The Model 167 High Duty Cycle TWT Amplifier has been designed specifically to operate gridded CW traveling wave tubes in the 250W power range at frequencies up to 18 GHz. Particular emphasis has been placed on the generation of the output RF pulse shape without the use of RF switches. Pulse width control is with an external pulse.

Internal power supplies are DC-DC converter designs with fast loop response times so that output level variations are minimal for any PRF including a non-periodic or burst type PRF. The modular power supplies and grid pulse generator have very low ripple, with attendant low phase noise in the TWT Amplifier.

The modular design of the Model 167 provides convenient accessibility to all elements in the TWT amplifier. Plug-in PC boards are accessible through the front panel. The PC card cover contains a legend for PC card located test points and controls. High voltage modules are encapsulated, plug-in assemblies. There is no exposed high voltage. Most modules are interchangeable between all units regardless of frequency.
Model 167 250W TWT Amplifier

SPECIFICATIONS

Duty Cycle ............... 50%, Nominal
Pulse Width Range ....... 0.05 to 100 us
PRF Range ............... Up to 1 MHz
RF Rise / Fall Time ...... 15 ns, Maximum
RF Pulse Droop .......... < 0.1 dB, Maximum
Delay, Input to RF ...... 200 ns, Maximum
Phase Noise .............. < ±1° pk to pk
Amplitude Variation ...... 0.1 dB, Maximum
Spurious Outputs ........ -50 dBc, Maximum
Input Pulse .............. 5 Volts into 50 ohms
Noise Figure ............. 35 dB, Nominal
RF Connectors .......... Precision Type N or Waveguide
Primary Power .......... 120/220/240 VAC ± 10%, 50/60 Hz
Operating Temperature ... 0 to 50°C
Weight .................. 92 lbs, Nominal
Dimensions ............... 8.75x19x28.5 (in.)

Standard Equipment
- Input Isolator
- Filament / Operate Time
- IEEE-488 Remote Interface
- Reverse Power Monitor

Options
- Driver Amplifier
- Other PRF and Pulse Width Ranges
- Extended Frequency Coverage
- Higher Peak Power
- RF Sample Ports
- RS-232/422 Remote Interface
- Other Primary Power
- Outdoor Enclosure
- RF Connectors on Front Panel
- Harmonic Filters