Bias Current Interface Simulator

# Operation and Service Manual

Second Edition

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# Notices

The information contained in this document is subject to change without notice.



Agilent Technologies Japan, Ltd.

Component Test PGU-Kobe

1-3-2, Murotani, Nishi-Ku, Kobe-shi, Hyogo, 651-2241 Japan



# Manual Printing History

The manual's printing date and part number indicate its current edition. The printing date changes when a new edition is printed. (Minor corrections and updates that are incorporated at reprint do not cause the date to change.) The manual part number changes when extensive technical changes are incorporated.

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## HOW TO USE THIS MANUAL

Section 1 of this manual gives the Bias Current Interface Simulator's general information. Section 2 gives the simulator operation. Section 3 gives the simulator's service information.

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# SECTION 1

## GENERAL INFORMATION

The Bias Current Interface Simulator is designed to evaluate the operation of the bias current interface. The Bias Current Simulator can be used to isolate interface problems between the bias current interface and the bias current source, by replacing the bias current source. Figure 1 shows the bias current simulator. Table 1 lists its specifications.

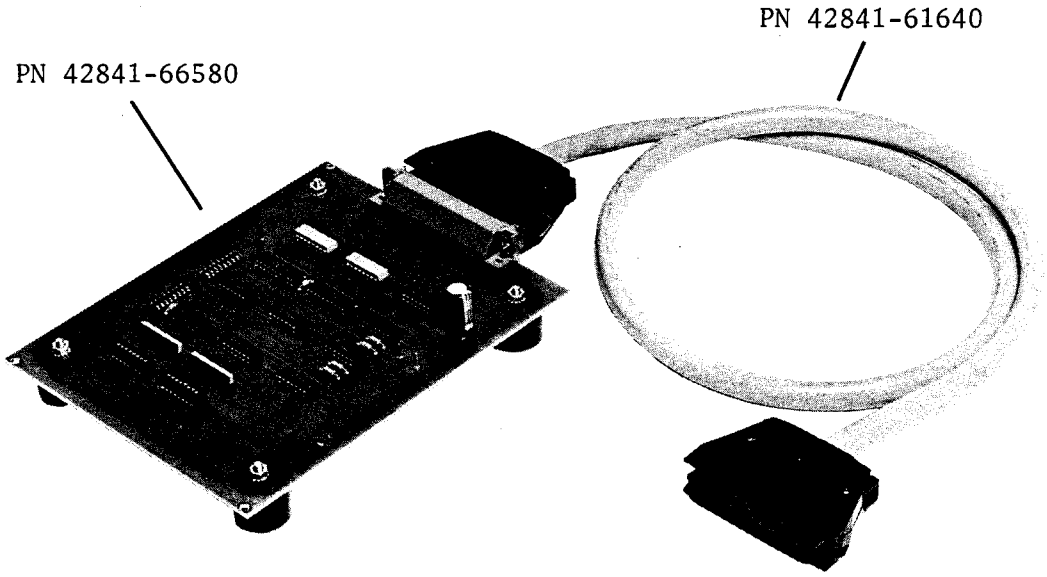


Figure 1. Bias Current Interface Simulator

Table 1. Specifications

| | |
|---|---|
| **REQUIRED POWER SUPPLY:** | +5 V DC |
| **INPUT SIGNAL:** | /CS0, /CS1, ADRS1 to ADRS6, DO0 to DO7 |
| | All the input signals are monitored by LEDs on the simulator. |
| **OUTPUT SIGNAL:** | DI0 to DI15 |
| | All the output signals can be changed by switches on the simulator. |
| **OPERATING ENVIRONMENT:** | |
| **Temperature:** | 0 °C to 55 °C |
| **Humidity:** | up to 95% (at 40 °C) |
| **STORAGE ENVIRONMENT:** | |
| **Temperature:** | -20 °C to 60 °C |
| **Humidity:** | up to 95% (at 40 °C) |
| **SIMULATOR BOARD DIMENSION:** | 158 mm (W) × 42 mm (H) × 210 mm (D) |
| **WEIGHT:** | |
| **Simulator Board:** | Approximately 0.23 kg (0.50 lb.) |
| **Interface Cable:** | Approximately 0.33 kg (0.72 lb.) |

## SECTION 2

## OPERATION

The Bias Current Interface Function Test enables bias current interface troubleshooting. How to perform the test is described in the Performance Test Section of each instrument's Operation Manual. The Bias Current Interface Simulator is necessary to perform the test.

## SECTION 3

## SERVICE

Figure 2 shows the simulator's component locations, Figure 3 shows the simulator's schematic diagram, and Table 3 lists the replaceable parts which can be ordered from your nearest Hewlett-Packard Service Office. Ordering information should include the HP Part Number and the quantity required.

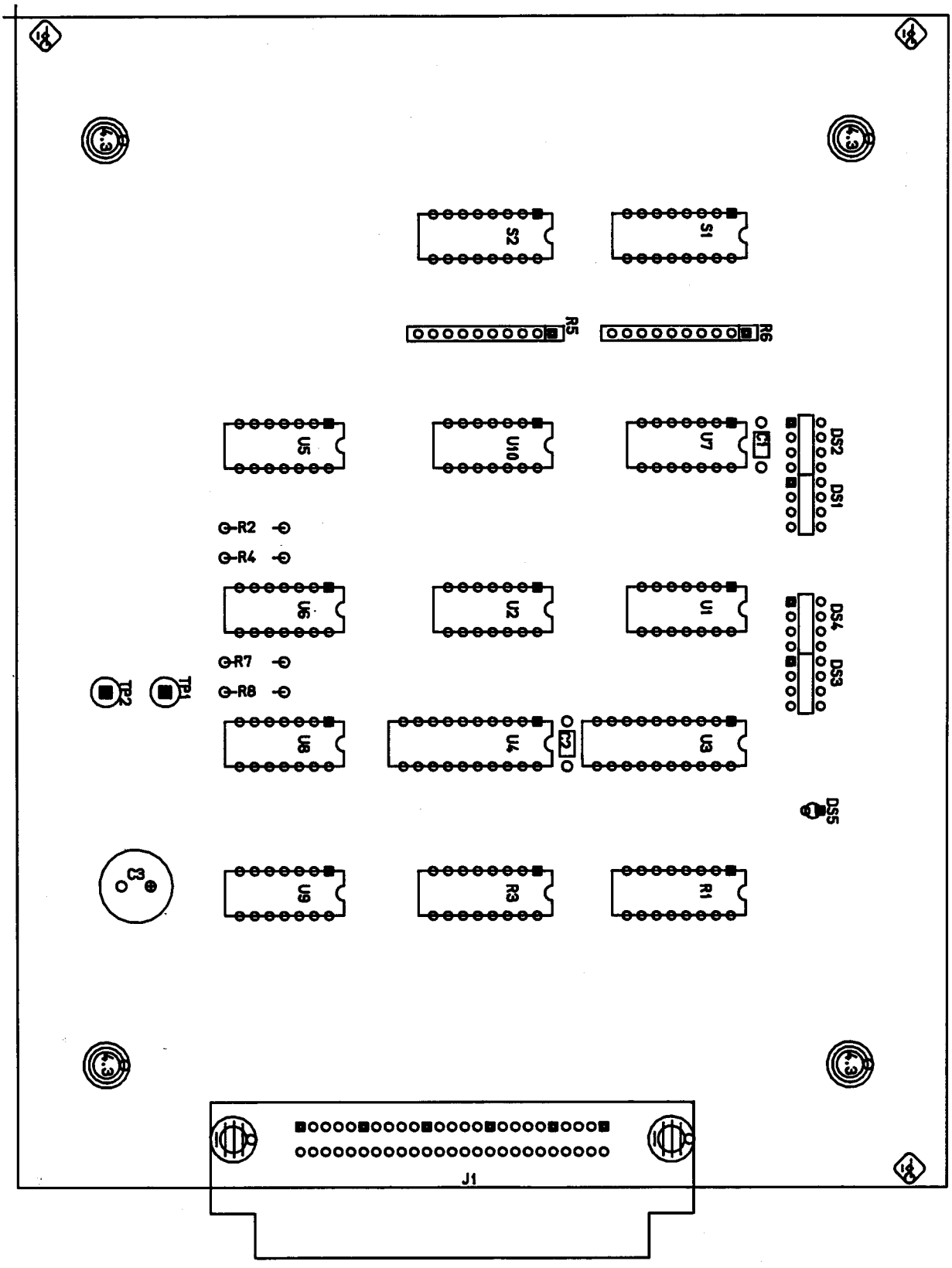


Figure 2. Component Locations

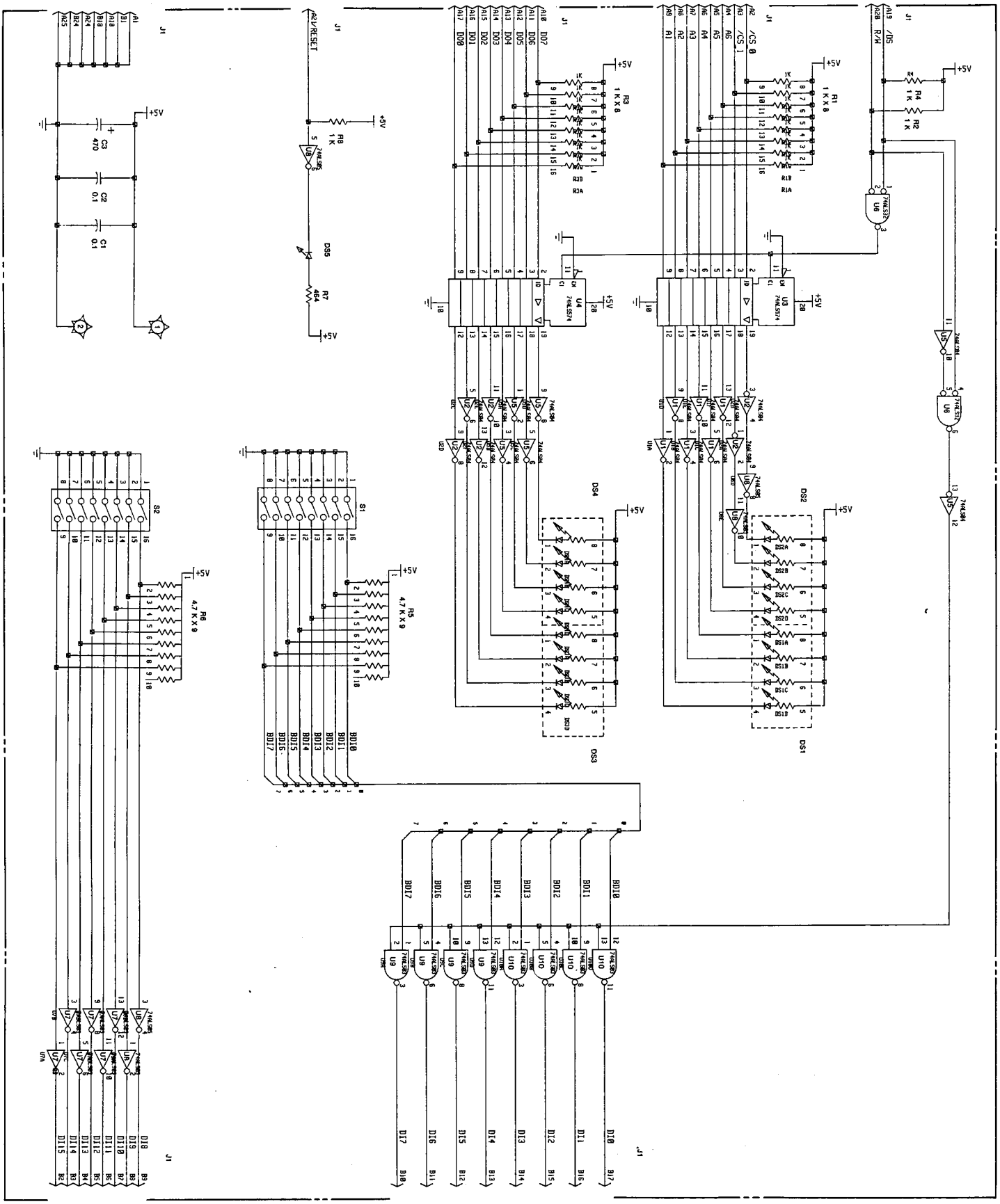

Figure 3. Schematic Diagram

Table 2. Replaceable Parts

| Reference Designation | HP Part Number | Qty. | Description |
|---|---|---|---|
| | 42841-66580 | 1 | BIAS IF SIMULATOR BOARD |
| C1 | 0160-6561 | 2 | CAPACITOR FXD. .1µF 50V |
| C2 | 0160-6561 | | CAPACITOR FXD. .1µF 50V |
| C3 | 0180-3471 | 1 | CAPACITOR FXD. 470µF 25V AL |
| DS1 | 1990-0652 | 4 | LED-LMP ARY |
| DS2 | 1990-0652 | | LED-LMP ARY |
| DS3 | 1990-0652 | | LED-LMP ARY |
| DS4 | 1990-0652 | | LED-LMP ARY |
| DS5 | 1990-0486 | 1 | LED-VSBL (RED) |
| J1 | 1252-2023 | 1 | CONN 50-PIN FEMALE |
| R1 | 1810-0037 | 2 | RES-NETWORK DIP 1K |
| R2 | 0757-0280 | 3 | RES 1K 1% |
| R3 | 1810-0037 | | RES-NETWORK DIP 1K |
| R4 | 0757-0280 | | RES 1K 1% |
| R5 | 1810-0279 | 2 | RES-NETWORK SIP 4.7K |
| R6 | 1810-0279 | | RES-NETWORK SIP 4.7K |
| R7 | 0698-0082 | 1 | RES 464 1 % |
| R8 | 0757-0280 | | RES 1K 1% |
| S1 | 3101-2831 | 2 | SW-DIP 8-1A SL |
| S2 | 3101-2831 | | SW-DIP 8-1A SL |
| TP1 | 0360-1653 | 2 | TERM-SGL-PIN |
| TP2 | 0360-1653 | | TERM-SGL-PIN |
| U1 | 1820-2634 | 3 | IC SN74ALS04N |
| U2 | 1820-2634 | | IC SN74ALS04N |
| U3 | 1820-2757 | 2 | IC SN74ALS574 |
| U4 | 1820-2757 | | IC SN74ALS574 |
| U5 | 1820-2634 | | IC SN74ALS04N |
| U6 | 1820-2657 | 1 | IC SN74ALS32N |
| U7 | 1820-3376 | 2 | IC SN74ALS05AN |
| U8 | 1820-3376 | | IC SN74ALS05AN |
| U9 | 1820-3270 | 2 | IC SN74ALS03AN |
| U10 | 1820-3270 | | IC SN74ALS03AN |
| | 0403-0004 | 4 | BUMPER FOOT-SCREW |
| | 2190-0586 | 4 | WASHER |
| | 0535-0043 | 4 | NUT |
| | 0515-0983 | 4 | SCREW M4 |

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Agilent Technologies
24/F, Cityplaza One, 1111 King's Road,
Taikoo Shing, Hong Kong
(tel) (852)-3197-7777
(fax) (852)-2506-9284

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