FEATURES:

- Frequency 17.7-22.0 GHz
- Low Spurious Outputs
- Phase and Amplitude Stability
- Complete TWT Protection
  - Helix Overcurrent
  - Cathode Over/Undervoltage
  - Collector Overvoltage
  - Filament Low Voltage
  - Overtemperature
  - 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
  - Collector Voltage(s)
  - Helix Current
  - Filament and Operate Time
- Front Panel Controls
  - Power On / Off
  - Operate
  - Standby
  - Fault Reset
  - Local / Remote

The Model 400K, CW TWT Amplifier has been designed for parallel operation of 250 watt traveling wave tubes in the 17.7 to 22.0 GHz frequency range. Internal power supplies are solid state DC-DC converter designs with fast loop response times so that output level variations are minimal. Both cathode and collector power supplies and the heater supply are duty cycle regulated designs. The cathode and collector power supplies have very low ripple, with attendant low phase noise in the TWT Amplifier. Output spurious signals are less than -50 dBc. 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.

The modular design of the Model 400K provides convenient accessibility to all elements in the TWT amplifier. High voltage modules are encapsulated, plug-in assemblies. There is no exposed high voltage. Most modules are interchangeable between units.
Model 400K 450W CW TWTA

SPECIFICATIONS

Duty Cycle ............... CW
Spurious Outputs ........ -50 dBc, Maximum
Phase Noise ............ Less than ± 1°
Amplitude Variation ...... 0.1 dB, Maximum
Gain .................... 57 dB, Minimum
Noise Figure ............ 35 dB, Nominal
RF Connectors ........... WR-51 Waveguide
Primary Power ........... 3 Phase, 208 VAC ± 10%, 50/60 Hz
Operating Temperature .. 0 to 50°C
Weight .................. 525 lbs, Nominal
Dimensions .............. 36x24x47.75 (in.)

Standard Equipment

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

Options

• Driver Amplifier
• Higher CW Power
• RF Sample Ports
• RS-232/422 or Ethernet Remote Interface
• Other Primary Power
• Outdoor Enclosure
• RF Connectors on Front Panel
• Harmonic Filters

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