

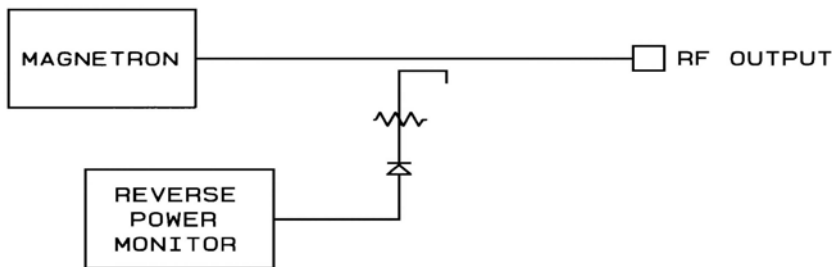
# Model 337-250kW Magnetron Transmitter

# 0.001 DUTY

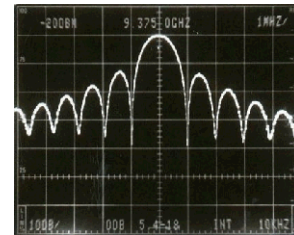


## FEATURES:

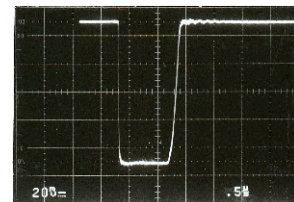
- Continuously Variable Pulse Width
- Magnetron Filament Program  
Regulated Filament Voltage
- Complete Magnetron Protection  
Arc Energy Limit  
Magnetron Over Duty  
Filament Voltage High / Low  
HVPS Over Current  
Input PRF, PW, and Duty Limit  
Output Reflected Power  
Over Temperature
- Custom Requirements
- 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 337 Power MOSFET Modulator, Magnetron Transmitter is designed to operate magnetrons up to 250 kW. The RF pulse is continuously variable, and the pulse width is determined by the magnetron capability. The Model 337 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 337 Modulator is a proven, reliable design which fills a need for an inexpensive, versatile transmitter with excellent RF output fidelity. The modulator HVPS is a very efficient, duty cycle regulated DC to DC converter design. A higher power version of the Model 337 (designated Model 527) is available for operation of magnetrons up to 1MW. Photographs of the output spectrum and detected RF are included.



Spectrum

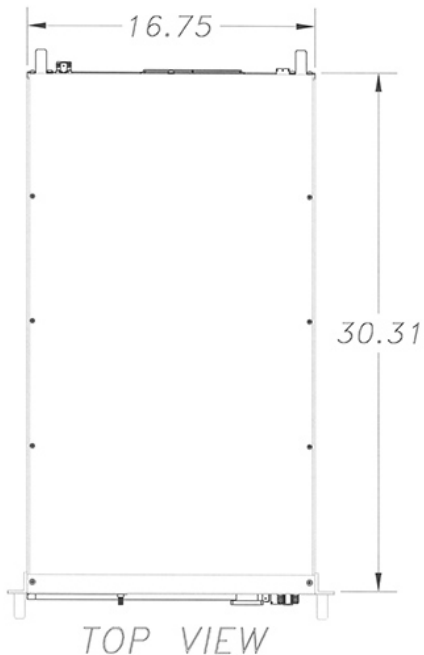
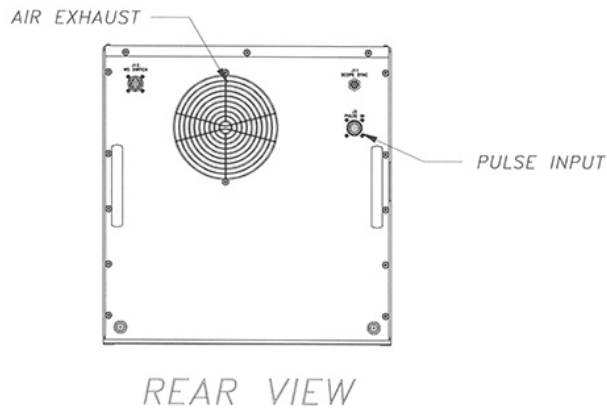
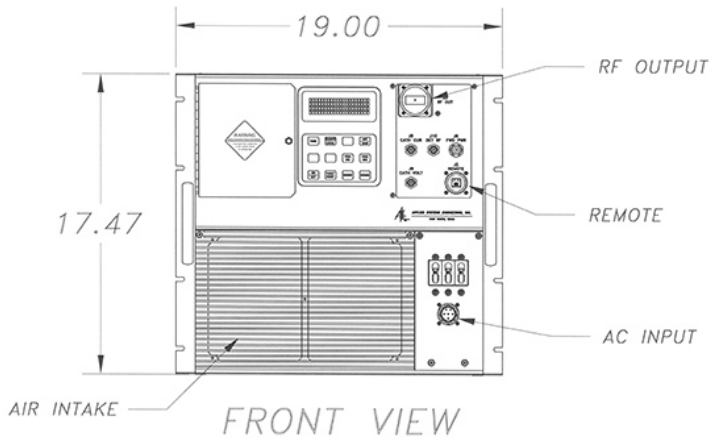


20mV / Division

## Model 337-250kW Transmitter SPECIFICATIONS

Frequency Range	.....	Determined by Magnetron
Output Power	.....	Up to 250 kW*
Duty Cycle	.....	0.001
Pulse Width Range	.....	0.15 to 1.0 $\mu$ s
PRF Range	.....	0 to 4 kHz
RF Rise Time	.....	100 ns, Nominal
RF Fall Time	.....	250 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
Input Pulse	.....	5 Volts into 50 ohms
Input Voltage	.....	3-Phase 208 VAC $\pm$ 10%, 60 Hz
Operating Temperature	.....	-20° to +50°C
Weight	.....	260 lbs, Nominal
Dimensions	.....	17.5x19x30.31 (in.)
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)

## Options

- Forward and Reverse RF Sample Ports
- RS-232/422 or IEEE-488 Remote Control
- Other Primary Power
- Rack Mount Slides
- RF Connectors on Front, Rear, or Top Panel
- Output Isolator
- Servo Tuning
- Outdoor Enclosure
- Conformal Coated PC Boards
- Custom Requirements

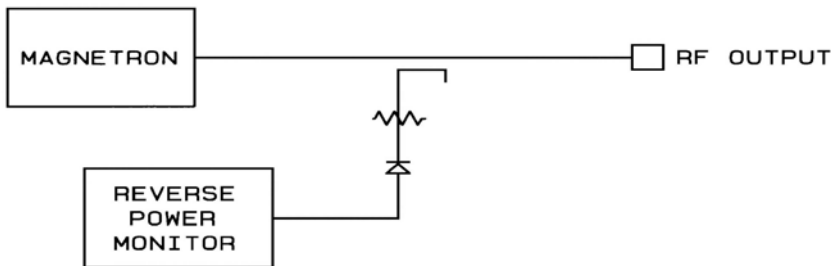
# Model 337-350kW Magnetron Transmitter

## 0.001 DUTY

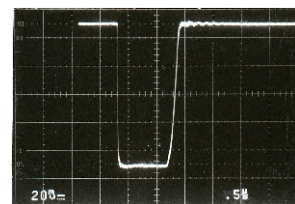
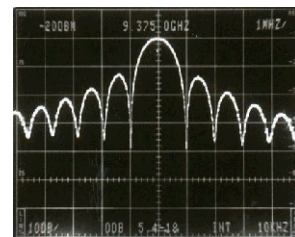


### FEATURES:

- 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
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- Custom Requirements
- 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 337 Power MOSFET Modulator, Magnetron Transmitter is designed to operate magnetrons up to 350 kW. The RF pulse is continuously variable, and the pulse width is determined by the magnetron capability. The Model 337 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 337 Modulator is a proven, reliable design which fills a need for an inexpensive, versatile transmitter with excellent RF output fidelity. The modulator HVPS is a very efficient, duty cycle regulated DC to DC converter design. A higher power version of the Model 337 (designated Model 527) is available for operation of magnetrons up to 1MW. Photographs of the output spectrum and detected RF are included.



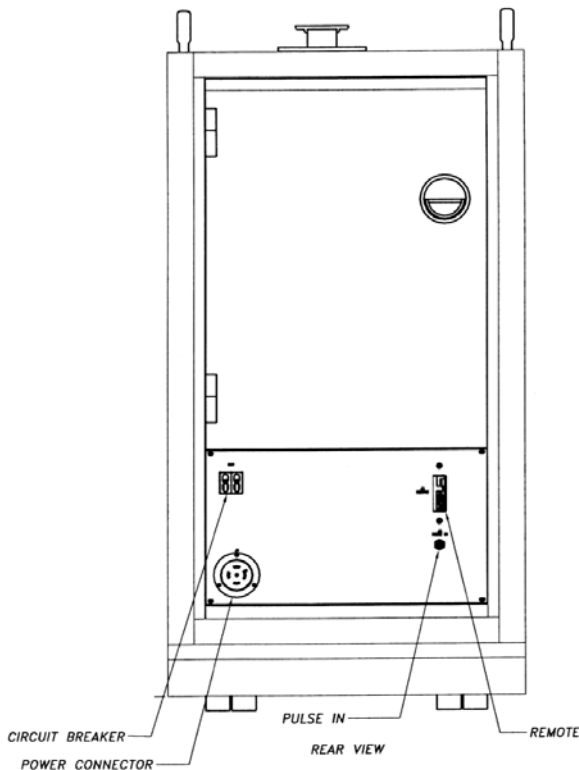
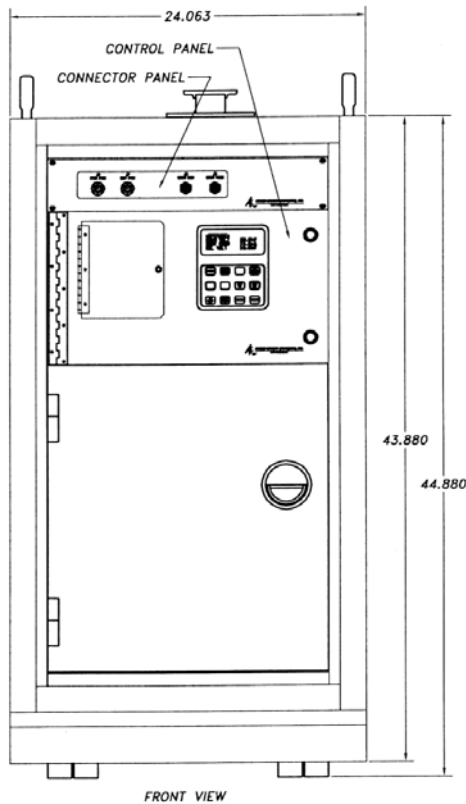
APPLIED SYSTEMS ENGINEERING, INC.

FORT WORTH, TEXAS

## Model 337-350kW Transmitter SPECIFICATIONS

Frequency Range	..... Determined by Magnetron
Output Power	..... Up to 350 kW*
Duty Cycle	..... 0.001
Pulse Width Range	..... 0.15 to 1.0 $\mu$ s
PRF Range	..... 0 to 4 kHz
RF Rise Time	..... 100 ns, Nominal
RF Fall Time	..... 250 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
Input Pulse	..... 5 Volts into 50 ohms
Input Voltage	..... 3-Phase 208 VAC $\pm$ 10%, 60 Hz
Operating Temperature	..... -20° to +50°C
Weight	..... 610 lbs, Nominal
Dimensions	..... 36x24x44 (in.)
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)

## Options

- Forward and Reverse RF Sample Ports
- RS-232/422 or IEEE-488 Remote Control
- Other Primary Power
- Rack Mount Slides
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