

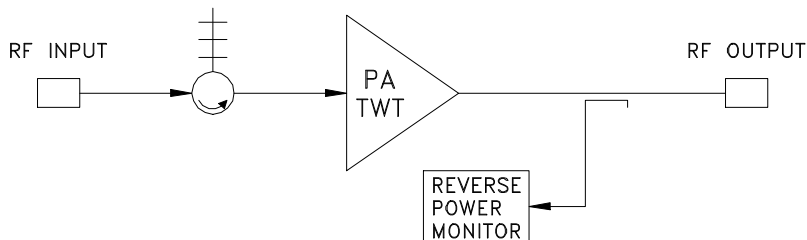
Model 117 1kW TWT Amplifier

1.5%
DUTY



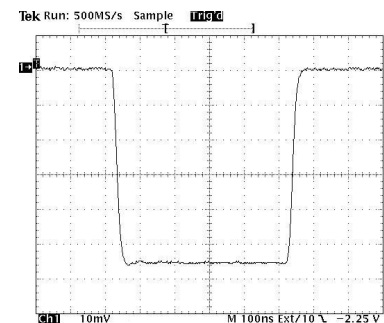
FEATURES:

- Frequency 2-18 GHz
Octave / Multioctave
- RF Pulse Fidelity
- Phase and Amplitude Stability
- Complete TWT Protection
 - Pulse Input Protection
 - Helix Overcurrent
 - Cathode Overvoltage
 - Cathode Undervoltage
 - Filament Low Voltage
 - Overtemperature
 - Input Energy Limit
- Custom Requirements
- Solid State Except for the TWT
- Modular Construction
- DC TWT Filaments
- Four Line Display
 - Operating Mode
 - Beam Voltage
 - Helix Current
 - Filament and Operate Time
- Front Panel Controls
 - Power On Circuit Breaker
 - Operate
 - Standby
 - Fault Reset



The Model 117 TWT Amplifier has been designed specifically to operate pulsed traveling wave tubes in the 1 to 2 kW peak power range at frequencies from 2.0 to 18 GHz. Particular emphasis has been placed on the generation of the output RF pulse shape without the use of RF switches. Pulse width control is with an external pulse.

Internal power supplies are DC-DC converter designs with fast loop response times so that output variations are minimal for any PRF including a non-periodic or burst type PRF. The modular power supplies and grid pulse generator have very low ripple, with attendant low phase noise in the TWT Amplifier.



Detected RF Output

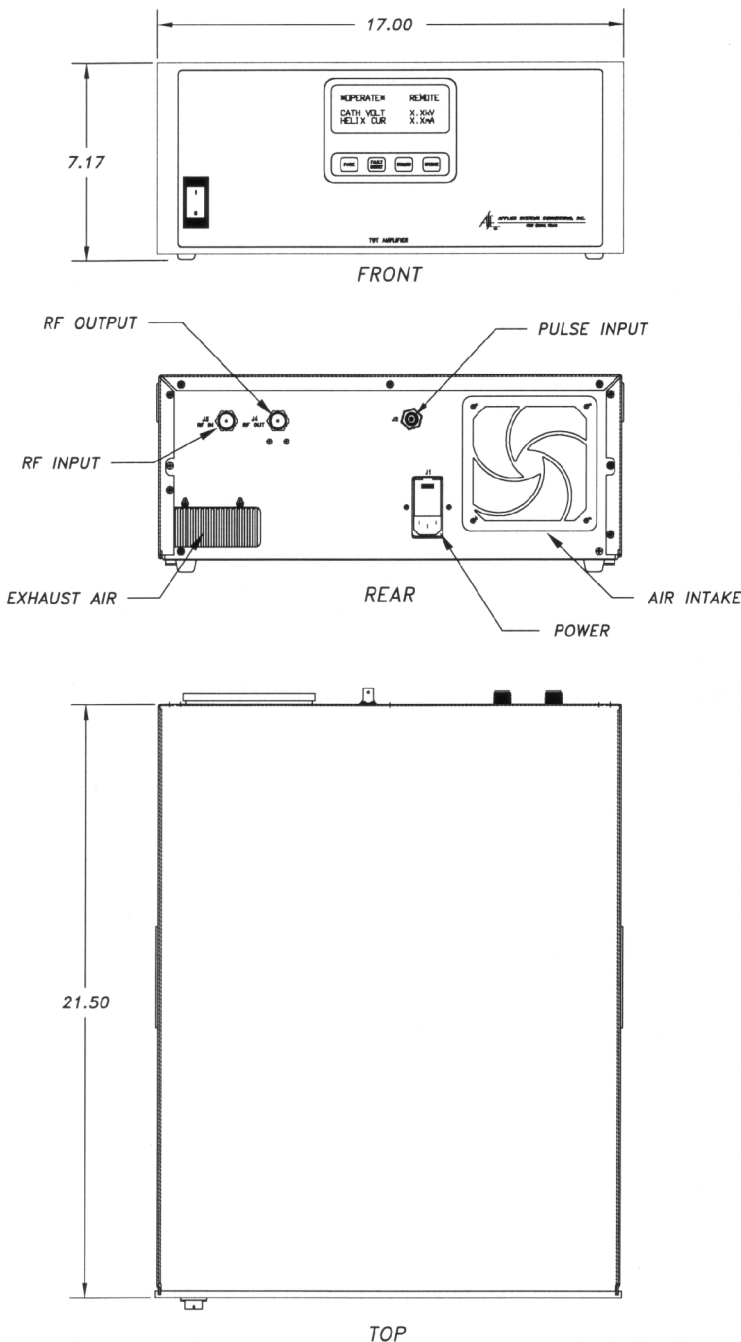


APPLIED SYSTEMS ENGINEERING, INC.

FORT WORTH, TEXAS

SPECIFICATIONS

Duty Cycle	1.5%, Maximum
Pulse Width Range	0.07 to 15 us
PRF Range	0 to 100 kHz
RF Rise / Fall Time	15 ns, Maximum
RF Pulse Droop	< 0.1 dB/10 us, Maximum
Delay, Input to RF	200 ns, Maximum
Phase Noise	< $\pm 1^\circ$ pk to pk
Amplitude Variation	0.1 dB, Maximum
Spurious Output	-50 dBc, Maximum
Input Pulse	5 Volts into 50 ohms
Noise Figure	35 dB, Nominal
RF Connectors	Precision Type N
Input Voltage	120/220/240 VAC $\pm 10\%$, 50/60 Hz
Operating Temperature	Laboratory Environment
Weight	65 lbs, Nominal
Dimensions	7 x 17 x 21.5 (in.)



Standard Equipment

- Input Isolator
- Reverse Power Monitor
- Filament Time Meter

Options

- Extended Frequency Coverage
- Solid State Driver Amplifier
- RF Sample Ports
- Phase Droop Correction
- Other Primary Power
- Rack Mount Ears
- Other Connector Types



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