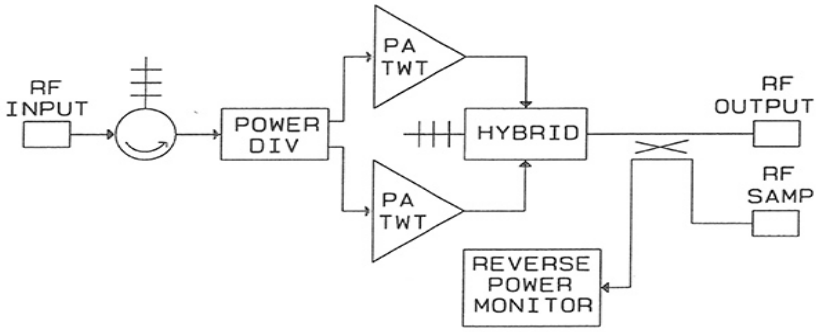
Model 477 Parallel Tube TWTA

DUTY UP TO 6.0%



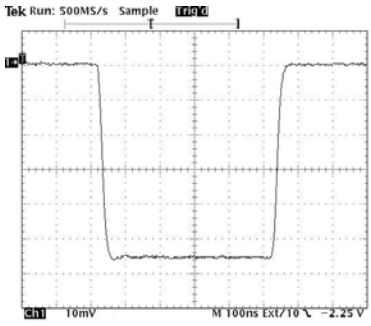
The Model 477, utilizing phase matched combined parallel TWT's, provides 6-8kW peak power at duty cycles up to 6% from 2-18GHz in standard band frequencies of 2-4, 4-8, 8-12, and 12-18GHz. Particular emphasis has been placed on the generation of the output RF pulse shape. The RF output pulse width tracks the input 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 flourescent display.

FEATURES:

- Low Spurious Outputs
- Phase and Amplitude Stability
- Complete TWT Protection
  - Pulse Input Protection
  - Helix Overcurrent
  - Cathode HVPS Crowbar
  - Cathode Over/Undervoltage
  - Collector 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



Detected RF Output

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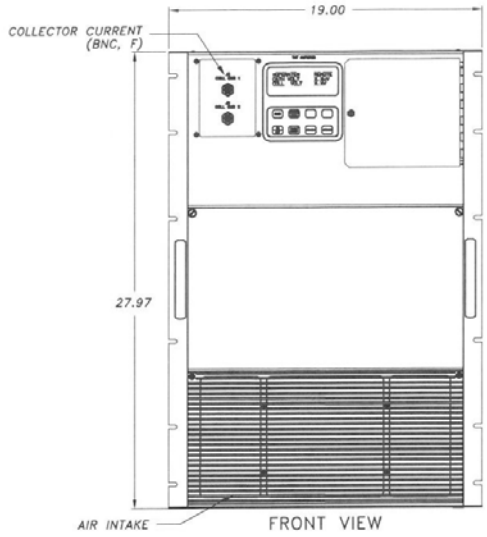
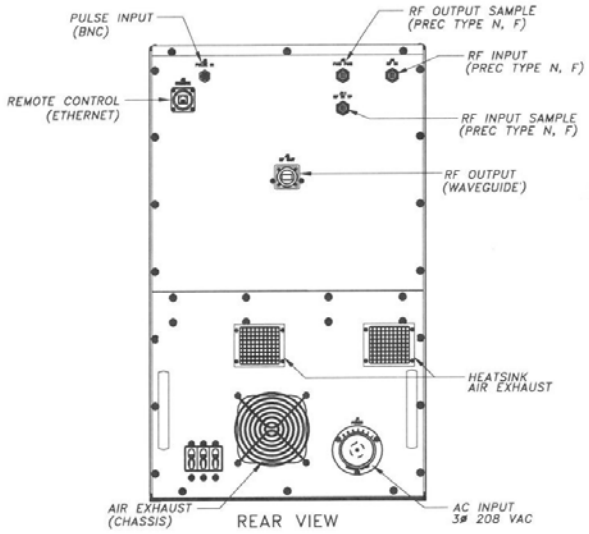
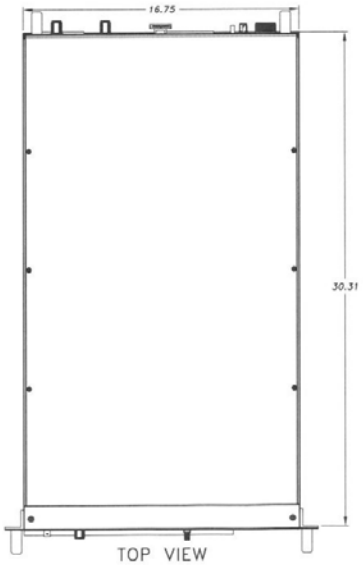
FORT WORTH, TEXAS







Model 477 Parallel Tube TWTA

SPECIFICATIONS

Output Power	6-8kW, Peak
Duty Cycle	6%, Minimum* (*up to 10% at 8-12 GHz)
Pulse Width Range	0.05 to 50µs (to 100µs) (50µs Maximum at 12-18 GHz)
PRF Range	0 to 100 kHz
RF Rise / Fall Time	15 ns, Maximum
Input Pulse / RF Pulse	300 ns, Maximum
Phase Noise	± 1° pk to pk
Amplitude Variation	0.1 dB, Maximum
Spurious Outputs	-50 dBc, Maximum
Harmonics	(Varies with band)
Input Pulse	2-5 Volts into 50 ohms
Noise Figure	(Varies with band)
RF Input Connector	PN, Female
RF Output Connector	(Varies with band)
Primary Power	208 VAC, 3-phase wye ± 10%, 50/60 Hz
Operating Temperature	-20° to +50°C
Weight	325 lbs, Nominal
Dimensions	16.75x27.97x30.31(in)

Standard Equipment

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

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
- Rack Mount Slides
- Outdoor Enclosure
- Conformal Coated PC Boards
- Custom Requirements

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07-14-22