

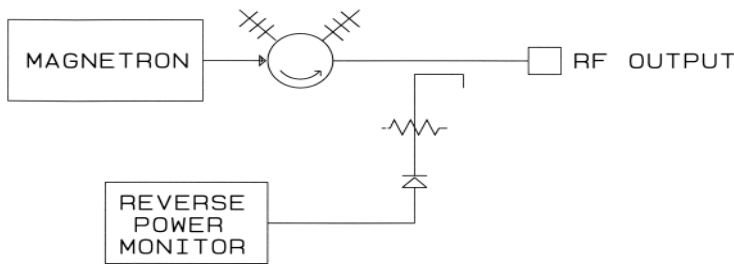
# Model 527 Magnetron Transmitter

0.001  
DUTY

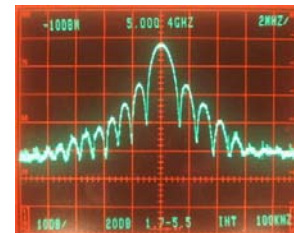


## FEATURES:

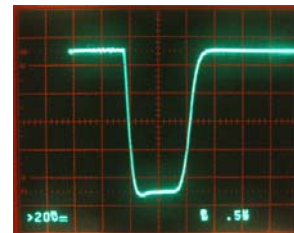
- **Continuously Variable Pulse Width**
- Magnetron Filament Program  
Regulated Filament Voltage
- Complete Magnetron Protection  
Arc Energy Limit  
Magnetron Over Duty  
Filament Voltage High / Low  
HVPS Over Current  
Input PRF, PW, and Duty Limit  
Output Reflected Power  
Over Temperature
- Modular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



The Model 527 is a 1 Megawatt Solid State Modulator Magnetron Transmitter. The RF pulse is continuously variable, and the pulse width is determined by the magnetron capability. State-Of-The-Art Direct Coupled Solid State FET Modulators obtain a flat topped pulse and excellent RF pulse stability. The Model 527 Modulator is not damaged by magnetron arcs. Arc energy to the magnetron is limited which actually helps to clean-up an arcing magnetron. The modulator HVPS is a very efficient, duty cycle regulated DC-to-DC converter design. A position servo provides magnetron tuning at the front panel or through the remote interface. Internal access is available through the front and rear doors and lift-off side panels.



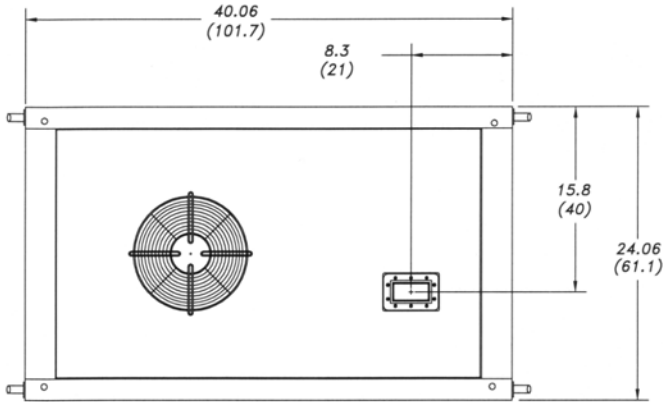
Spectrum



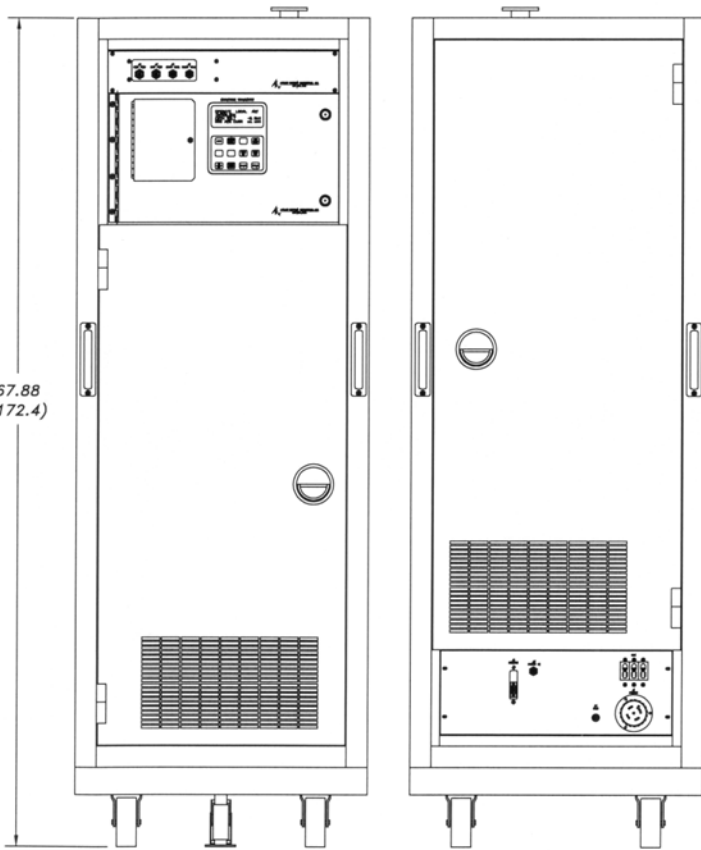
20mV / Division

0.5  $\mu$ s / Division

## Model 527 1MW TRANSMITTER SPECIFICATIONS



TOP VIEW



FRONT VIEW

REAR VIEW

Frequency Range	Determined by Magnetron
Output Power	Up to 1 MW*
Duty Cycle	0.001
Pulse Width Range	0.2 to 1.0 $\mu$ s
PRF Range	0 to 2.0 kHz
RF Rise Time	100 ns, Nominal
RF Fall Time	150 ns, Nominal
RF Pulse Droop	0.5 dB, Maximum
Delay, Input to RF	1.0 $\mu$ s, Maximum
Amplitude Variation	0.1 dB, Maximum Pulse to Pulse
Pulse Tracking	$\pm$ 30 ns Input Pulse to RF Output Pulse
Pulse Recovery Time	2 $\mu$ s, Maximum
Input Pulse	5 Volts into 50 ohms
Input Voltage	208 VAC 3-phase $\pm$ 10%, 50/60 Hz
	(other primary power may be specified)
Operating Temperature	-20° to +50°C
Weight	1000 lbs, Nominal
Dimensions	40 x 24 x 68in.
Cooling	Internal Forced Air
	*Power and performance determined by Magnetron

### Standard Equipment

- Filament / Operate Time
- Remote Power On/Off
- Reverse Power Monitor
- Ethernet Remote Control (TCP/IP or UDP/IP)
- Servo Tuning

### Options

- Forward and Reverse RF Sample Ports
- RS-232/422 or IEEE-488 Remote Control
- RF Connector types and locations may be specified
- Receive Port
- AFC Port
- Outdoor Enclosure
- Conformal Coated PC Boards
- Custom Requirements



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