

LEANGEN-2450M-450-M

450W Solid-State Microwave Generator

LEANGEN-2450M-450-M is a compact, light-weight and highly reliable OEM microwave generator module for ISM applications at 2450MHz, fully based on steady solid-state technology with high power efficiency. The module is powered by a single 32Vdc power supply and it features a 0-450W 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 450W and its output frequency can be selected in the range 2400-2500MHz. Moreover, the product is optionally equipped with a digital serial bus 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 generation, organic tissue ablation and automotive ignition.

LEANGEN-2450M-450-M is fully tested with pulsed power applications and is designed to operate with forced air or liquid cooling, depending on the final application requirements. In order to guarantee straightforward and successful integration, it is equipped with accurate real-time measurement of reflected power and with a user-friendly control interface for comprehensive setting and control.

This exclusive module on the market is a building block for LEANFA's award-winning **KOPERNICOOK®** system, a revolution in Microwave and RF processing of food and agricultural commodities introduced by an intelligent use of innovative solid-state generators.



QUICK OVERVIEW

Compact, light-weight and top-reliable

Single 32Vdc power supply

CW 0-450W with top spectrum purity in full power range

2400-2500MHz frequency range

Can drive probes or radiate resonant cavities

Real-time measurement of reflected power

User-friendly control interface

Designed for pulsed power applications

High-efficiency

Forced air or liquid cooling

Built-in circulator with integrated dummy load

LEANGEN-2450M-450-M

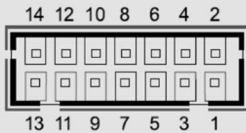
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Technical Specifications

Output Power	0-450W CW @2450MHz
Power Modes	Tested with CW and Pulsed modes, compliant with industrial applications
Output Connector	T.B.D. 50Ω
Technology	Fully Solid-State: LDMOS driver and power stage
Output RF Isolation	Built-in circulator with integrated dummy load
Operating Frequency	2400-2500MHz step 2MHz (option: step 10kHz)
Power Supply	32Vdc
Power Efficiency	50%
Output Power Measurement	Real-time
Reflected Power Measurement	Real-time, better than 5% full-scale accuracy
Output Protection	Hardware Protection against 100% load mismatch ^(*)
Control&Monitoring	Analogue interface (standard), Serial interface (optional)
GUI for PC Control	Available on request
Cooling Option	Forced-air heatsink or liquid-cooling cold plate available on request
Size	172x65x27mm
Weight	1kg

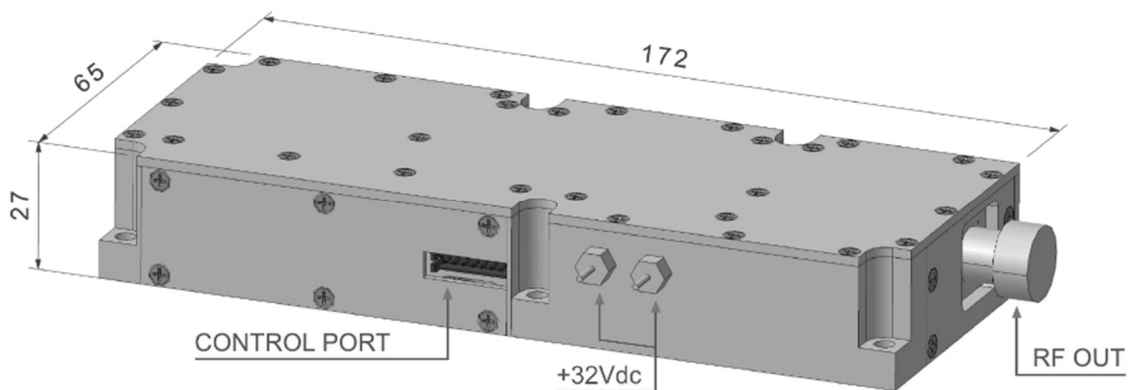
(*) The integrator shall avoid excessive load mismatch by proper reflected power monitoring

Standard Control Port pinout



1 Forward Power (out)	0-5V	2 GROUND	0V
3 Reflected Power (out)	0-5V	4 Temperature (out)	1°C/10mV
5 ON/OFF (in)	Open-ON/0V-OFF	6 Power Supply*	+5V (250mA)
7 VDrive	+32V	8 VDrive	+32V
9 Not Used (leave open)		10 Gain Control (in)	0-5V
11 Not Used (leave open)		12 PLL Lock signal (out)	UnLock-0V/Lock-3,3V
13 Not Used (leave open)		14 Not Used (leave open)	

*Max voltage +5,3V



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 Due to our continuous improvement effort, specifications are subject to change without prior notice
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