

2450MHz

1kW

LEANGEN-2450M-1000-M 1kW Solid-State Microwave Generator

LEANGEN-2450M-1000-M is a compact, lightweight and highly reliable 2450MHz 1kW Solid-State Generator for ISM applications at 2450MHz, fully based on steady solid-state technology with high power efficiency. The module is powered by a single 48Vdc power supply and it features a 0-1000W CW output with exceptional spectral purity at all power levels and absolute reliability thanks to built-in circulator with integrated dummy load. Its output power can be precisely regulated from zero to 1000W and its output frequency can be fine-tuned in the range 2400-2500MHz. The product comes equipped with a digital serial control interface, allowing smart industrial applications in solid-state dynamic modular systems counting multiple modules controlled by a central digital brain.

The module has been conceived to drive probes or to radiate resonant cavities, with plenty of applications as solid-state cooking, microwave chemistry, plasma ignition and shaping, materials curing, semiconductor manufacturing, automotive ignition and many others.

LEANGEN-2450M-1000-M is fully tested with pulsed power applications and is designed to operate with liquid cooling. In order to guarantee straightforward and successful integration, it is equipped with accurate real-time measurement of forward and reflected power and with a user-friendly control interface for comprehensive setting and control.

The module features an external gating input to manage externally driven pulsed processes and an interlock control signal that allows safe operating conditions in association with different kinds of applicators.

LEANGEN-2450M-1000-M is designed to be the perfect solution for magnetron replacement in new lines of industrial equipment aiming at extreme compactness, flexibility of operation and long life cycles with extremely low maintenance and zero downtime issues.

QUICK OVERVIEW

Compact, lightweight and top-reliable

48Vdc power supply

Water cooled

Tested with CW and Pulsed modes

2400-2500MHz frequency range

7/16 DIN 50Ω coaxial output

Real-time measurement of reflected power

Highly tolerant to strong load mismatch conditions

Digital control interface

Built-in circulator with integrated dummy load

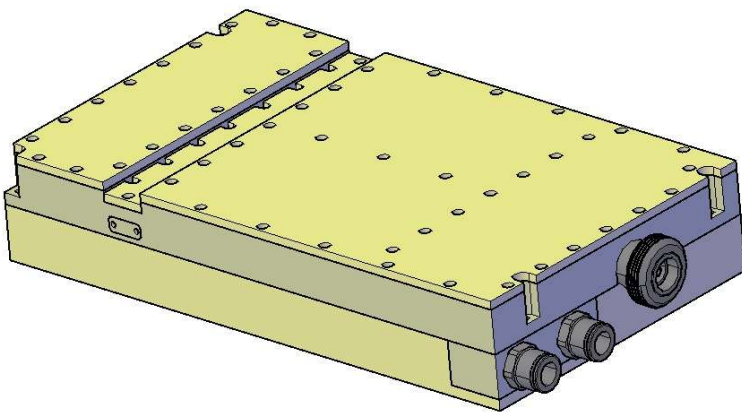
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1kW Solid-State Microwave Generator

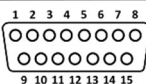
Technical Specifications

Output Power	0-1000W CW @2400-2500MHz
Power Modes	Tested with CW and Pulsed modes, compliant with industrial applications
Output Connector	7/16 DIN 50Ω
Technology	GaN
Output RF Isolation	Built-in circulator with integrated dummy load ^(*)
Operating Frequency	2400-2500MHz step 100kHz
Power Supply	48Vdc
Power Efficiency	55%
Forward and Reflected Power Meas.	Real-time
Control&Monitoring	RS485 interface
GUI for PC Control	Available on request
Cooling Water Temperature	18°C – 28°C
Cooling Water Flow	≥ 5 liters/min
Size	281x150x47mm
Weight	4.3kg

() The integrator shall avoid excessive load mismatch by proper reflected power monitoring*



15-pin Control Connector*



- | | |
|------------------------|-------------------------------|
| 1) RS485_1 (A) | 9) RS485_1 (B) |
| 2) RS485_2 (A) / CAN H | 10) RS485_2 (B) / CAN L |
| 3) EXT GATING | 11) I2C SDA |
| 4) I2C SCL | 12) RESET |
| 5) INTERLOCK | 13) ON/OFF |
| 6) N.C. | 14) +Vdd SERVICE CIRC. (Opt.) |
| 7) N.C. | 15) N.C. |
| 8) GND. | |

() Configurable pinout - contact factory for details*

