PTL-50 902-928 MHZ SOLID-STATE HIGH-POWER MICROWAVE GENERATOR

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
• Built in real-time load analysis (S11, S21)
• Real-time adaptive power management
• RF power transistors have 500,000+ hour MTBF
• Distributed high-speed multi-processor control architecture
• Waveguide or independent coaxial outputs

Frequency Range
• Entire 902-928 MHz ISM band
• Frequency Step Size: 100 kHz
• Absolute Frequency Accuracy: +/- 2.5 ppm
• Frequency Stability: +/- 0.5 ppm
• Phase adjustment 0-360°, 1.4° resolution
• Operating Modes: fixed, single frequency, band sweep, or optimized frequency hopping
• Sweep Step Time: 10 msec. to 1 second adjustable
• Frequency change response time <1 msec.

Microwave Power Output

<table>
<thead>
<tr>
<th>Model</th>
<th>Maximum Power</th>
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<tbody>
<tr>
<td>PTL-50</td>
<td>50 KW</td>
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• Power set resolution: 1 watt at full power
• Power Amplifiers: Rugged NXP LDMOS transistors
• 2.5 KW modular power blades, fault tolerant
• Harmonic suppression >50dBc
• 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.

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.

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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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 scalar network analyzer
- Band map edit, save, and load
- Programmable ignition pulse for gas plasma

RF Output

- WR-975 waveguide

Power Supply

- AC mains: 360 to 528 VAC three phase 50/60 Hz
- High efficiency 50 volt switch mode power supply
- Line-to-RF-conversion efficiency: 55%
- Water Cooled
- Ambient environment temperature: 0º - 50º C

Dimensions and Weight:

- PTL-50: 52”H x 52”D x 60”W, Weight: 2500 lbs.

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