## SECTION V <br> NOISE SOURCE MODEL 349A



Figure 5-1. Model 349A Noise Source

## 5-1. INTRODUCTION.

Like other noise sources, the 349A is designed to operate from the internal power of the Models 340A/B or 342A Noise Figure Meters. The j Model 349A is connected to a - noise figure meter and the source current adjusted using the controls and meter provided on the noise figure meter. The source is then ready for operation.

## 5-2. GENERAL OPERATING INFORMATION.

## CAUTION

Due to a capacitive effect between plasma and helix, a high voltage pulse appears at both the NOISE OUT and

TERMINATION connectors. This pulse occurs during the noise tube ignition interval. The energy from the pulse may damage fragile devices, such as parametric amplifiers or transistors. To protect equipment from these pulses, a suitable high-pass filter should be utilized.
The Model 349A Noise Source is designed for use with the be Models 340A/B and 342A Noise Figure Meters. The noise source provides a known excess noise power throughout its spectrum. The output of the noise source is fed to the device under test and

Table 5-1. Specifications

```
FREQUENCY RANGE:
400 to 4000 Mc, wider range with correction
EXCESS NOISE
15. 7 0.5 db; 1000 to 4000 Mc
15. }60.6 db; 400 to 1000 M
NOISE GENERATOR:
Argon discharge tube
RECOMMENDED OPERATING CURRENT: }150\mathrm{ n
SWR: Fired Unfired
Up to 2600 Mc: less than 1.35 less than 1.
2600 to 3000 Mc: less than 1.5 less than I
3000 to 4000 Mc: less than 2.0 less than 3.
Source terminated ina coaxial load with less thi
1.05 SWR
INPUT POWER:
Supplied by V Models 340A'B or 342A Noise Figure
```

```
Meters
MAXIMUM RF INPUT
Voltage: 225 volts peak
Power: }1000\mathrm{ wafts peak, . }5\mathrm{ watts average
NET WEIGHT:
Approximately 3-1/4 lb (1, 5 kg)
SIZE:
15 inches ( }381\textrm{mm}\mathrm{ ) long, 3 inches (76 mm) wide,
2 inches (51 mm) high
NOISE OUT and TERMINATION Connectors:
Type N, terminate one end with a 50-ohm low-
reflection coaxial load except it feed-through5-1
applications
ACCESSORIES AVAILABLE:
908A Coaxial Termination, 50 ohms
```

