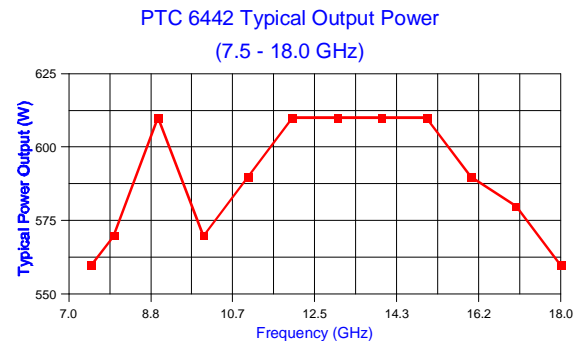


PTC6442 TWT Amplifier

500 W CW. 7.5 – 18.0 GHz



TMD Standard style instrumentation amplifier, with digital front panel. Rear mounted connectors option



- **The TMD PTC6442 Travelling Wave Tube Microwave Amplifier** has been designed for Test and Measurement applications. These include EMI/EMC Immunity Testing, Radar, EW Systems Simulation and Training, Antenna, Multipaction and High Power Component Testing.
- Standard features are extensive power supply and TWT protection, Input RF isolator, IEEE 488 Interface, Input power factor correction, Reflected RF power protection, RF output sample port and solid state pre-amplifier.
- Power conversion is by a high efficiency, high frequency switching inverter, which results in a compact and lightweight unit (typically 8U x 19" x 700 mm; 48 kg).
- Low cost of ownership and high MTBF is derived from high technology military amplifiers; nevertheless available at an affordable price.
- The products are based on an easily maintainable, modular design and are supported by a dedicated team of engineers, operating in a purpose built microwave tube and equipment factory.
- Optional TWT modulation capability - **enables amplifier to be used in both CW and pulsed modes.**
- Various additional options are available on special request – please contact TMD for further details.

Standard Features

- **New modular power supply design** offers: improved reliability, maintainability, faster repair capability and lower cost of manufacture, equating to lower price for the user (reference document EVD6334).
- Self Diagnostic & Troubleshooting capability.
- RF Pre-amplification allows amplifier to be driven with -10 dBm to 0 dBm typically.
- Amplifier Protection against high load VSWR.
- -50 dB Forward Power Sample allows user monitoring of output signals.
- IEEE Remote Control and Monitoring.
- Comprehensive operation and maintenance manual.
- 24 Month Warranty.



SPECIFICATIONS

RF PERFORMANCE

Frequency

7.5 to 18.0 GHz

Output Power

500 W CW minimum

Saturated Gain

57 dB minimum, 60-70 dB typical

Duty

CW

Spurious Outputs

-40 dBc max, -50 dBc typical

Harmonic Output

-20 dBc typical

Max Load VSWR

3:1 max, 2:1 typical for best performance

ELECTRICAL

Input Voltage

110 to 240 VAC phase-neutral 47 to 440 Hz

single phase supply

220 VAC phase-phase 47 to 440 Hz

three phase supply optional

Power Consumption

2900 W typical

MECHANICAL

Weight

48 kg typical

Width

19ins. rack mounting to IEC 297

Height

8U

Depth

700 mm

Cooling

Forced Air

(integral blower)

RF Output

WRD750 waveguide

RF Input, RF Sample

N female, SMA female optional



ENVIRONMENTAL

Temperature Range

Operating -10° C +50°C (derated 1.9° per 1,000 ft above sea level)

Non Operating -20 °C to +70°C

Relative Humidity

95% non condensing

Altitude

Operating 10,000 ft above sea level (3,048 m)

Non-operating 50,000 ft above sea level (15,240 m)

Vibration

Meets the vibratory extremes specified in MIL-STD-810, method 514.3 procedure 1

Shock

Meets performance specifications after 15 g for 11 ms shock specified in MIL-STD-810, method 516.4, procedure VI

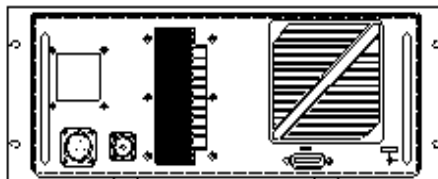
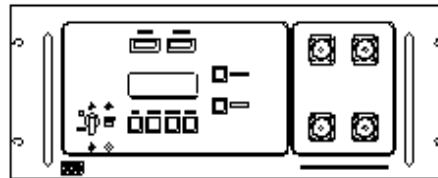
STATUS INDICATORS (FRONT PANEL)

Prime Power

On/Standby

Operate

Status: Displayed on LCD.



Typical front panel (top) and rear panel (bottom) configurations - positions of input and output connections may vary according to customer requirements - including rear panel mounting option.

SUPPORT

TMD provides 24 month warranty, installation support, through life service & rapid response (reference document EVD6334). The factory is situated only 5 km from London, Heathrow.

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