

1. INTRODUCTION

2. The HP Model 8447C Amplifier is a general purpose, wideband amplifier that provides 30 dB gain to signals from 30 to 300 MHz. It can be used to make up resistive probe losses or to improve sensitivity when used as a preamplifier for a spectrum analyzer or oscilloscope. It can also be used as a power amplifier for a signal generator.

3. OPTIONS

4. The HP Model 8447C Amplifier, Option 002, offers 75 ohm input and output impedances. In all other respects it is identical to the 8447C.

5. INSTRUMENTS COVERED BY MANUAL

6. Each Model 8447C carries a two-section serial number. The first section of the number is a prefix. The contents of this Manual apply directly to Amplifiers which have the same serial number prefix as listed after "Serials Prefixed" on the title page.

7. Revisions required to adapt this Manual to other serial number prefixes are contained in a yellow "Manual Changes" insert supplied with the Manual. For information about serial number prefixes not listed on the title page or in the insert, contact the nearest Hewlett-Packard office.

8. INITIAL INSPECTION

9. Mechanical Check

10. If damage to the shipping carton is evident, ask the carrier's agent to be present when the instrument is unpacked. Inspect the instrument for mechanical damage. Also check the cushioning material for signs of severe stress.

11. Performance Check

12. The electrical performance of the Model 8447C or Model 8447C-002 should be verified upon receipt. Performance checks suitable for incoming inspection are given in paragraphs 48 through 52.

13. Claims for Damage

14. If the instrument is mechanically damaged in transit, notify the carrier and the nearest Hewlett-Packard field office immediately. A list of field offices is contained in the back of this Manual. Retain the shipping carton and padding material for the carrier's inspection. The field office will arrange for replacement or repair of your instrument without delay for claim settlements against

Table 1. Specifications

Frequency Range: 30 to 300 MHz
Gain: 30 dB \pm 1 dB (midband)
Gain Flatness: \pm 1 dB
Noise Figure: <11 dB
Output Level: >+17 dBm at 1 dB compression point
Distortion: Harmonics at least 35 dB down at output levels up to +10 dBm
Impedance: 50 Ω both ports or 75 Ω both ports (VSWR <2.0)
Reverse Isolation: >35 dB
Power Requirements: 115 or 230 Vac \pm 10%, 48 to 440 Hz, 15 Watts, 27 VA max.
Weight: Net, 3 lbs., 11 oz. (1,67 kg)
Dimensions: 8-1/2 inches (216 mm) by 5-1/8 inches (130 mm) by 3-3/8 inches (85,8 mm)

the carrier. Before shipment, this instrument was inspected and found free of mechanical and electrical defects. If there is any deficiency, or if electrical performance is not within specifications, notify your nearest Hewlett-Packard sales and service office.

15. PREPARATION FOR USE

16. Power Requirements

17. The Model 8447C or Model 8447C-002 operates from 115 or 230 volts ac line voltage at any line frequency between 48 and 440 Hz. A slide switch on the rear panel is set to the correct position for the line voltage available. A 0.5 ampere line fuse is required for either 115 or 230 volt operation.

18. Power Cable

19. To protect operating personnel, the National Electrical Manufacturer's Association (NEMA) recommends that the instrument panel and cabinet be grounded. All Hewlett-Packard instruments are equipped with a three-conductor power cable which, when plugged into the appropriate receptacle, grounds the instrument. The offset pin on the power cable's three-prong connector is the ground wire.

20. To preserve the protection feature when operating the instrument from a two-conductor outlet, use a three-prong to two-prong adapter and connect the green pigtail on the adapter to ground.

21. The power cord or power input connector meet the specifications established by the International Electrotechnical Commission (IEC).