

## PTWT6G18G-2.2KW

### 6.0-18.0GHz 3.8KW (typ) Pulsed TWT Amplifier



#### MAIN FEATURES

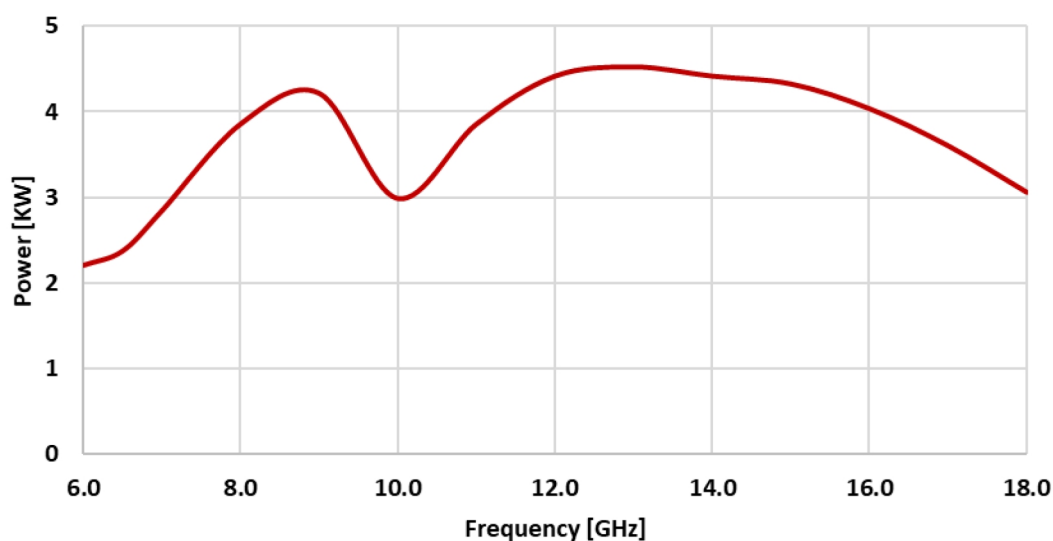
- User Interface
- Rugged, Ultra-Reliable Design
- Ethernet and GPIB Remote Interface
- 3 year warranty (1 Year on the tube)
- Plug and Play Field-Replaceable Power

The PTWT6G18G series of Pulsed TWT Amplifier provide outstanding RF performance. These 6.5 to 18.0 GHz TWTA's (traveling wave tube amplifiers) have field proven reliability and industry leading performance. This makes these amplifiers ideal for multiple high frequency high power applications including EMC / Radiated Immunity, Communications, EW, Radar, RF Component Testing, and scientific applications.

Operation safety and ease of use are paramount in Teseq Pulsed TWT amplifier product designs. The PTWT6G18G series includes a full complement of RF and hardware protection systems including high VSWR, over-current, voltage and TWT arc protection as well as redundant thermal and airflow sensors to prevent the TWT from overheating.

PTWT6G18G series includes a display screen and web page providing instant operational and critical parameter status, as well as built in self-test, advanced fault diagnostics and modular plug and play field replaceable power supplies. This modular design offers ease of service providing quick turn around times. In addition, these amplifiers will log operational hours and any tripped states with a date stamp throughout their life which greatly aids diagnostics.

PTWT6G18G-2.2KW



## Technical Specifications

|                                 |                                                 |
|---------------------------------|-------------------------------------------------|
| Frequency (min.) GHz            | 6.5 GHz                                         |
| Frequency (max.) GHz            | 18 GHz                                          |
| Psat (min)                      | 2.2 kW                                          |
| Psat (typ)                      | 3.8 kW                                          |
| Small Signal Gain               | 63 dB                                           |
| Pulse Width Range               | 200 nsec to 50 µsec                             |
| PRF Range                       | Up to 100KHz                                    |
| Duty Cycle                      | 6%                                              |
| Rise & Fall Time                | 50 nsec to 100 nsec                             |
| Pulse to Pulse Jitter           | +/- 5 nsec                                      |
| Pulse Width Jitter (Distortion) | +/- 5 nsec                                      |
| Pulse Recovery Time             | 150 nsec                                        |
| Pulse Delay                     | 200 nsec to 300 nsec                            |
| Pulse Droop                     | 0.5 dB /100 µsec or 0.25 dB/10 µsec             |
| Power Output Stability          | 0.3 dB Pulse to Pulse at a Constant Drive Level |
| Pulse On / Off Ratio            | 80dB                                            |
| Modulation Formats              | AM, FM, Pulse                                   |
| Output VSWR Tolerance           | < 3:1                                           |
| Maximum Input Power (no damage) | 10 dBm                                          |
| Stability                       | Unconditional                                   |
| Output Impedance                | 50 Ohm                                          |
| Input VSWR                      | 2:1 (typical)                                   |
| Output VSWR                     | 2.5:1 (max)                                     |
| 2nd Harmonic                    | Typ -13dBc / Max -2.0dBc                        |
| Operating Temperature           | 0°C to +40°C                                    |
| Non-Operating Temperture        | -10°C to +50°C                                  |
| Humidity                        | 80% Max, non condensing                         |
| Supply Frequency                | 47 to 63 Hz                                     |
| Supply Power (typ)              | 3 KVA                                           |
| Pulse Input                     | Front Panel BNC Female, 5V TTL Into 50 ohms     |

## General Specifications

|                     |                                              |
|---------------------|----------------------------------------------|
| Safety Interlock    | BNC-female                                   |
| Supply Voltage      | "1-Phase: 200-264 V or 3-Phase: 187-230 VLL" |
| RF Input Connector  | Type N female                                |
| RF Output Connector | WRD650                                       |
| Com. Interface      | GPIO & Ethernet                              |
| Dimensions (WxHxD)  | 12U, 19 inch, 800mm                          |
| Weight kg           | 90 kg                                        |
| Cooling System      | Air Cooled, Self Contained                   |

## Available Variants

| Product             | Configuration             | Item #   |
|---------------------|---------------------------|----------|
| PTWT6G18G-2.2KW-001 | Front Panel RF Connectors | 3-342054 |
| PTWT6G18G-2.2KW-002 | Rear Panel RF Connectors  | 3-342055 |