

**Microwave Test Station
for GL139 Style HVPS**

APPROVALS			REVISIONS			
	INITIALS	DATE	REV	DESCRIPTION	DATE	APPR
Drawn	JFG	01APR03	3	Updates for new enclosure	02DEC03	JFG
Engineering						
Manufacturing						
Marketing						

1.0 General Description

The Microwave Test Station (MTS) described in this document is designed for field use in diagnostic evaluation of high voltage power supplies (HVPS) in the GL139 family of microwave equipment manufactured by GAE, ASTeX and ASTeX/Gerling Laboratories, Inc. Specific models covered include:

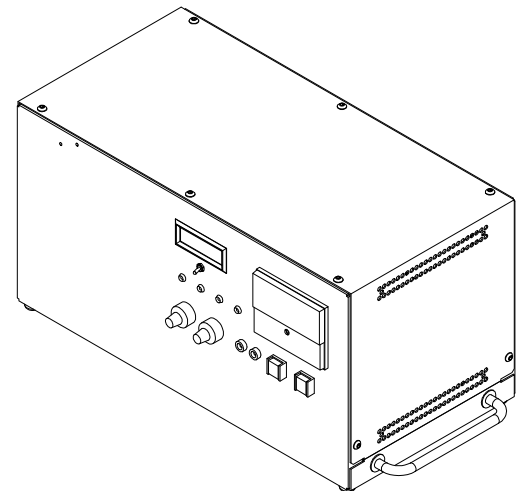
<u>GAE p/n</u>	<u>ASTeX/AGL p/n</u>	<u>Novellus/GaSonics p/n</u>	<u>System use on</u>
911496	OEM-C12932-2-A	61-0052	A-3010
911665	OEM-D13765	61-2332	Iridia

The MTS enables the field service technician to perform a functional evaluation of the HVPS to:

- determine if a failure has occurred, and
- identify the primary causes(s) of failure to assist with dispositioning the unit for repair.

Included inside the MTS are a magnetron and waveguide dummy load which allow service technicians to operate the HVPS under full load conditions according to original factory specifications. The necessary functional controls for operating the HVPS are provided as well as various indicators for display of operational status and diagnostic information. Electrical power required for operation of the MTS is provided by the HVPS. All electrical cables necessary for connecting the MTS to the HVPS are also included.

NOTE: The MTS is designed for use in failure diagnostics and basic adjustments only and is not intended for final calibration purposes. Final calibration of the HVPS should be done only after installation in the semiconductor fab tool according to instructions outlined in the user manual provided by the equipment manufacturer.

**2.0 Reference Documents**

<u>Title</u>	<u>Document Number</u>
Product User Manual	930032

3.0 General Specifications**3.1 Electrical**

Operating Frequency	2450 MHz +/- 50 MHz
Magnetron	Water-cooled Hitachi 2M130
Microwave Power	1.8 kW nominal (continuous)

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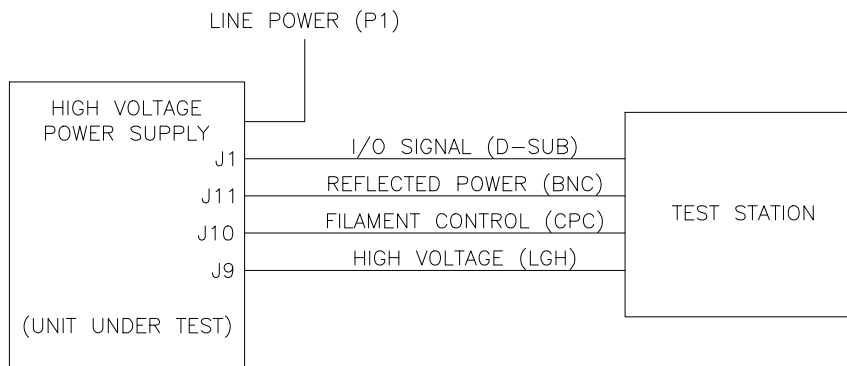
Interlocks	Magnetron over-temperature; Access cover; Waveguide flange; Water flow
Controls	Microwave start: Pushbutton switch Microwave stop: Pushbutton switch Microwave power adjust: 10-turn dial Reflected power adjust: 10-turn dial
Indicators	Line Power: LED (amber) System Ready: LED (amber) RF Generator On: LED (amber) RF Generator Full Power: LED (amber) Forward/Reflected Power Sense: Digital panel meter Microwave Power: Analog panel meter Filament Voltage Reference: twin banana jacks

3.2 Mechanical

Electrical Connections	High voltage: 4-conductor male LGH style Control I/O: 25-conductor male D-sub Filament power: 9-conductor female CPC Reflected power input: male BNC Grounding stud: ¼-20 UNC
Cooling Requirement	Water: 0.5 gpm min., 95 °F (35 °C) max. inlet temp (dew point min. inlet temp), 70 psig max. inlet pressure
Water Connections	3/8" Swagelok® tube fittings, stainless steel
Construction	Stainless steel enclosure

3.3 Compliance

Compliance with relevant regulations of OSHA, IEC and FCC.

4.0 Installation Diagram**5.0 Ordering Information**Description

Microwave Test Station, for GL139 Style HVPS

Part Number

GA3203

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6.0 Outline Drawing

