

S3477A SOI Noise Amplifier

The **S3447A Noise Amplifier** is specifically designed for high performance /high accuracy SOI device (packaged or wafer) flicker noise measurements. The noise amplifier can be used in conjunction with Silvaco's **UTMOST III™** automatic parameter extraction software or stand alone for manual and interactive flicker noise measurements.

The advanced design of the **S3447A** amplifier meets the requirements for low amplitude noise measurements typically found in SOI devices by providing constant gain for frequencies up to 300kHz. The **S3447A** noise amplification system allows users to provide automatic DC biasing for noise measurements.

SPECIFICATIONS

AMPLIFIER

<i>Amplifier Type:</i>	Non-Inverting Voltage Amplifier.
<i>Amplifier Gain:</i>	121
<i>Amplifier Bandwidth:</i>	300 kHz
<i>Amplifier Noise Floor:</i>	-128 dB (V)
<i>Frequency Range:</i>	0.25 Hz - 1 MHz.
<i>Load Resistance</i>	11 kW

DUT

<i>DUT Type:</i>	N-channel or P-channel transistors. (wafer or packaged)
<i>Recommended Current range:</i>	+/- 10µA to +/- 10mA.
<i>Voltage range:</i>	+/- 50V max.
<i>Output impedance matching:</i>	100W to 1MW
<i>Input impedance matching:</i>	0 to 100MW

FRONT PANEL

<i>Output to DUT:</i>	5 BNC connectors for Drain, Gate, Source, Backgate and Bulk terminals.
<i>Input to Amplifier:</i>	5 Triax connectors for DC Analyzer SMUs.
<i>Indicator:</i>	Power.

POWER (50-60 Hz)

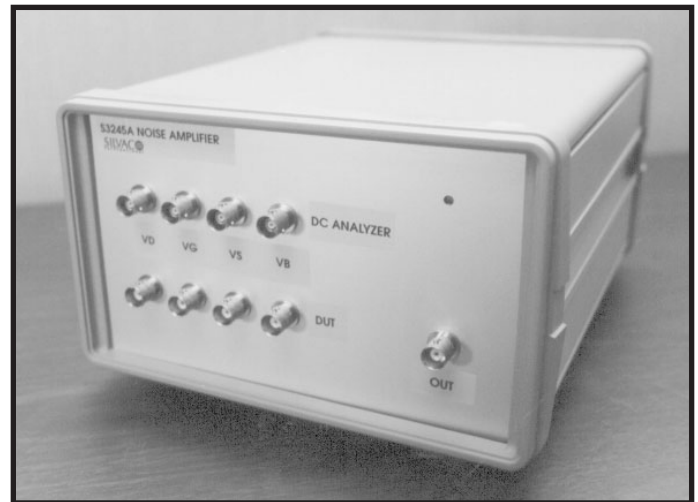
110-120 +/- 10% VAC or
220-240 +/- 10% VAC

PHYSICAL

<i>Dimensions (WxHxD):</i>	8"x 4.75"x 9.75" (20.5cm. x 12 cm. x 25 cm.)
<i>Weight:</i>	7.5 lb (3.4 kg)

OPERATING ENVIRONMENT

<i>Temperature:</i>	0° C to 125° C
<i>Humidity:</i>	10% to 90% noncondensing.



SYSTEM REQUIREMENTS

<i>DC Analyzer:</i>	HP4141, HP4142, HP4145, HP4155/56.
<i>Dynamic Signal Analyzer:</i>	HP3561, HP3562, HP35660, HP35665, HP35670
<i>Computer Hardware:</i>	Sun Sparc, IBM or HP 32 MB memory. 60 MB harddisk space.
<i>Software:</i>	UTMOST version 15.2.0 or later with Noise Module.
<i>GPIB Interface:</i>	National Instruments GPIB-232CT-A Serial to GPIB converter Box, or GPIB direct interface with HP 700 series computers. (The GPIB converter box is required only for the DC Analyzer and the DSA.)
<i>Cables:</i>	6 BNC cables, 5 Triax cables.

UTMOST III is a trademark of Silvaco International.

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