

PTWA-2G8G-500

500W CW TWT Amplifier

Traveler Wave Tube(TWT) Power RF Amplifier

The PTWA-2G8G-500 is a TWT 500W (CW) RF Amplifier which covers frequency range from 2GHz to 8GHz. 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. This amplifier combines Four 350W TWTs to achieve the specified rated power. The amplifier comes with 3 years warranty including the TWT.

Electrical Frequency Range 2-8GHz Output Power 2-2.5GHz, 500W min. 600W typical 2.5-7.5GHz, 500W min. 1000W typical 7.5-8GHz, 500W min. 600W typical Internal Pre-Amp. Input level: 0dBm or less Gain @ rated power 57dB Input / Output 50 ohms(VSWR 2.0:1) Impedance RF Input / Output RF Input Type N Female / Connectors RF Output 7/16 Female; Rear Panel Modulation AM / FM / Pulse Noise Figure ≦ 35dB Spurious -50dBc Harmonics (nom.) 2-3GHz: 0 to-3dBc; @Rated Power 3-6GHz: -3 to-8dBc 6-8GHz: -8 to -15dBc - Prime Power 120/208 AC +/-10%, 50/60 Hz, Three Phase - Power consumption 12KVA max. Mechanical - Cooling System Air cooled ,self contained Shock MIL-STD-810C, method 516.2 Vibration MIL-STD-810C, method 514.2 Environmental - Temperature 0° to 40° C Non-opera	Parameter	Specification
Output Power2-2.5GHz, 500W min. 600W typical2.5-7.5GHz, 500W min. 1000W typical7.5-8GHz, 500W min. 600W typicalInternal Pre-Amp.Input Ivel: 0dBm or lessGain @ rated power57dBInput / Output50 ohms(VSWR 2.0:1)ImpedanceRF Input / OutputConnectorsRF Output 7/16 Female; Rear PanelModulationAM / FM / PulseNoise Figure≤ 35dBSpurious-50dBcHarmonics (nom.)2-3GHz: 0 to-3dBc;@Rated Power3-6GHz: -3 to-8dBc6-8GHz: -8 to -15dBcPrime Power120/208 AC +/-10%, 50/60 Hz, ThreePhasePower consumption12KVA max.MechanicalConfigurationRack configuration19"W x 36"D x 24U [42" Panel space]HighCooling SystemAir cooled ,self containedShockMIL-STD-810C, method 516.2VibrationMIL-STD-810C, method 514.2EnvironmentalTemperature0° to 40° CNon-operating Temp-20° to 70°CHumidityHumidityUp to 95% without condensation	<u>Electrical</u>	
$\begin{array}{c c} 2.5-7.5 \text{GHz}, 500 \text{W min}. 1000 \text{W typical} \\ 7.5-8 \text{GHz}, 500 \text{W min}. 600 \text{W typical} \\ \hline \\ Internal Pre-Amp. Input level: 0 dBm or less \\ \hline \\ Gain @ rated power 57 dB \\ \hline \\ Input / Output 50 ohms(VSWR 2.0:1) \\ \hline \\ Impedance \\ \hline \\ RF Input / Output RF Input Type N Female / \\ \hline \\ Connectors RF Output 7/16 Female; Rear Panel \\ \hline \\ Modulation AM / FM / Pulse \\ \hline \\ Noise Figure & \leq 35 dB \\ \hline \\ Spurious & -50 dBc \\ \hline \\ Harmonics (nom.) & 2-3 GHz: 0 to-3 dBc; \\ @ Rated Power & 3-6 GHz: -3 to-8 dBc \\ \hline \\ 6-8 GHz: -8 to -15 dBc \\ \hline \\ Prime Power & 120/208 AC +/-10\%, 50/60 Hz, Three \\ \hline \\ Phase \\ \hline \\ Power consumption & 12 KVA max. \\ \hline \\ \hline \\ Mechanical \\ \hline \\ Cooling System Air cooled , self contained \\ \hline \\ Shock & MIL-STD-810C, method 516.2 \\ \hline \\ Vibration & MIL-STD-810C, method 514.2 \\ \hline \\ Environmental \\ \hline \\ Temperature & 0° to 40° C \\ \hline \\ Non-operating Temp - 20° to 70°C \\ \hline \\ Humidity & Up to 95\% without condensation \\ \hline \end{array}$	Frequency Range	2-8GHz
7.5-8GHz, 500W min. 600W typicalInternal Pre-Amp.Input level: 0dBm or lessGain @ rated power57dBInput / Output50 ohms(VSWR 2.0:1)ImpedanceRF Input Type N Female /ConnectorsRF Output 7/16 Female; Rear PanelModulationAM / FM / PulseNoise Figure \leq 35dBSpurious-50dBcHarmonics (nom.)2-3GHz: 0 to-3dBc;@Rated Power3-6GHz: -3 to-8dBc6-8GHz: -8 to -15dBcPrime Power120/208 AC +/-10%, 50/60 Hz, ThreePhasePower consumption12KVA max.MechanicalCooling SystemAir cooled ,self containedShockMIL-STD-810C, method 516.2VibrationMIL-STD-810C, method 514.2EnvironmentalTemperatureTemperature0° to 40° CNon-operating Temp-20° to 70°CHumidityUp to 95% without condensation	Output Power	2-2.5GHz, 500W min. 600W typical
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RF Input / OutputRF Input Type N Female / RF Output 7/16 Female; Rear PanelModulationAM / FM / PulseNoise Figure≤ 35dBSpurious-50dBcHarmonics (nom.)2-3GHz: 0 to-3dBc; @Rated Power@Rated Power3-6GHz: -3 to-8dBc 6-8GHz: -3 to-8dBcPrime Power120/208 AC +/-10%, 50/60 Hz, Three PhasePower consumption12KVA max.MechanicalConfiguration 19"W x 36"D x 24U [42" Panel space] HighCooling SystemAir cooled ,self contained ShockShockMIL-STD-810C, method 516.2VibrationMIL-STD-810C, method 514.2EnvironmentalTemperature0° to 40° C Non-operating Temp-20° to 70°C HumidityHumidityUp to 95% without condensation	Input / Output	50 ohms(VSWR 2.0:1)
ConnectorsRF Output 7/16 Female; Rear PanelModulationAM / FM / PulseNoise Figure≦ 35dBSpurious-50dBcHarmonics (nom.)2-3GHz: 0 to-3dBc;@Rated Power3-6GHz: -3 to-8dBc6-8GHz: -3 to -15dBcPrime Power120/208 AC +/-10%, 50/60 Hz, ThreePhasePower consumption12KVA max.MechanicalConfigurationRack configuration19"W x 36"D x 24U [42" Panel space]HighCooling SystemAir cooled ,self containedShockMIL-STD-810C, method 516.2VibrationMIL-STD-810C, method 514.2EnvironmentalTemperature0° to 40° CNon-operating Temp-20° to 70°CHumidityUp to 95% without condensation	Impedance	
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Noise Figure $\leq 35dB$ Spurious-50dBcHarmonics (nom.)2-3GHz: 0 to-3dBc;@Rated Power3-6GHz: -3 to-8dBc $6-8GHz: -3 to -15dBc$ Prime Power120/208 AC +/-10%, 50/60 Hz, ThreePhasePower consumption12KVA max.MechanicalConfigurationRack configuration $19"W \times 36"D \times 24U [42" Panel space] HighCooling SystemAir cooled ,self containedShockMIL-STD-810C, method 516.2VibrationMIL-STD-810C, method 514.2Environmental-20° to 70°CHumidityUp to 95% without condensation$	Connectors	RF Output 7/16 Female; Rear Panel
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6-8GHz: -8 to -15dBcPrime Power120/208 AC +/-10%, 50/60 Hz, Three PhasePower consumption12KVA max.MechanicalRack configuration 19"W x 36"D x 24U [42" Panel space] HighCooling SystemAir cooled ,self containedShockMIL-STD-810C, method 516.2VibrationMIL-STD-810C, method 514.2EnvironmentalTemperatureTemperature0° to 40° CNon-operating Temp-20° to 70°CHumidityUp to 95% without condensation	Harmonics (nom.)	2-3GHz: 0 to-3dBc;
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PhasePower consumption12KVA max.MechanicalConfigurationRack configuration 19"W x 36"D x 24U [42" Panel space] HighCooling SystemAir cooled ,self containedShockMIL-STD-810C, method 516.2VibrationMIL-STD-810C, method 514.2EnvironmentalTemperature0° to 40° CNon-operating Temp-20° to 70°CHumidityUp to 95% without condensation		6-8GHz: -8 to -15dBc
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ConfigurationRack configuration 19"W x 36"D x 24U [42" Panel space] HighCooling SystemAir cooled ,self containedShockMIL-STD-810C, method 516.2VibrationMIL-STD-810C, method 514.2EnvironmentalTemperatureTemperature0° to 40° CNon-operating Temp-20° to 70°CHumidityUp to 95% without condensation	Power consumption	12KVA max.
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VibrationMIL-STD-810C, method 514.2EnvironmentalTemperature0° to 40° CNon-operating Temp-20° to 70°CHumidityUp to 95% without condensation	Cooling System	Air cooled ,self contained
EnvironmentalTemperature0° to 40° CNon-operating Temp-20° to 70°CHumidityUp to 95% without condensation	Shock	MIL-STD-810C, method 516.2
Temperature0° to 40° CNon-operating Temp-20° to 70°CHumidityUp to 95% without condensation	Vibration	MIL-STD-810C, method 514.2
Non-operating Temp-20° to 70°CHumidityUp to 95% without condensation	Environmental	
Humidity Up to 95% without condensation	Temperature	0° to 40° C
· · · ·	Non-operating Temp	-20° to 70°C
Altitude 5,000 feet	Humidity	Up to 95% without condensation
	Altitude	5,000 feet

THESE SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE



Features [Build-in]

•	High Voltage power supplies Over/Under Voltage & Over Currents Protection
•	RS 232 & Ethernet Remote Control.
•	RF Input / Output Connectors on the Rear Panel.
•	Standby/RF_ON, Elapsed Time Metering in hours.
•	Filament/Beam Elapsed Time Metering in hours.
•	Color TFT Touch screen Display with Front Panel Controls and Indicators.

OPTIONS

001	VSWR Protection against output mismatch.
002	Alternate Prime Power (specify at time of order).
003	IEEE 488, Remote Control.
004	Forward RF Sample Port Type N Female -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	RF Safety Interlock, type BNC Connector.
009	Forward/Reflected Power Indication simultaneously on Front Panel display.
010	Slides for Rack mount.
011	External Harmonic filters for -20dBc harmonic reduction, Band 1 Filter: 2-3.5GHz, Band 2 Filter: 3.5-6GHz,
	Band 3 Filter: 6-8GHz. Note: Output will be affected when filters are connected to the Amplifier Output
	connector. Only one filter can be connected at a time.

