



## PT-KW Series Pulse TWT Microwave Power Amplifiers

1.0 – 18 GHz • 2,000 – 4,000 watts, Minimum Rated Power

<u>Standard Features for IFI PT-Series Pulse TWT Amplifiers</u>	
<b>Standard Features</b>	VSWR Reflected Power Protection, the unit operates without damage or oscillation into any magnitude of phase or load impedance, Open & Short Circuit Protection.
	* Alternate Prime Power (specify at time of order)
	GPIB IEEE 488 & RS232 Remote Control
	RF Sample Port on the Front Panel, 112R for rear panel
	Internal Pre-amplification to obtain rated output power with an input level of 0 dBm or less.
	RF Input/Output Connectors on the Front Panel, 118R for rear panel
	Internal Systems Diagnostics & Status Indicators
	Filament/Beam Elapsed Time Metering in hours
	RF Safety Interlock
	Forward/Reflected Power Indication simultaneously on Front Panel display

<u>PT- Series Specifications:</u>	
Frequency Range:	As Specified in Model Table
Rated Output Power:	As Specified in Model Table
Gain @ Rated Power:	As Specified in Model Table
Prime Power:	As Required for Customer (Some are listed below)
Input/output Impedance:	50 ohms
RF Input/ Sample Connectors:	Type N Female, unless specified otherwise
RF Output Connector:	Type SC or 716 Female up to 8 GHz, 8-12 GHz is WR90, 12-18 GHz is WR62, 7.5-18 GHz is WRD750, 6.5-18 GHz is WRD650 <u>Other waveguides available by request or specification (see Option 117)</u>
Input VSWR/Output VSWR:	2.0:1/ 2.5:1
Pulse Input:	BNC Female Front Panel {TTL into 50ohms standard} consult factory for special requirements
Pulse Width Range:	100nsec – 100usec
PRF Range:	Up to 100 KHz Standard, Higher PRF ranges available consult factory
Duty Cycle:	6% Standard, Lower & Higher PRF ranges subject to TWT spec.
Rise & Fall Time:	15 ns nominal; 20 ns maximum
Pulse to Pulse Jitter:	+/- 5 nsec maximum
Pulse Width Jitter:(Distortion)	+/- 5 nsec maximum
Pulse Recovery Time:	150 nsec maximum
Pulse Delay:	250 nsec maximum / 180 nsec typical
Pulse Droop:	0.5 dB/100usecs, 0.1dB/10usec
Power Output Stability:	0.2dB Pulse to Pulse at constant drive level & PRF
Pulse On/Off Ratio:	80 dB
Phase Stability Pulse to Pulse:	+/-1 degree nominal
Temperature:	0° to 50° C operating, -40° to 70° C non-operating
Humidity:	95% without condensation
Altitude:	10,000 feet operating, 50,000 non-operating
Cooling System:	Air cooled, self-contained
Modulation:	All types, AM, FM, Pulse
Configuration:	Rack Mount as specified in Model Table
Spurious Outputs:	<-60 dBc nominal

<u>Standard Prime Powers:</u>	
100, 115, 120 VAC ±10% 50/60 Hz, single phase	
200, 220, 230, 240VAC ±10% 50/60 Hz, single phase	
100/200VAC, 115/208 or 200/220/230/240VAC ±10% 50/60 Hz, three phase Wye or Delta and/or 400 Hz power is available.	
Special Prime Powers other then listed are subject to availability	

<u>Some Available Options for IFI PT- Series TWT Amplifiers</u>	
<b>Option 103 G/D:</b>	VSWR Reflected Power Protection “Graceful Degradation Feature” which will automatically reduce the input drive and fold back the output power when the average reflected power exceeds a preset limit of 3.0:1. The unit operates without damage or oscillation into any magnitude of phase or load impedance.
<b>Option 110-1E:</b>	GPIB IEEE-488 RS232 and Ethernet Remote Control
<b>Option 110-2:</b>	GPIB IEEE-488 and RS 422 Remote Control
<b>Option 110-3:</b>	GPIB IEEE-488 and RS 485 Remote Control
<b>Option 113:</b>	Chassis Slides for 19” Rack Mounting
<b>Option 118F or R:</b>	Front Panel RF Connections 118R for Rear Panel RF Connections
<b>Option 123F or R:</b>	Reflected RF Sample Port -40, -50 or -60dB N or SMA, Front or Rear Panel





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**Outline Configurations:**

