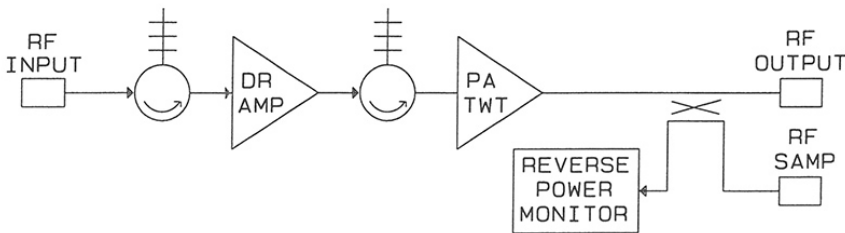


# Model 177Ka 750W\* TWT Amplifier

Up to  
10.0%  
DUTY\*

## FEATURES:

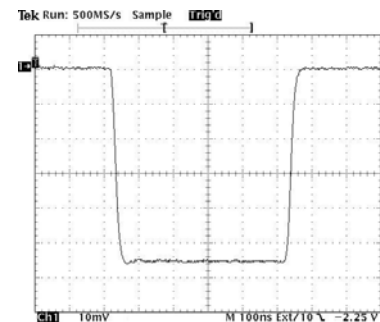
- Low Spurious Outputs
- Phase and Amplitude Stability
- Complete TWT Protection
  - Pulse Input Protection
  - Helix Overcurrent
  - Cathode HVPS Crowbar
  - Cathode Over/Undervoltage
  - Filament Low Voltage
  - Over temperature
  - Input Energy Limit
  - Reverse Power Monitor
- Custom Requirements
- Solid State Except for the TWT
- Front Panel Voltage Adjustments
- Front Panel Fault Isolation
- Modular Construction
- DC TWT Filaments
- Four Line Display
  - Operating Mode
  - Cathode Voltage
  - Helix Current
  - Filament and Operate Time
- Front Panel Controls
  - Power On / Off
  - Operate
  - Standby
  - Fault Reset
  - Local / Remote



The Model 177Ka provides between 300-750W\* peak power at duty cycles up to 10%\* at frequencies between 32 to 36 GHz\*. Particular emphasis has been placed on the generation of the output RF pulse shape. The RF output pulse width tracks the input 5 volt video pulse.

The High Voltage Power Supplies are modular DC-DC converter designs. The Power supply design provides superior stability for optimum TWT phase noise and spurious performance. All high voltage modules are plug-in assemblies packaged in an aluminum oil tank with transformer oil as the dielectric medium. Transformer drivers feature power MOSFET's in a full wave bridge configuration. Imbedded processor provides control, monitor and interface functions, and multiple pages of monitored functions on the front panel 4-line vacuum fluorescent display.

\* Tube Specific Parameters, call for options



Detected RF Output

## Model 177Ka TWT Amplifier SPECIFICATIONS

Output Power	300-750 Watts, Peak*
Duty Cycle	up to 10%, Maximum*
Pulse Width Range	0.05 to 30 $\mu$ s
PRF Range	0 to 100 kHz
RF Rise / Fall Time	15 ns, Maximum
Input Pulse / RF Pulse	200 ns, Maximum
Phase Noise	$\pm 1^\circ$ pk to pk
Amplitude Variation	0.1 dB, Maximum
Spurious Outputs	-50 dBc, Maximum
Harmonics	-30 dBc, Maximum
Input Pulse	5 Volts into 50 ohms
Noise Figure	20 dB, Nominal
RF Input Connector	3.5mm, Female
RF Output Connector	WR-28 Waveguide
Primary Power	120 VAC, 1-phase $\pm 10\%$ , 50/60 Hz
Operating Temperature	-20° to +50°C
Weight	127 lbs, Nominal
Dimensions	19 x 12.25 x 24 (in.)

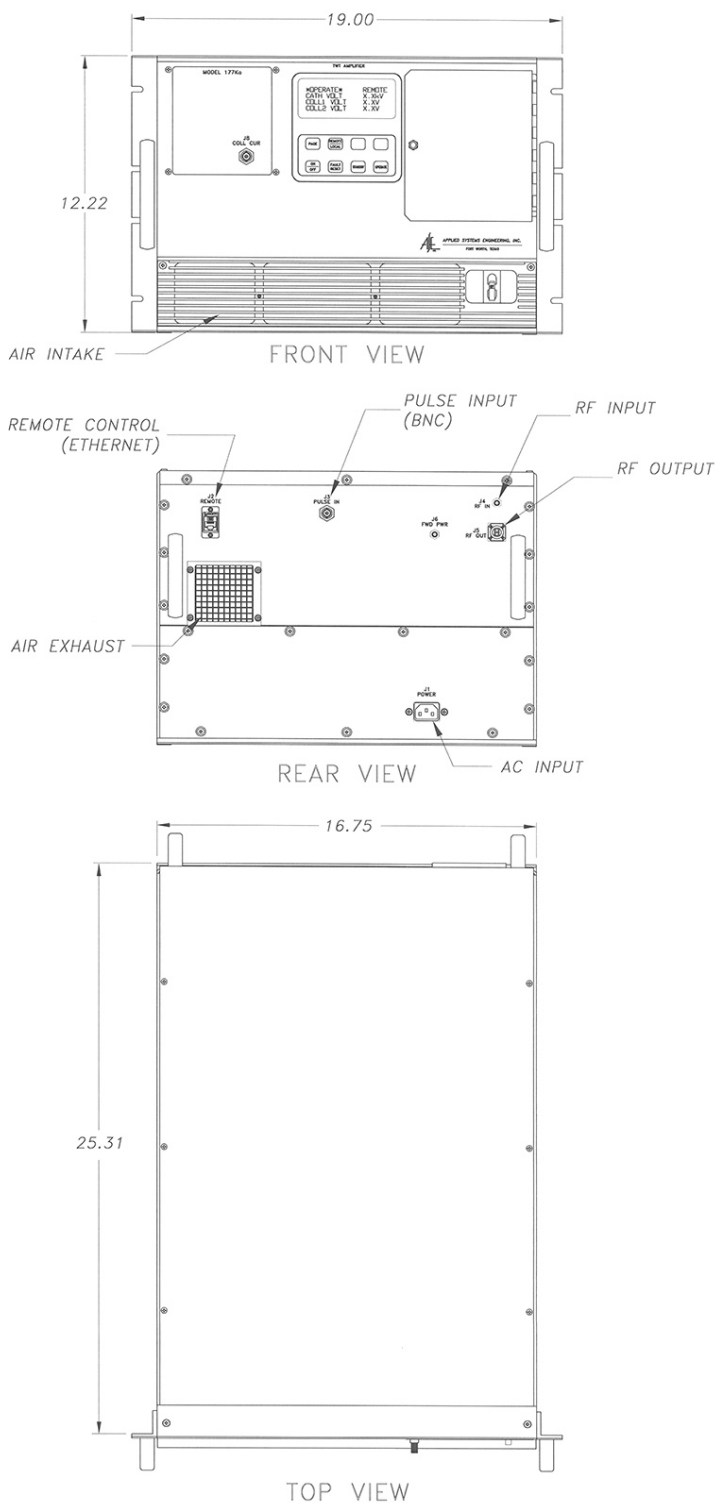
\* Tube Specific Parameters, call for options

## Standard Equipment

- Filament / Operate Time
- Remote Power On/Off
- Ethernet Remote Control (TCP/IP or UDP/IP)
- RF Input Isolator
- Driver Amplifier
- Reverse Power Monitor
- Forward RF Sample Port

## Options

- Other PRF and Pulse Width Ranges
- Reverse RF Sample Port
- Detected RF Output
- RS-232/422 or IEEE-488 Remote Control
- Other Primary Power
- RF Connections on Front or Rear Panel
- Outdoor Enclosure



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