

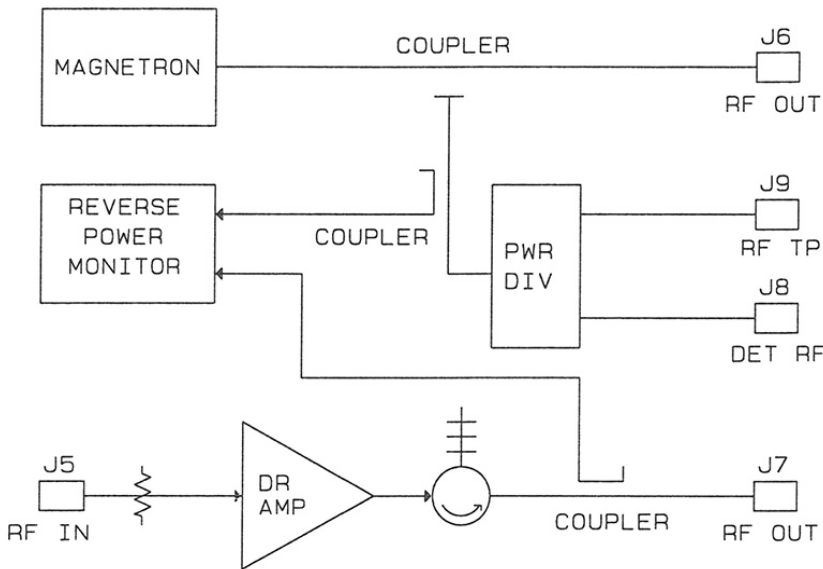
Model 184A Magnetron Transmitter

**0.001
DUTY**

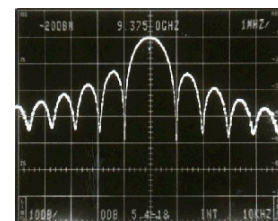


FEATURES:

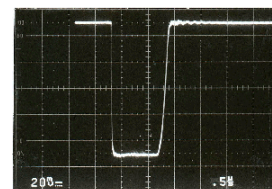
- Fixed Pulse Width
- Magnetron Filament Program
Regulated Filament Voltage
- Complete Magnetron Protection
Arc Energy Limit
Magnetron Over Duty
Filament Voltage High / Low
HVPS Over Current
Input PRF, PW, and Duty Limit
Output Reflected Power
Over Temperature
- Modular Construction
- Four Line Display
Operating Mode
HVPS Voltage and Current
Magnetron Average Current
Filament and Operate Time
- Front Panel Controls
Operate
Standby
Fault Reset
Local / Remote
Magnetron/SSA Select
Trigger Inhibit



The Model 184A Power MOSFET Modulator, Magnetron Transmitter is designed to operate magnetrons up to 75 kW. The pulse width is fixed at 0.25 microseconds, at PRF up to 4 kHz. The Model 184A Modulator is not damaged by magnetron arcs. Arc energy to the magnetron is limited which actually helps to clean-up an arcing magnetron. The Model 184A Modulator is a proven, reliable design which replaces the original Model 184 design with over 30 years of field use. The new modulator HVPS is a very efficient, duty cycle regulated DC to DC converter design. Photographs of the output spectrum and detected RF are included.



Spectrum



20mV / Division

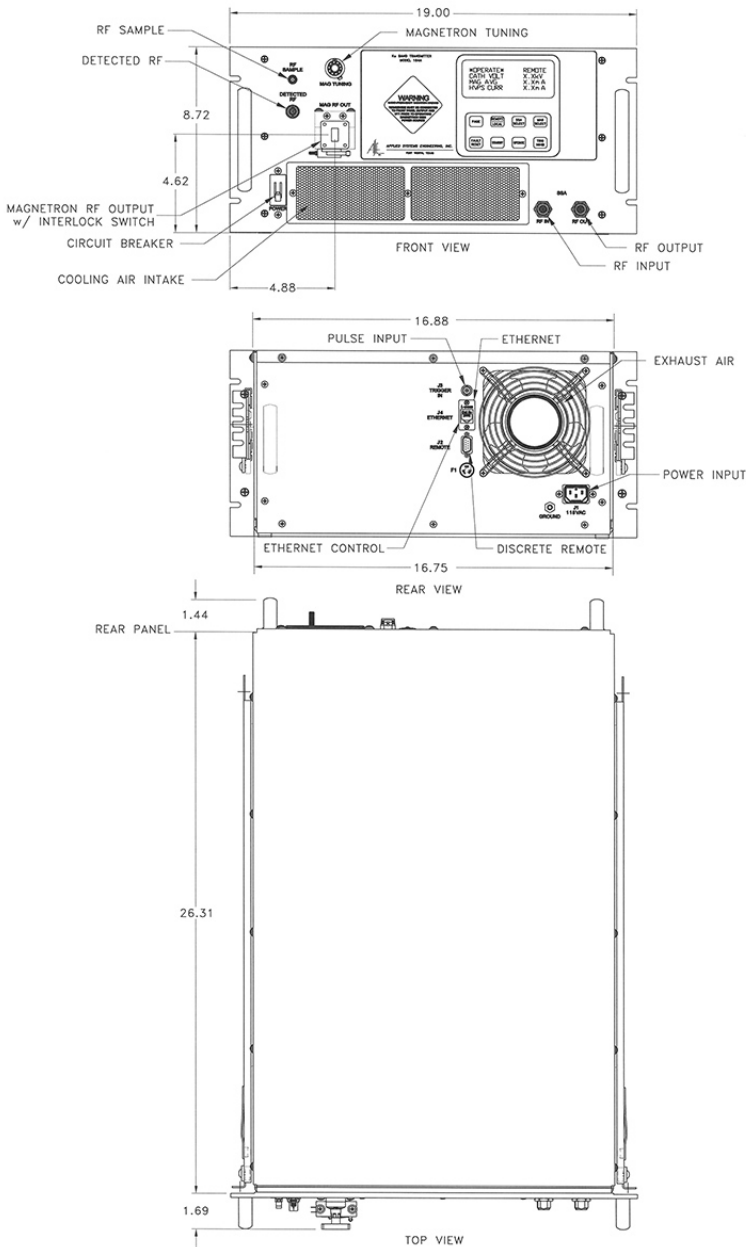
0.5 us / Division



APPLIED SYSTEMS ENGINEERING, INC.

FORT WORTH, TEXAS

Model 184A Transmitter SPECIFICATIONS



Frequency Range	16.0-17.0 GHz
Magnetron Output Power	75 kW, ± 1 dB
.	(at 16.5 GHz)
Duty Cycle	0.001
Pulse Width	0.25 μ s, $\pm 10\%$
PRF Range	0 to 4 kHz
RF Rise Time	50 ns, Nominal
RF Fall Time	70 ns, Nominal
Amplitude Variation	0.1 dB, Maximum
.	Pulse to Pulse
Input Pulse	3-5 Volts into 50 ohms
Input Voltage	115 VAC
.	$\pm 10\%$, 47-63 Hz
Operating Temperature	0 to $+30^\circ$ C
Weight	125 lbs, Nominal
Dimensions	8.72x19x26.31 (in.)
Cooling	Internal Forced Air

Standard Equipment

- Filament / Operate Time
- Magnetron Reverse Power Monitor
- Ethernet Remote Control (TCP/IP)
- Legacy Discrete Remote Control
- Magnetron RF Output
- Front Panel Magnetron Tuning
- Magnetron RF Sample Port
- Magnetron Detected RF
- 10W SSA RF Output (16.0-17.0 GHz)
- SSA Reverse Power Monitor
- Rack Mount Slides
- Conformal Coated PC Boards
- Form, Fit, and Function Interchangeable with Legacy Model 184, with greatly improved performance and reliability.