

8116A-06A

S E R V I C E N O T E

SUPERSEDES 8116A-06

HP 8116A Pulse/Function Generator 50 MHz

Serial Numbers: 0000A00000/3134G11545

Recommended Replacement (P/N 1DD6-0002) of A1 U300 Timing IC Requires Modifications

To Be Performed By: HP-Qualified Personnel

Parts Required:

HP P/N 1DD6-0002, Rate IC
 HP P/N 0698-3438, R-FXD 147 1%
 HP P/N 0160-3875, C-FXD 22 PF

Additional parts for serial numbers 0000G00000 to 2334G03220 and 0000A00000 to 2334A00324:

HP P/N 0160-0575, C-FXD 0.047 UF, Qty 2
 HP P/N 0698-3441, R-FXD 215 1%
 HP P/N 0698-3160, R-FXD 31.6 k 1%
 HP P/N 1901-1068, Schottky Diode, Qty 2

Continued

DATE: 05 October 1992

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:		
MODIFICATION AVAILABLE		
ACTION CATEGORY:	AGREEABLE TIME	<input type="checkbox"/> PERFORMANCE ENHANCEMENT <input checked="" type="checkbox"/> SERVICE/RELIABILITY ENHANCEMENT
LOCATION CATEGORY:	<input type="checkbox"/> CUSTOMER INSTALLABLE <input type="checkbox"/> ON-SITE <input checked="" type="checkbox"/> HP LOCATION	AVAILABLE UNTIL: October 1993
AUTHOR: PW	ENTITY: B100	ADDITIONAL INFORMATION:

Situation:

The replacement part for Timing IC A1 U300, Width Generator, requires modification of the -5.2 V power supply. The new Timing IC needs -5.4 V power supply, so that the Timing IC operates at ambient temperatures 10 deg celcius.

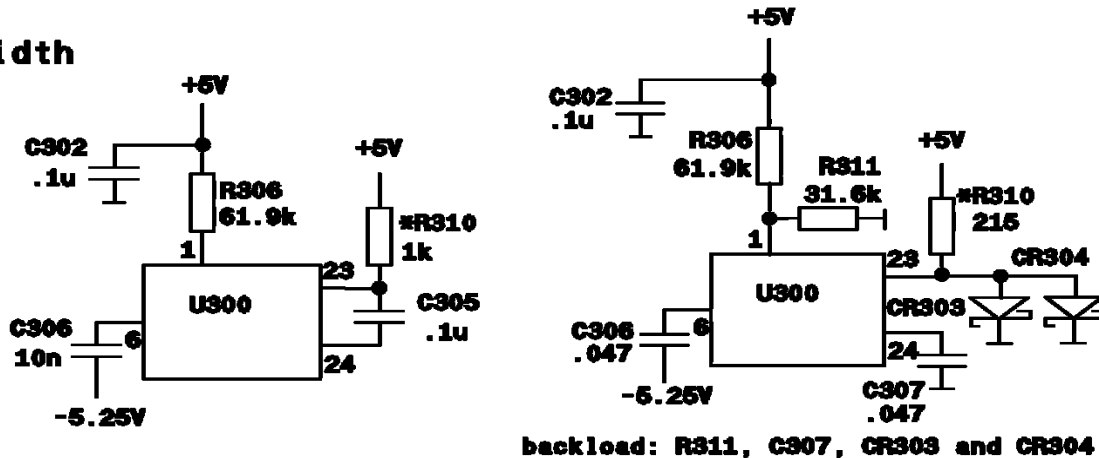
Solution/Action:**Caution:**

Boards are sensitive to electrostatic discharge (ESD). Please use standard ESD precautions whenever the unit's cover is removed!

Instruments with serial number 0000G00000 to 2334G03220 and instruments with serial number 0000A00000 to 2334A00324

P/N 5180-2410 is used for A1 U300. When replaced by 1DD6-0002 the following modification steps have to be performed:

- 1) Delete A1 C305.
- 2) Replace A1 C306 with 0160-0575 C-FXD 0.047 uF.
- 3) Replace A1 R310 with 0698-3441 R-FXD 215 ohms.
- 4) Backloading:
 - a) Connect A1 C307, 0160-0575 C-FXD 0.047 uF, from U300 pin 24 to ground (GND).
 - b) Connect A1 CR303 and CR304, 1901-1068 Schottky diode, from U300 pin 23 to GND (cathodes connected to GND!)
 - c) Connect A1 R311, 0698-3160 R-FXD 31.6 kohms, from U300 pin 1 to GND.
- 5) In series to A1 R15, 5.2 kohms resistor, a 0698-3438 R-FXD 147 ohms resistor has to be mounted. Into the two holes of A1 R15 the two in series connected resistors (R15 and the 147 ohms resistor) have to be soldered.
- 6) Replace A1 C300 with 0160-3875 C-FXD 22 pF.
- 7) Delete A3 W1 Jumper.

5180-2410**1DD6-0002****Width**

Instruments with serial number 2334G03221 to 3134G11545 and instruments with serial number 2334A00325 to 2816Axxxxx

P/N 1826-0984 is used for A1 U300. When replaced by 1DD6-0002 the following modification steps have to be performed:

- 1) In series to A1 R15, 5.2 kohms resistor, a 0698-3438 R-FXD 147 ohms resistor has to be mounted. Into the two holes of A1 R15 the two in series connected resistors (R15 and the 147 ohms resistor) have to be soldered.
- 2) Replace A1 C300 with 0160-3875 C-FXD 22 pF.

Adjust A1 R12 to achieve -5.4 V +/- 10 mV. Check the +5 V power supply for 5.05 V +/- 50 mV. Re-adjust A1 R12 to get the best compromise for both supply voltages. Finally perform width adjustment and a complete performance test.