



## GT7525 Series



Instruments for Industry, GT7525 Series TWT Amplifiers provide outstanding RF performance. These 2.5 to 7.5 GHz TWTA's (traveling wave tube amplifiers) have field proven reliability and industry leading performance. Making these amplifiers ideal for multiple high frequency high power applications including but not limited to RF immunity testing.

Operation safety and ease of use are paramount in IFI TWT amplifier product designs. The IFI GT7525 series include a full complement of RF and hardware protection systems including high VSWR, over-current and voltage protection as well as redundant thermal and airflow sensors to prevent the TWT from overheating. In addition, the GT7525 series includes a state-of-the-art touch screen interface that is sophisticated, comprehensive, but yet simple to use. Our amplifiers feature modular construction and this concept of modular design minimizes internally produced EMI signal leakage and provides easy access for field service and rapid turnaround at depot level repair facilities.

### MAIN FEATURES

- Intuitive user interface
- Rugged Modular Design Construction
- USB, Ethernet, GPIB and RS232 interface
- 3 year warranty (1 Year on the tube)
- Solid State Power Supply

The touch screen interface shows forward/reverse power indication, system status and self-diagnostic information. All the TWTA operating parameters are simultaneously available via the touch screen interface as well as over the remote bus. For remote operation GPIB, RS232, USB & Ethernet remote interfaces are included as standard. To meet individual application needs, the GT7525 Series TWT power amplifiers can be easily customized with harmonic filters or other options. With this capability and its reliable elegant design, the GT7525 series amplifiers are the perfect amplifier for your microwave needs. IFI offers different size packages and configurations to best suit your application. A product and design built to last!

### Models & General Specifications

Model Number	Frequency Range	Rated Power	Gain	Mains Power	Weight	Size
GT7525-1000	2.5 GHz - 7.5 GHz	1 kW	60 dB	7 KVA	150 kg	Rack Integrated
GT7525-200		200 W	53 dB	2.5 KVA	32 kg	19 inch, 3U Case, 680 mm Deep
GT7525-300		300 W	55 dB	3 KVA	37 kg	19 inch, 6U Case, 680 mm Deep
GT7525-500		500 W	57 dB	4 KVA	39 kg	



**RF Specifications**

Pulse Width Range	100 nsec to CW
PRF Range	Up to 100 KHz
Duty Cycle	0 - 100% (up to CW)
Rise & Fall Time	25 nsec nominal 45 nsec 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 / 100 µsec, 0.25 dB / 10 µsec
Power Output Stability	0.2 dB Pulse to Pulse at Constant Drive Level
Pulse On / Off Ratio	80 dB
Modulation Formats	AM, FM, Pulse
Output VSWR Tolerance	<3:1, Infinite any phase, > 3:1 Safety Trip
Stability	Unconditional
Output Impedance	50 Ohm
Input VSWR	2:1 (typical)
Output VSWR	2.5:1 (max)
Spurious	-50 dBc
Supply Frequency	47 to 63
Pulse Input	Front Panel BNC Female, (TTL into 50 ohms as Standard)
Maximum Input Power (no damage)	10 dBm

**General Specifications**

Safety Interlock	Via rear panel mounted BNC-female
Supply Voltage	< 3KVA Single Phase 90 to 264 VAC > 3KVA Three Phase, 5 Wire STAR, 380 to 415 VAC / 4 Wire Delta, 208 to 240 VAC
RF Input Connector	Type N female
RF Output Connector	Type SC or 7/16 Female
Com. Interface	GPIB, RS232, Ethernet & USB
Cooling System	Air Cooled, Self-contained
Available Options	Option 103, VSWR Reflected Power Protection "Graceful Degradation" which will automatically reduce the input drive and foldback the output power when the average reflected exceeds a preset limit of 3:1 Option 118F or R, Front or Rear Panel RF Connections Option 123F or R, Front or Rear Panel Reflected RF Sample Port, -40, -50, -60 dB Option 129, Harmonic Filter mounted either internally, externally or separate chassis mounted. (amplifier variant dependent)

**Available Models**

Product	Description
GT7525-1000	2.5 to 7.5 GHz CW / Pulsed TWT Microwave Power Amplifier, 1000 W
GT7525-200	2.5 to 7.5 GHz CW / Pulsed TWT Microwave Power Amplifier, 200 W
GT7525-300	2.5 to 7.5 GHz CW / Pulsed TWT Microwave Power Amplifier, 300 W
GT7525-500	2.5 to 7.5 GHz CW / Pulsed TWT Microwave Power Amplifier, 500 W