

PTS-1 2400-2500 MHZ SOLID-STATE DESKTOP MICROWAVE GENERATOR

PrecisePower™

Key Features

- Precision frequency and power control
- Revolutionary software control utilizing a Windows™ based GUI
- Versatile frequency sweeping modes
- One button automatic load tuning
- Integral isolators protect from severe output mismatch
- Built in real-time scalar network analyzer (S11, S21)
- Real-time adaptive power control
- RF power transistors have 500,000+ hour MTBF
- Distributed high-speed multi-processor control architecture
- Convenient coaxial connector output



Frequency Range

- Covers the entire 2400-2500 MHz ISM band
- Sweep Frequency Step Size: 1 MHz
- Absolute Frequency Accuracy: +/- 2.5 ppm
- Frequency Stability: +/- 0.5 ppm
- Phase adjustment 0-360°, 1.4° resolution
- Operating Modes: fixed, single frequency, full/partial band sweep, or optimized frequency hopping
- Sweep Step Time: 10 msec. to 1 second adjustable
- Frequency change response time <1 msec.

Modulation

- Modes: CW, pulse width modulation, or external RF input
- PWM Mode: 10 Hz to 1 kHz pulse rate, 0–100% duty cycle
- Gas plasma ignition feature
- Low level RF input and output connectors permit multiple generators to be phase locked.

Microwave Power Output

- Up to 1 kilowatt continuous power output
- Power set resolution: 1 watt at full power
- Power Amplifiers: Rugged NXP LDMOS transistors
1 KW modular power blades, fault tolerant
- Harmonic suppression >50 dBc
- Power control accuracy: 0.1%
- High accuracy timer
- Power measurement accuracy: Forward Power 0.1%,
Reflected Power 0.5%.
- Max. mismatch for full power output: 6 dB RL/3:1 VSWR
- Max. mismatch with power fold back; 4 dB RL/4.5:1 VSWR
- Power switching speed: <1 msec.

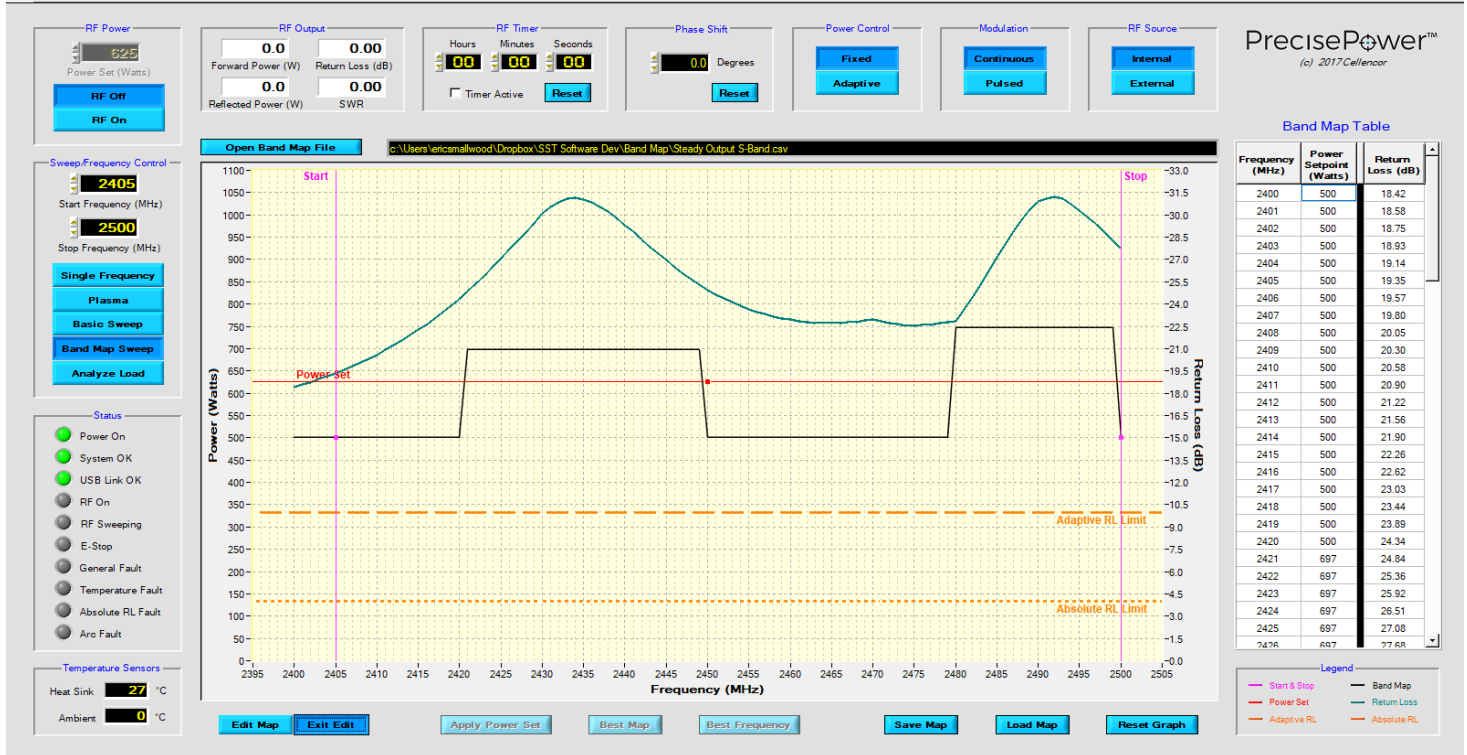
Control System

- Feature-rich Windows™-based interactive control software
- USB 2.0 interface to Windows PC
- Complete LabView™ support
- Local or remote operation
- Ethernet remote control
- PLC-type hardware control interface with 24 VDC and 20 ma. current loop inputs and outputs
- Arc detection and emergency stop inputs with 1 us. response time



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Main User Interface Screen

Software Highlights

- Point and Click power and frequency setting across the band
- Real time display of forward and reflected power and return loss
- Automatic selection of best single frequency
- Automatic generation of optimal band map for frequency sweeping
- Integral one port scalar real time network analyzer
- Power utilization measurement
- Band map edit, save, and load
- Programmable ignition pulse for gas plasmas

RF Output

- 7/16 DIN coaxial connector outputs

Power Supply

- AC mains: 180-264 VAC single phase 50/60 Hz
- High efficiency 30 volt switch mode power supply
- Line-to-RF-conversion efficiency: 55%
- Air Cooled – no water chiller required
- Ambient environment temperature: 0⁰ - 50⁰ C

Dimensions and Weight:

- Dimensions: 5.2" Hx21.26" Lx 17.58" W
- Weight: 55 lbs.

These are preliminary specifications and are subject to change. Patents applied for.