



DATASHEET & SPECIFICATIONS



SERIES 9100

HIGH POWER PULSED WAVE MICROWAVE AMPLIFIER MODEL

Series 9100 Amplifier systems provide the maximum in reliability, cost effectiveness and system growth potential. This state-of-the-art production product delivers incomparable Pulsed RF performance for operation in benign laboratory or hostile field environments. Microprocessors provide the operator and or computer, access to monitor TWT conditions, fault latching and control of power supply and modulator parameters.

RF Specifications

Frequency		Input Power (for Rated Output)	
Power Ripple		Spurious Output 0-250 Hz	
Output Peak Power		> 250 Hz	
Load VSWR		Output VSWR Protection	
Duty Cycle		Gain Stability	
Gain (for rated output)			

RF Sampling

RF Output Pulse Video Sample		RF Interstage Power Sample	
RF Output Power Sample		RF Input Power Sample	



Modulation

Pulse Width		Droop	
Repetition Rate		Pulse Jitter	
Rise and Fall Time		Video/RF Throughput Delay	

Electrical

Primary Input Power Mains		Modulation Input Pulse	
Primary Power Consumption		Digital Interface	
Elapsed Time Meter			

Mechanical

Front Panel		Finish- Front Panel Chassis	
Dimensions- Front Panel Depth		Weight	
		Cooling	

Environmental

Operating Temperature	
Storage Temperature	
Humidity	
Altitude	

DIGITAL INTERFACE RS-232

RS-232 interface provides ability to remotely operate, monitor, control and adjust the system. IEEE-488, an optional feature, provides the ability to remotely operate, monitor and control operation of the amplifier. Any fault condition latches information. Ethernet (LAN) and RS-422 are also available. Software is provided to operate with MS Windows.

Continued on next page >>



DIGITAL INTERFACE RS-232

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CONDITIONS MONITORED AND INTERLOCKED

VSWR	
Body Voltage	
Body Current*	
Heater Voltage*	
Heater Current*	
Grid Bias Voltage*	
Grid Pulse Amplitude*	
Access Lid Interlock	
Excessive Temperature	
PRF Limit	
Pulse Width Limit	
Pulse Received	

* The following parameters and associated High/Low limits are factory adjustable (including Cathode Voltage).

CONTROLS & INDICATORS

FRONT PANEL

- : Switches
- : Illuminated Status Monitor
- : Off/Standby/Operate/Reset
- : Warm-up/Standby/Operate/Reset

ACCESSORIES SUPPLIED (1-EACH)

- Maintenance Manual
- Primary Input Power Mating Connector
- CD ROM: Computing Operating Software

CONNECTORS TYPE

RF Input (Rear Panel)	
RF Output (Rear Panel)	
RF Samples (Front Panel)	
RF Output Pulse Video Sample (Front Panel)	
Modulation Input Panel (Rear Panel)	

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DIGITAL INTERFACE RS-232

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CONDITIONS MONITORED AND INTERLOCKED	ADJUSTABLE PARAMETERS
RS 232	
IEEE-488 (Optional)	
Ethernet (Optional)	
Primary Power Input	
Remote Control	

NOTE: RF Connectors may be optionally located on either the front or rear panels.

Controls and Indicators (Optional)

Operation	The front panel display is active whenever TWTA is powered on.
Standard Mode	Warm-up (with time remaining) Standby Operate (with pulse indication) Fault (with fault name)
Diagnostics Mode	Following parameters are available through menu: heater voltage, heater current, grid bias voltage, grid drive voltage, helix voltage, helix current, collector voltage, collector current, cathode current, VSWR.

Options

Option E- Rack Mounting	Allows the unit to be mounted in a standard EAI 19" rack cabinet, incorporating side mounted sides.
Option G- 400 Hz	Provides for 400 Hz AC frequency operation.
Option J- Output Isolator	Protects the TWT from varying load VSWR conditions. Insertion loss of the Isolator will lower the output power slightly (0.5 dB typically) from normal. Call the factory for configuration and dimensions (Isolator may be provided externally).
Option X- Reflected Power Protection	Protects the TWT from high load VSWR and intended for use on ultra wide band or high power units for which Isolators are not normally available. Consists of a coupler and detector that turns the TWTA off when excessive reflected power is sensed. Typical insertion loss is 0.5 dB.