The Model 127 TWT Amplifier has been designed specifically to operate pulsed traveling wave tubes in the 1 to 2 kW peak power range at frequencies 2.0 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.
Model 127 TWT Amplifier

SPECIFICATIONS

Duty Cycle ................ 2.0%, Maximum
Pulse Width Range ....... 0.07 to 15 us
PRF Range ............... 0 to 100 kHz
RF Rise / Fall Time ...... 15 ns, Maximum
RF Pulse Droop .......... < 0.1 dB/10 us, 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 .................. 70 lbs, Nominal
Dimensions .............. 7 x 19 x 25.5 (in.)

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

Options
• Solid State Driver Amplifier
• Pulse Width up to 25 μsec
• Extended Frequency Coverage
• Forward and Reverse RF Sample Ports
• RS-232/422 Remote Interface
• Other Primary Power
• Rack Mount Slides
• RF Connectors on Front Panel