

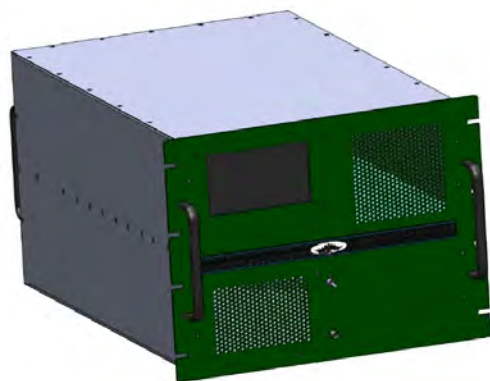


## PTWPA-12G18G-3000

### 3000W Pulse TWT Amplifier

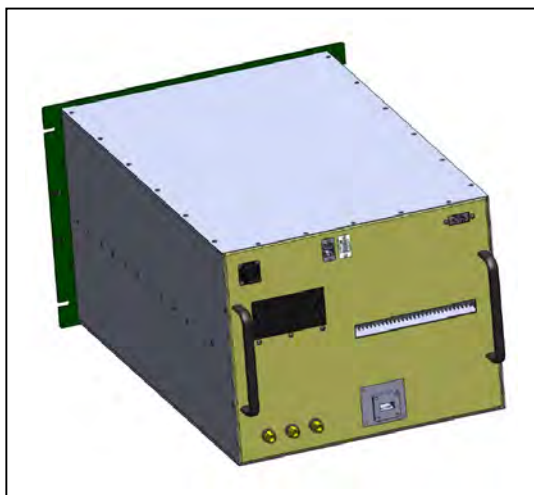
#### Traveler Wave Tube (TWT) Power RF Amplifier

The PTWPA-12G18G-3000 is a TWT 3000W (Pulse) RF Amplifier which covers frequency range from 12GHz to 18GHz. This amplifier can achieve high efficiency operation with proven reliability as is designed with the robust engineering and employment of the most advanced devices and components. The amplifier comes with 1 year warranty including the TWT.



Parameter	Specification
<b>Electrical</b>	
Frequency Range	12-18 GHz
Output Power	3000W Peak min
RF Input Power	0dBm for Saturated Power Out
Gain @ rated power	65dB
Input /Output Impedance	50 ohms(VSWR 2.0:1)
Load VSWR	1.5:1 max
Harmonics	-40dBc
Spurious	-50dBc max.
Pulse Input	TTL. High=Beam-ON, Low=Beam-OFF, 50Ω Input. BNC Female on Front Panel
Pulse Width	1uSec -50uSec
Rise/Fall time	30nSec
Pulse Delay	120nSec
PRF	100Hz-50KHz
Duty Cycle	0-4% min. 6% max.
Pulse to Pulse jitter	±10nsec max.
Overshoot, P-P	5%
Pulse to Pulse Phase Noise	±1°
Pulse to Pulse Stability	±0.3dB max.
Pulse Droop	0.2dB @ 10uSec pulse max. 0.5dB @ 50uSec pulse max.
Pout ON/OFF ratio	80dB
RF Input/Sample Connectors	Precision Type N Female On Rear Panel

THESE SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.



RF Output Connector	WR62 Waveguide
Noise Power density	5dBm/MHz, max.
Prime Power	220VAC +/-10%, 50/60 Hz, Single Phase, 3 wires on the Rear Panel
Consumptions	2.5KVA max.
<b><u>Mechanical</u></b>	
Configuration	Racks mounts 19"W x 26.13"D x 14"H
Weight	120 Lbs
Cooling System	Air cooled: forced Air Front to Rear, self contained
Shock	MIL-STD-810F, method 516.2
Vibration	MIL-STD-810F, method 514.2
<b><u>Environmental</u></b>	
Temperature	0° to 50° C
Non-operating Temp	0° to 60°C
Humidity	95% without condensation
Altitude	5,000 feet

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## **Features**

- High Voltage power supplies Protections, include: High Voltage Under/Over Voltage faults, Cathode current, Helix current, Collector current, Heater voltage monitor, HV PS temperature, TWT temperature, HV PS B+ current, RF arc protection
- Local controls: Power OFF/ON, RF OFF/ON [STBY/OPRT], Fault Reset
- Local Indicators via Color display: Helix Voltage/Current, Collector Voltage, Heater Voltage, Warm Up time, Status for all controls, Over temperature, Cool down, Interlock, Heater/Beam elapsed time metering in Hours, Local/Remote status, see Figure 1 [Display]
- Forward and Reflected Power metering simultaneously on the Front panel Display
- Local metering via color display of Pulse parameters
- Automated Heater warm up time to Standby, TWT cool time down to Power OFF
- Automated idle Standby to Power OFF
- RS 232 [DB 25] & Ethernet Remote Control [RJ45].
- RF Input / Output Connectors on the Rear Panel.
- Fault Latching and logging [100 events]
- Color TFT Touch screen Display with Front Panel Controls and Indicators. See Figure 1 [Display]
- VSWR Protection against output mismatch greater than 2.5:1

## **OPTIONS**

001	VSWR Protection against output mismatch
002	Alternate Prime Power (specify at time of order).
003	USB Remote Control
004	Forward RF Sample Port Type N Female, or SMA/F, -50dBc nominal on the Rear Panel [standard] or Front panel.
005	Reflected RF Sample Port Type N Female -50dBc nominal on the Rear Panel [standard] or Front panel.
006	RF Input/Output Connectors on the Rear Panel [Standard], (Specify front or rear at time of order).
007	Internal Systems Diagnostics.
008	Heater/Beam Elapsed Time Metering in hours.
009	RF Safety Interlock, type BNC Connector.
010	Slides for Rack mount.

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Figure 1. Amplifier display showing status controls and metering

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## Reliant EMC LLC

3311 Lewis Ave  
Signal Hill, CA 90755  
Tel.:(408)9165750

E-Mail: [contact@reliantemc.com](mailto:contact@reliantemc.com)  
Web:[www.reliantemc.com](http://www.reliantemc.com)