cursor position to the left one character position.</td>
</tr>
<tr>
<td>Blank (c)</td>
<td>Move the cursor position down one line.</td>
</tr>
</tbody>
</table>

#### BLANK (a)

- Move the cursor position up one line.
- Move the cursor position to the right one character.
- Move the cursor position to the left one character position.

#### BLANK (b)

- Move the cursor position down one line.
- Move the cursor position up one line.

#### BLANK (c)

- Move the cursor position to the right one character.
- Move the cursor position to the left one character position.

### KEY LEGEND

- **Key**: +5G
- **Code**: $F$
- **Function**: Move cursor position up one line.

### USER CODES

<table>
<thead>
<tr>
<th>CODE</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>MOVE CURSOR position up one line.</td>
</tr>
<tr>
<td>02</td>
<td>MOVE CURSOR position down one line.</td>
</tr>
<tr>
<td>03</td>
<td>MOVE CURSOR position to the right one character.</td>
</tr>
<tr>
<td>04</td>
<td>MOVE CURSOR position to the left one character position.</td>
</tr>
</tbody>
</table>

### BLANK KEYS MAY BE USED TO IMPLEMENT USER FUNCTIONS

---

**TITLE**: VT50 ENGINEERING SPECIFICATION

#### DESCRIPTION

**UL APPROVAL**

- Units with serial numbers in
  - Accordance with Underwriters' approval, units
  - Lacking are to have UL approval.

**TAB**

- When the Tab (011) is received
  - The characters moved to the next tab stop
  - Tab stops are set every 8 spaces on the
  - Right 13 character position, 13a

**VT50 H**

- VT50 with direct addressing and 18-key
  - Monochrome monochrome

- The VT50 H has all of the above VT50 specifications
  - Plus the following additional features:

### USER CODES

<table>
<thead>
<tr>
<th>CODE</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>MOVE CURSOR position up one line.</td>
</tr>
<tr>
<td>02</td>
<td>MOVE CURSOR position down one line.</td>
</tr>
<tr>
<td>03</td>
<td>MOVE CURSOR position to the right one character.</td>
</tr>
<tr>
<td>04</td>
<td>MOVE CURSOR position to the left one character position.</td>
</tr>
</tbody>
</table>

---

**TITLE**: VT50 ENGINEERING SPECIFICATION

#### DESCRIPTION

**DIRECT CURSOR ADDRESSING**

- Direct Cursor Addressing can be invoked
  - In the VT50 and VT50H by two separate commands.

- The two commands are:

  1. **CTRL H ON/ON**
     - “Clear” “Column”
     - Through the use of 000-018, the
     - Cursor can be directed to any of
     - The characters locations in the CRT
     - The cursor move escape from

  2. **ESC "y" “Clear” “Column”
     - “Clear” “Column”
     - Through the use of ESC “y”, the
     - Cursor can be directed to any of
     - The characters locations in the CRT
     - The cursor move escape from

---

**TITLE**: VT50 ENGINEERING SPECIFICATION

#### DESCRIPTION

**INDEX**

<table>
<thead>
<tr>
<th>CODE</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>MOVE CURSOR position up one line.</td>
</tr>
<tr>
<td>02</td>
<td>MOVE CURSOR position down one line.</td>
</tr>
<tr>
<td>03</td>
<td>MOVE CURSOR position to the right one character.</td>
</tr>
<tr>
<td>04</td>
<td>MOVE CURSOR position to the left one character position.</td>
</tr>
</tbody>
</table>

---

**TITLE**: VT50 ENGINEERING SPECIFICATION

#### DESCRIPTION

**INDEX**

- Direct Cursor Addressing can be invoked
- In the VT50 and VT50H by two separate commands.

- The two commands are:

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  2. **ESC "y" “Clear” “Column”
     - “Clear” “Column”
     - Through the use of ESC “y”, the
     - Cursor can be directed to any of
     - The characters locations in the CRT
     - The cursor move escape from
### Engineering Specification

**Title:**

The Y- and X-addresses are determined by subtracting 82 (c) from the received data, and taking the result as the new column position. If the Y-address is greater than 127 (c), the cursor will be positioned on the last line. If the X-address is greater than 127 (c), the cursor will be positioned in the last column.

Control codes and escape-sequences do not interfere with the execution of a direct cursor addressing sequence.

All of the following specifications also apply to the VT50.

### Table

<table>
<thead>
<tr>
<th>Pin</th>
<th>Connector P/n</th>
<th>Type</th>
<th>Female Pins</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12-09378-03</td>
<td>Male</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>12-09379-03</td>
<td>Male</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>12-09340-00</td>
<td>Male</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>12-09340-01</td>
<td>Male</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>12-09340-02</td>
<td>Male</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>12-09340-03</td>
<td>Male</td>
<td>8</td>
</tr>
<tr>
<td>7</td>
<td>12-09340-04</td>
<td>Male</td>
<td>10</td>
</tr>
<tr>
<td>8</td>
<td>12-09340-05</td>
<td>Male</td>
<td>12</td>
</tr>
</tbody>
</table>

### Connectors

- **PROD:** For 20mA, the connector is equivalent to the equivalent pin 2, 3, 4, 5, and 6. The terminal pair is used.
- **VT50:** The terminal pair is used.

### Signals

- **Signal Transmit Positive**
- **Signal Transmit Negative**
- **Signal Receive Positive**
- **Signal Receive Negative**

### Transmission

- **Transmitter**
  - Transmit Positive: 0V
  - Transmit Negative: -4.0V
  - Receive Positive: 2.5V
  - Receive Negative: 0V

### Receiver

- **Receiver**
  - Passive, isolated
  - Negative: 0V
  - Positive: 4.0V

**Self-test** is achieved by jumpering 1-2, 3-4, 5-6, and putting the terminal in full duplex.

### Engineering Specification

**Title:**

The VT50 meets RS-232C standards. The card is a customer-installed option. The cable has 2 chips which convert to VT50 levels.

### Characteristics

- **Width of Cable:** 4 meters
- **Connector:** Connector is equivalent to the equivalent pin 2, 3, 4, 5, and 6.
- **Signal Transmit Positive:** 0V
- **Signal Transmit Negative:** -4.0V
- **Signal Receive Positive:** 2.5V
- **Signal Receive Negative:** 0V
- **Self-test:** The card is a customer-installed option.

### Table

<table>
<thead>
<tr>
<th>Pin</th>
<th>Connector P/n</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12-09378-03</td>
</tr>
<tr>
<td>2</td>
<td>12-09379-03</td>
</tr>
<tr>
<td>3</td>
<td>12-09340-00</td>
</tr>
<tr>
<td>4</td>
<td>12-09340-01</td>
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<tr>
<td>5</td>
<td>12-09340-02</td>
</tr>
<tr>
<td>6</td>
<td>12-09340-03</td>
</tr>
<tr>
<td>7</td>
<td>12-09340-04</td>
</tr>
<tr>
<td>8</td>
<td>12-09340-05</td>
</tr>
</tbody>
</table>

### Connectors

- **PROD:** For 20mA, the connector is equivalent to the equivalent pin 2, 3, 4, 5, and 6. The terminal pair is used.
- **VT50:** The terminal pair is used.

### Signals

- **Signal Transmit Positive**
- **Signal Transmit Negative**
- **Signal Receive Positive**
- **Signal Receive Negative**

### Transmission

- **Transmitter**
  - Transmit Positive: 0V
  - Transmit Negative: -4.0V
  - Receive Positive: 2.5V
  - Receive Negative: 0V

### Receiver

- **Receiver**
  - Passive, isolated
  - Negative: 0V
  - Positive: 4.0V

**Self-test** is achieved by jumpering 1-2, 3-4, 5-6, and putting the terminal in full duplex.
The EIA card is supported by two rows of straight pins which accept A/B/C/D connectors (AMP PIN 25-389950-0) or AMP cable (AMP PIN 25-389952-0 with contact 38000-G) for cable connection to system interfaces. The row of pins in only for card support. Signals available on the other row are:

**CHARACTERISTIC**

**DESCRIPTION**

PIN 1 - Signal name: +5V @ 250mA

PIN 2 - Signal name: -12V @ 150mA

PIN #3 - Signal name: +15V @ 250mA

PIN #4 - Gnd

PIN #5 - VTI received data

PIN #6 - VTI transmitted data

### 4.0 INITIALIZING

Powering up the unit causes the VTSO to initialize. The power ON/OFF switch on the right side of the VTSO is recommended for initialization.

Initialization causes the entire screen to be cleared and centered to the home position (upper left hand corner).

Initialization on some VTSO's may be achieved by holding the control key down, then pressing and releasing the break key. It is anticipated that this feature will be deleted at some later date as the initialize function is achieved by the power switch.

### 7.0 BREAK KEY

Pressing the break key forces the serial line to a space condition (zero current) for .15 to .40 seconds (.25 sec. nominal). This feature is provided for users with software written to operate in Half-Duplex.

**WARNING:** THE BREAK KEY FUNCTIONS EVEN IN LOCAL MODE!

---

**ENGINEERING SPECIFICATION CONTINUATION SHEET**

**TITLE:** VT50 ENGINEERING SPECIFICATION

**SHEET:**

**8.0 TV PICTURE QUALITY**

The character resolution shall not vary markedly across the screen nor shall there be excessive pin-cushion or excessive barrel distortion. That is acceptable shall be that which is acceptable to the untrained observer such as a clerk typist. The picture must be clear, easy to read and free of visual defects. Impair unreadability.

The horizontal centering shall be such that the distance of the left hand character on the sixth line from the left screen boundary is within 13" of the distance from the right most character on the ninth line to the right screen boundary.

The vertical centering shall be such that the distance of the top screen edge to the 40th character on line 1 shall be within 13mm of the distance of the bottom screen edge to the 40th character on the 12th line.

The screen image shall appear parallel to the table surface.
Upon removal from shipping container, inspect for physical damage, then make the following checks before connecting your VTS terminal to your system:

1) LOCAL MODE CHECK:

Set terminal, using a screwdriver or small nails, to "Local Mode" and "7020" baud as shown on label mounted to underside of terminal. Plug terminal into line, move the ON/OFF slide switch located on the right side of terminal to the ON position.

After a one minute warm-up period, a flashing cursor should appear on the screen. If nothing is seen or display is too bright, reach over and adjust the intensity control on the rear of the terminal at the top right hand corner. Control moves to the right for increased brightness.

Check for terminal to display characters as keys are depressed.

2) REMOTE MODE CHECK - FULL DUPLEX:

Set terminal for full-duplex operation, locate terminal strip, with screws numbered 1 through 6 on underside. Pull 1 and 2 together, then 3 and 4, and finally 5 and 6, like any wire for jumpers.

The terminal should now display characters as keys are depressed.

C) Press the "REPRINT" key and the "A" key; the latter should repeat as long as both keys are down.

4) ON-LINE ACCEPTANCE TEST:

Conduct VTS test to a DEC PDP-11 computer via a DEC-H/10 interface, local and run the VTS acceptance test program for at least one pass.

Massachusetts DIGITAL EQUIPMENT CORPORATION

ENGINEERING SPECIFICATION

TITLE

VT50 ACCEPTANCE TEST

DATE 12/31/74

REVISIONS

A ECO CHANGE

REV

DESCRIPTION

CHANGE

DATE

APRO BY

DATE

A

ECO CHANGE

REV

CHANGE

DATE

APRO BY

DATE

ENGINEERING SPECIFICATION

TITLE

VT50 ACCEPTANCE TEST

DATE 12/31/74

CONTINUATION SHEET

as follows:

Terminal

Character displayed on screen

VT10A

A

VT10B

B

VT10C

C

2) HALF-DUPLEX, ESCAPE AND CONTROL COLUMNS.

Accept keystrokes 1 and 2, and 3 and 4, then set Jumper from 1 to 4 on the terminal strip. Set terminal for test-duplex operation, then press the following keys and check for corresponding characters on screen.

Error Functions:

a. Type "i" character on all lines

b. With cursor on the bottom line, press "CTRL N" check for cursor to go to the leftmost position on that line.

c. Press "ESC N" check for cursor to go to the bottom line of the screen.

d. Press "ALT N" check for cursor to go to the top left of the screen.

e. Press "ESC J"; check for all characters on the screen to be erased.

 Morse Cursor Functions:

a. All VT10 Models

b. Press ESC "C" cursor should move to right, repeat until cursor is in the center of screen.

c. Press "CTRL N" cursor should move down one line.

d. Press "CTRL N" cursor should move up one line.

e. Press "CTRL N" cursor should move to the next TAB stop.

f. VTS10, VTS11 only (direct cursor addressing and numeric pad)

a. Press "F1" on numeric pad cursor should move to the home position on the screen (last character on 1st line).

b. Press "F2" on numeric pad cursor should move up one line on the screen.

c. Press "CTRL N" + "SPACE", the cursor should move to the bottom position on the screen.

d. Press "CTRL N" + "SPACE", the cursor should move to the 1st character position on the line (12th line) on the screen.

e. Press "CTRL N" + "SPACE", the cursor should move to the home position on the screen.

f. Repeat stops a thru e replacing the "CTRL N" with "ESC N".

Hold Screen Mode Functions:

a. Press "ESC C" hold screen mode

b. Press "ESC N" hold screen mode

c. Press "ALT N" hold screen mode

d. Type "VTSP" - check characters do not appear on the screen.

e. Press "ESC K" the message "VTSP" should now appear

f. Press "ESC S" - exit hold screen mode

g. Press "ESC K" - check for message to scroll up

Miscellaneous Functions:

a. Press "ALT C" check for cursor to ring

b. Press "ALT C" check for the characters to appear on the screen.

DIGITAL EQUIPMENT CORPORATION

MASSACHUSETTS

ENGINEERING SPECIFICATION

TITLE

VT50 ACCEPTANCE TEST

DATE 12/31/74

CONTINUATION SHEET

as follows:

Terminal

Character displayed on screen

VT10A

A

VT10B

B

VT10C

C

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DIGITAL EQUIPMENT CORPORATION

MASSACHUSETTS

ENGINEERING SPECIFICATION

TITLE

VT50 ACCEPTANCE TEST
ENGINEERING SPECIFICATION

TITLE VT50 Manufacturing Acceptance Specification

DURING SYSTEM TESTING—BEFORE SKELETON BURN-IN AND AFTER BURN-IN

2.2.3 Final Acceptance Test
Final Acceptance Testing is a communication test which tests the ability of a VT50 to communicate with VTSO. Testing will be performed by exercising the VT50 Acceptance Test Program.

3.0 VT50 Picture Quality
The VT50 picture quality shall be in conformance with this specification before being shipped.

Active Screen Size: Vertical 30mm ± 2mm
   Horizontal 220mm ± 2mm

± Character Size: Vertical 6mm ± 2mm
   Horizontal 2mm ± 2mm

Centering:
   Vertical ± difference of no greater than 2mm between the top and bottom margins of the vertical center of the screen (6th character).
   Horizontal ± difference of no greater than 2mm between the left and right margins of the horizontal center of the screen's sixth line.

* The vertical and horizontal margins are the non-displayed area
   in the CET between the 5th and Active Screen Size.

Character size dependent on the active screen size.
NOTES:

1. REWORK FROM PURCHASE SPEC.
   DWG. C-PS-1212127-0-0
2. CUT BLACK WIRE 35.1 MM FROM PIN 4
   CONNECTION AND STRIP INSULATION
   BACK 6.3 MM USE WIRE (ITEM 3) CUT
   INSULATION BACK 6.3 MM ON BOTH
   ENDS AND CONNECT ONE END OF EACH
   WIRE TO TERMINAL (ITEM 5) AS SHOWN.

SEE NOTE #2
FOR REWORK PROCEDURES
<table>
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<th>PART NO.</th>
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<tr>
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<td>00-11865-1</td>
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**SPECIFICATION**

- Change No.: 00
- Title: MONITOR POWER SUPPLY
- Date: 1977-06-01

**PARTS**

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<tr>
<td>B</td>
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<td></td>
<td></td>
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<tr>
<td>D</td>
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**NOTES**

- Change No.: 00
- Title: MONITOR POWER SUPPLY
- Date: 1977-06-01
NOT ON BOARD

**INSTALL WHEN USING 24V OR SHIPS**

**INSTALL WHEN USING 30v OR SHIPS**
<table>
<thead>
<tr>
<th>ECO NO.</th>
<th>ORIGINATOR</th>
<th>DATE WRITTEN</th>
<th>NEW CS REV</th>
<th>NEW STICK</th>
<th>REV</th>
<th>IT IS MANDATORY TO REMOVE ALL EARLIER VERSIONS NOW AVAILABLE ON REV.</th>
<th>ARE ALL REVISIONS OF THIS MODULE COMPLETELY COMPATIBLE WITH THIS LEVEL?</th>
<th>SIMPLIFIED CHANGE DESCRIPTION</th>
<th>NO. PARTS ADDED</th>
<th>NO. PARTS DELETED</th>
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<tbody>
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<td>0001</td>
<td>P RUCCI</td>
<td>1-27-75</td>
<td>E</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>12</td>
<td>11</td>
<td></td>
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<tr>
<td>0002</td>
<td>P RUCCI</td>
<td>3-6-75</td>
<td>O C</td>
<td>X</td>
<td>K</td>
<td>X</td>
<td>X</td>
<td>2</td>
<td>2</td>
<td></td>
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<td>0003</td>
<td>B WHITLEROY</td>
<td>3-30-75</td>
<td>E</td>
<td>-</td>
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<td>X</td>
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<tr>
<td>0004</td>
<td>B RUCCI</td>
<td>4-17-75</td>
<td>F</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>ADD TWO CAPS TO GANDEL ECO 4</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>L ZAFFI</td>
<td>5-6-75</td>
<td>F</td>
<td>-</td>
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<td>X</td>
<td>ADJUSTED STIPPLE TO LATEST ECO'S</td>
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<tr>
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<td>J DOHERON</td>
<td>4-16-75</td>
<td>H D</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>ADD VIF TO FOCUS PAT</td>
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<tr>
<td>0006</td>
<td>D DOHERON</td>
<td>3-28-75</td>
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<td>X</td>
<td>ADJUST VIF ON BD PLANS TO GANDEL ECO 4</td>
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<td></td>
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</tbody>
</table>

**PRODUCT LINE:** P

**DATE RELEASED:** 1-27-75

**RELEASED CS REV.:** P

**RELEASED ETCH BD REV.:**
### Title: VTSO Heat Spreader

#### Inspection Procedure Continuation Sheet

**1.0** Inspection by attributes.

**1.1** All other dimensions and/or characteristics pertaining to 7412849 that are not listed must be inspected on 20% of the sample size from each lot. All defects must be listed and inspected on the entire A.O.L. sample. Parts must conform completely to print.

**1.2** Applicable document DEC Metal Quality Manual.

**2.0** Characteristics Procedure

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Check position of 10 #8-32 inserts</td>
<td>Use fixture 94-02147-3</td>
</tr>
<tr>
<td>2.2 Check position of holes: Use fixture 94-02148-3 on surface &quot;a&quot;</td>
<td>Visual</td>
</tr>
<tr>
<td>2.3 Check for finish</td>
<td>Visual</td>
</tr>
<tr>
<td>2.4 Check for &quot;O&quot; hole for fastening</td>
<td>Vernier calipers</td>
</tr>
<tr>
<td>2.5 Material thickness</td>
<td>Visual</td>
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<tr>
<td>2.6 Workmanship</td>
<td>Visual</td>
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<tr>
<td>MOD No.</td>
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<tr>
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<td>HAMINSKY</td>
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<tr>
<td>M0003</td>
<td>BUZENSKY</td>
</tr>
<tr>
<td>M0004</td>
<td>DECHENSON</td>
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<td>BUZENSKY</td>
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<td>M0006</td>
<td>DECHENSON</td>
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</table>

**PRODUCT LINE:** 80
**DATE RELEASED:** 1-10-75
**RELEASED BY:** M. R. GRANSTEN

**SIMPLIFIED CHANGE DESCRIPTION**

1. REV. 2 NEW IS NOT COMPATIBLE
2. REMOVE 2 NEW IS NOT COMPATIBLE
3. VARIATIONS ON ELECTRICAL DESIGN FOR 4.550-0 Connectors
4. VARIATIONS ON ELECTRICAL DESIGN FOR 4.550-0 Connectors
5. NEW ETCH REV. 5 INTRODUCED INTO PORT 4.550-0 CONNECTORS
6. REMOVE 2 NEW
7. DELETE UNATTACHED CONNDT. ON CS SHEET 8.
<table>
<thead>
<tr>
<th>ECO NO.</th>
<th>ORIGINATOR</th>
<th>DATE WRITTEN</th>
<th>BC NEW CKS REV. BOARD REV.</th>
<th>IS IT MANDATORY TO BERRY IN THE FOLLOWING ORDER?</th>
<th>ARE ALL REVISIONS OF THIS MODULE IDENTICAL TO REV. A?</th>
<th>SIMPLIFIED CHANGE DESCRIPTION</th>
<th>NO. OF PARTS ADDED</th>
<th>NO. OF PARTS DELETED</th>
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<tbody>
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<td>VISITANDO</td>
<td>JAN. 24, 75</td>
<td>B G X</td>
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<td>X</td>
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## ECO History

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<th>ECO NO</th>
<th>ORIGINATOR</th>
<th>DATE WRITTEN</th>
<th>NEW CS REV.</th>
<th>NEW ETCH REV.</th>
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<th>ARE ALL REVISIONS OF THIS MODULE CONSIDERED COMPATIBLE? CAN BE MIXED INDECREMINATELY?</th>
<th>SIMPLIFIED CHANGE DESCRIPTION</th>
<th>NO. PARTS ADDED</th>
<th>NO. PARTS DELETED</th>
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<tbody>
<tr>
<td>0001</td>
<td>DICKENSON</td>
<td>FEB. 3, 75</td>
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<td>PT1-K</td>
<td>AC-E</td>
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<td>PT1-L</td>
<td>PT1-M</td>
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NOTE: KEYBOARD END OF CABLE IS SOLDERED CONNECTIONS.
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<th>DATE WRITTEN</th>
<th>NEW CS REV.</th>
<th>L/W ETCH REV.</th>
<th>IS IT MANDATORY TO REMOVE ALL EARLIER ECO'S?</th>
<th>ARE ALL REVISIONS OF THIS MODULE COMPLETELY COMPATIBLE BY REVISION LEVEL?</th>
<th>SIMPLIFIED CHANGE DESCRIPTION</th>
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<th>NO. PARTS DELETED</th>
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<td>REMOVED TO REMOVE LOCATION</td>
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<thead>
<tr>
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<td>0-CS-5410906-1</td>
<td>INPUT POWER SUPPLY</td>
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<td>0-CS-5410907-1</td>
<td>DATA PATHS, MEMORY AND DECODER</td>
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<td>DATA PATHS, MEMORY AND TIMING</td>
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<td>0-CS-5410909-1</td>
<td>PACKAGING INSTRUCTION: DATA PATH BOARD, POWER SUPPLY BOARD</td>
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<tr>
<td>0-CS-5410910-1</td>
<td>PACKAGING INSTRUCTION: POWER SUPPLY BOARD</td>
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<tr>
<td>0-CS-5410911-1</td>
<td>PACKAGING INSTRUCTION: TERMINAL BOARD</td>
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<tr>
<td>0-CS-5410912-1</td>
<td>CUSTOMER SHIPPING PACKAGE</td>
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<table>
<thead>
<tr>
<th><strong>TITLE</strong></th>
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<tbody>
<tr>
<td>HIGH SYST</td>
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</table>
DIGITAL EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

PACKAGING INSTRUCTION

TIT;E: DATA PATH BOARD, ROBjI/UART BOARD, POWER SUPPLY BOARD

PACKAGING INSTRUCTION

MATERIAL REQUIREMENTS

Quantity

Part No.

Description

1

990563

Regular Board

1

990577

Laminated Buildup

1

990594

Sheet with Foam

1

5410886

Data Supply Board (5410886)

A/R

991729

Note

2.00, with Cloth Tape

For additional support of each of the above packaged components, see the following Packaging Instructions:

Step

Procedure

1

Place the Regular Board (990563) using one strip of Cloth Tape across the bottom and one strip above the end.

2

Fold up edges of Sheet with Foam (990594) with foam facing up and place it in the cavity of the Laminated Buildup (990577). Make sure that the edges of the Foam match the creases in the bottom of the Laminated Buildup.

3

Place Power Supply Board (5410886) in the Sheet with Foam and Laminated Buildup assembly by folding the high voltage lead through the round hole in the Sheet and out into the Round Plate and out through the hole in the Round Plate. The foil layer is on the inside of the cavity.

4

Fold the top edge of the Laminated Buildup down over the Power Supply and fold the top panel between the Round Plate and the Round Plate, which is ground to the top panel.

5

Fold the bottom edge of the Laminated Buildup down and place the whole assembly into the Regular Board Cavity. Proceed the assembly so that the bottom edges are down and the striping line is toward the outside end of the Regular Board Cavity.

PACKAGING INSTRUCTION

TIT:E: DATA PATH BOARD, ROBjI/UART BOARD, POWER SUPPLY BOARD

PACKAGING INSTRUCTION

MATERIAL REQUIREMENTS

Quantity

Part No.

Description

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Procedure

1

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2

Fold up edges of Sheet with Foam (990594) with foam facing up and place it in the cavity of the Laminated Buildup (990577). Make sure that the edges of the Foam match the creases in the bottom of the Laminated Buildup.

3

Place Power Supply Board (5410886) in the Sheet with Foam and Laminated Buildup assembly by folding the high voltage lead through the round hole in the Sheet and out into the Round Plate and out through the hole in the Round Plate. The foil layer is on the inside of the cavity.

4

Fold the top edge of the Laminated Buildup down over the Power Supply and fold the top panel between the Round Plate and the Round Plate, which is ground to the top panel.

5

Fold the bottom edge of the Laminated Buildup down and place the whole assembly into the Regular Board Cavity. Proceed the assembly so that the bottom edges are down and the striping line is toward the outside end of the Regular Board Cavity.

PACKAGING INSTRUCTION

TIT;E: DATA PATH BOARD, ROBjI/UART BOARD, POWER SUPPLY BOARD

PACKAGING INSTRUCTION

MATERIAL REQUIREMENTS

Quantity

Part No.

Description

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Regular Board

1

990577

Laminated Buildup

1

990594

Sheet with Foam

1

5410886

Data Supply Board (5410886)

A/R

991729

Note

2.00, with Cloth Tape

For additional support of each of the above packaged components, see the following Packaging Instructions:

Step

Procedure

1

Place the Regular Board (990562) using one strip of Cloth Tape across the bottom and one strip above the end.

2

Fold up edges of Sheet with Foam (990594) with foam facing up and place it in the cavity of the Laminated Buildup (990577). Make sure that the edges of the Foam match the creases in the bottom of the Laminated Buildup.

3

Place Power Supply Board (5410886) in the Sheet with Foam and Laminated Buildup assembly by folding the high voltage lead through the round hole in the Sheet and out into the Round Plate and out through the hole in the Round Plate. The foil layer is on the inside of the cavity.

4

Fold the top edge of the Laminated Buildup down over the Power Supply and fold the top panel between the Round Plate and the Round Plate, which is ground to the top panel.

5

Fold the bottom edge of the Laminated Buildup down and place the whole assembly into the Regular Board Cavity. Proceed the assembly so that the bottom edges are down and the striping line is toward the outside end of the Regular Board Cavity.
### Packaging Instructions

**Title**: DAB PATH (S410906) and ROM/UART (S410902) SHIPPING PACKAGE

**Digital Equipment Corporation**
**Maynard, Massachusetts**

**Revision**: __

#### Material Requirements

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<th>Quantity</th>
<th>Purchase Specification No.</th>
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<tbody>
<tr>
<td>1</td>
<td>9905640</td>
<td>Die-Cut Carton with Foam</td>
</tr>
<tr>
<td>1</td>
<td>9905841</td>
<td>Sound Sheet</td>
</tr>
<tr>
<td>1</td>
<td>9905729</td>
<td>Glue Tape</td>
</tr>
</tbody>
</table>

#### Packaging Instructions

**Step 1**: Open the two top flaps on the Die-Cut Carton with Foam (PN 9905640) which has been supplied wrapped.

**Step 2**: Place one STENCIL Board (PN 9905729) component face down onto the section of the Die-Cut Carton with the three pieces of Foam on the top. Place the board into the carton with the pins facing toward the middle divider. The pins to secure the slots provided in the middle divider.

**Step 3**: Place one Data Pack Board (PN 9905841) component face down on the secured stencils.

**Step 4**: Close the Die-Cut Carton and open across the top with one strip of Foam tape.

**Step 5**: Place the Die-Cut Carton assembly face down onto the Sound Sheet (PN 9905640). Fold up each end of the Die-Cut Carton and add one strip of tape across the middle and one strip across each end.

---

**Sheet 1 of 1**
**PACKAGING INSTRUCTION**

**TITLE:** Power Supply Board (644088) Shipping Package

<table>
<thead>
<tr>
<th>Step</th>
<th>Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Set up Regular Slotted Carton (PN0170) using one strip of Chux tape across the bottom and one strip across each end.</td>
</tr>
<tr>
<td>2</td>
<td>Fold up edges of the Scored Sheet with Foam (9905679) with Scored Sheet up and down it into the cavity of the Laminated Build-up (990497). Make sure that the seams in the Foam match the chink in the bottom of the Laminated Build-up.</td>
</tr>
<tr>
<td>3</td>
<td>Place the Power Supply Board (PN0170) in the Scored Sheet and Laminated Build-up assembly by threading the high tension hose through the scored hole in the Scored Sheet and into the scored hole in the Foam. Pull the Power Supply Board down into the cavity. Do not bend the hose.</td>
</tr>
<tr>
<td>4</td>
<td>Fold the top flap of the Laminated Build-up down the Power Supply Board and feed the hose through the scored hole in the top flap.</td>
</tr>
<tr>
<td>5</td>
<td>Fold the three bottom flaps of the Laminated Build-up down and place the entire assembly into the top Regular Slotted Carton.</td>
</tr>
<tr>
<td>6</td>
<td>Close and seal the Regular Slotted Carton using one strip of Chux tape across the middle and one strip across each end.</td>
</tr>
</tbody>
</table>

**NOTE:** Any errors in the above document will be corrected.
DIGITAL EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

PACKAGING INSTRUCTION

TITLE: KEYBOARD (5410893) CUSTOMER SHIPPING PACKAGE

MATERIAL REQUIREMENTS

<table>
<thead>
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<th>Quantity</th>
<th>Part No.</th>
<th>Description</th>
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<td>1</td>
<td>9905729</td>
<td>Die-Cut Sheet with Foam</td>
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<tr>
<td>1</td>
<td>9905729</td>
<td>Regular Shipping Canister</td>
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<tr>
<td>1</td>
<td>9905729</td>
<td>Jute with Cello Tape</td>
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</table>

PACKAGING INSTRUCTIONS

1. Place keyboard on Die-Cut Sheet with Foam (9905729) with spacers in the "Spacer Bar Area" perforations on the Die-Cut Sheet.
2. Fold the top sheet down and over the keyboard so that the spacers are facing up through the openings in the sheet.
3. Fold the top sheet down and over the keyboard so that the spacers are facing up through the openings in the sheet.
4. Fold the top sheet down and over the keyboard so that the spacers are facing up through the openings in the sheet.
5. Set up regular shipping canister and tape with one strip of Cello Tape across the middle and one strip across each end.
6. Place the Die-Cut Sheet with Foam and keyboard assembly into the regular shipping canister with the spacers facing up.
7. Close end cap with one strip of Cello Tape across the middle and one strip across each end.
<table>
<thead>
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<th>NO.</th>
<th>DWG NO.</th>
<th>PART NO.</th>
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<tr>
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<td>( \text{VT50, VT51 Terminal Unис. with} )</td>
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<td>2</td>
<td>7011069</td>
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<td>( \text{VT50, VT51 Terminal Assembly: with} )</td>
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<tr>
<td>3</td>
<td>DEC-EP-JYTA-A-B</td>
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<td>( \text{VT50, VT51 Terminal Program} )</td>
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<tr>
<td>4</td>
<td>VT50-771</td>
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<td>( \text{VT50, VT51 Terminal Test Kit} )</td>
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</tbody>
</table>

**NOTE:**
- Insure that this cable is shipped with terminal, usually installed by manufacturer. If cable is not installed from manufacturer, insure parts required to create cable in field are shipped and add 1-7011069-0-0 cable part to contents of the shipping container.
- VT50 shipped, terminal usually contains a manual when shipped from manufacturer.
- VT50 Test Kit 1, VT50 Installation Guide, UNT: 1 per.
PART NO. | DIM A | MAT'L | FINISH | USE CD ON
---|---|---|---|---
-1 | 96.0 | 1010/8050 BK LEXAN WITH 3M #5468 STICK BACK TAPE | 92-000001-47 EXP. ABS. |
-2 | 101.0 | 1010/8050 BK LEXAN WITH 3M #5033 STICK BACK TAPE | 92-00151-47 INJ. MLD |

NOTES:
1. SILK SCREEN "DIGITAL DESKTOP" LOGO "EB GRY 2. MARK UP AFTER SCREENING " ONLY.
3. APPLY NEW POLARIC FINISH ON 2.
4. APPLY 3M TAPE "ALCO ON ENTIRE SURFACE FOR SIZE."

PART 1
DIM. 'A'
MAT'L FINISH USED ON

EXP.

92-000001-47

LEXAN WITH 3M #468 STICK BACK TAPE

92-00151-47

INJ. MLD

EB GRY

MARK UP AFTER SCREENING " ONLY.

POLARIC FINISH ON 2.

3M TAPE "ALCO ON ENTIRE SURFACE FOR SIZE."
NOTES:

1. MAKE FROM PURCHASE SPEC A-PB-910752-0-0

SHIELDING, BRAIDED

METRIC DIMENSIONS

DEPT NO.

1.186 DIAMETER

ZGC.7

ZGC.7

GRIP REACTION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS

ANGLES CLASS OF

NORMAL DIMENSIONS RANGE PREFERENCES

SURFACE QUALITY:

MEDIUM

TOLERANCE:

FREEDON

DEFLECTED

QTY.

10.6

10.5

10.4

10.3

10.2

GASS

10.1

0.6

0.5

0.4

0.3

0.2

STRAP, BRAIDED

SCALE

DIGITAL

NEXT HIGHER ASSY.

FULL SCALE

REV

SEE PARTS LIST

Sheet 1 of 4