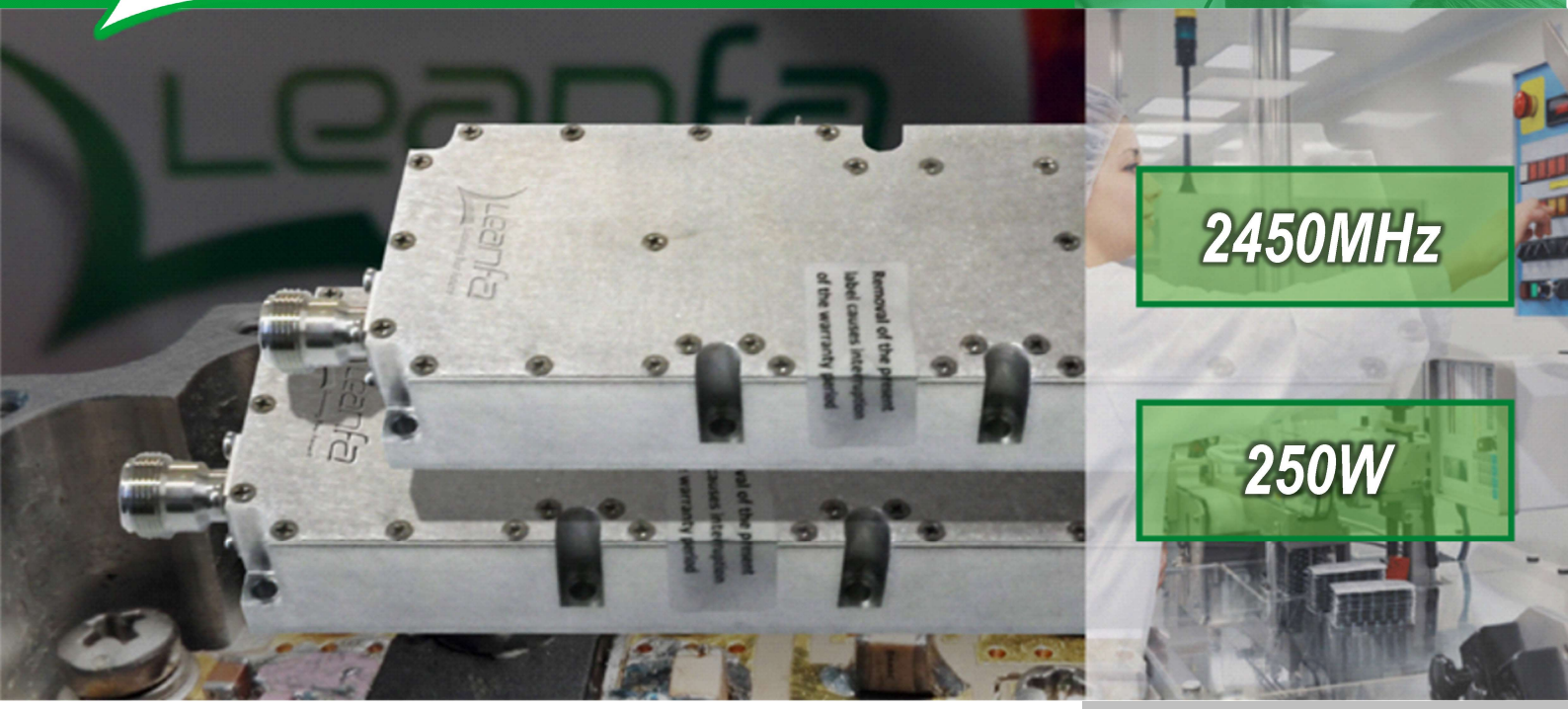
Leanfa
Shaping Energy Waves

OEM MICROWAVE GENERATOR



LEANGEN-2450M-250-M

OEM Solid-State Microwave Generator

LEANGEN-2450M-250-M is a compact, lightweight and super-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 30Vdc power supply and it features a 0-250W 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 250W 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 (single/multiple) or to radiate resonant cavities, with plenty of applications as solid-state cooking, microwave chemistry, plasma lighting, organic tissue ablation and automotive ignition.

LEANGEN-2450M-250-M is fully tested with pulsed power applications and is designed to perfectly operate with forced air cooling. In order to guarantee straightforward and successful integration within industrial plants, 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 the 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.

NO Magnetron

QUICK OVERVIEW

Compact, lightweight and top-reliable

Single 30Vdc power supply

CW 0-250W with top spectrum purity in full power range

2400-2500MHz frequency range

Can drive probes (single/multiple) or radiate resonant cavities

Real-time measurement of reflected power

User-friendly control interface

Designed for pulsed power applications

High efficiency

Perfect with forced air cooling

First stone of our KOPERNICOOK® system

Built-in circulator with integrated dummy load

LEANGEN-2450M-250-M

OEM Solid-State Microwave Generator

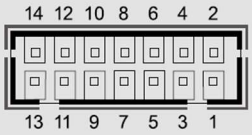
Technical Specifications

Output Power	0-250W CW @2450MHz
Power Modes	Tested with CW and Pulsed modes, compliant with industrial applications
Output Connector	N female, 50Ω (option: SMA)
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)
Operating Temperature	Max 60°C(1)
Power Supply	28-32Vdc
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(2)
Control&Monitoring	Analogue interface (standard), Serial interface (optional)
Spurious Emissions	<50dBc
GUI for PC Control	Available on request
Cooling Option	Forced-air heatsink or liquid-cooling cold plate available on request
Size	172x65x27mm
Weight	1kg

(1) Internal generator temperature as measured by the embedded sensor. Typical temperature derating of the nominal output power is 1%/°C above 55°C.

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

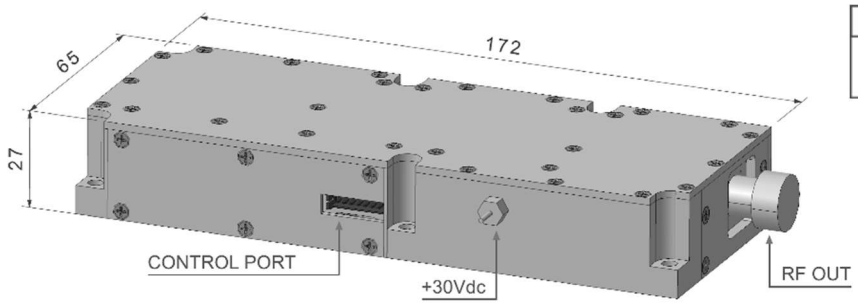
Standard Control Port pinout



1	Forward Power (out)	**0-5V**
3	Reflected Power (out)	**0-5V**
5	ON/OFF (in)	**Open-ON/0V-OFF**
7	VDrive	**+30V**
9	Not Used (leave open)	
11	Not Used (leave open)	
13	Not Used (leave open)	

2	GROUND	**0V**
4	Temperature (out)	**1°C/10mV**
6	Power Supply*	**+5V (250mA)**
8	VDrive	**+30V**
10	Gain Control (in)	**0-5V**
12	PLL Lock signal (out)	**UnLock-0V/Lock-3,3V**
14	Not Used (leave open)	

*Max voltage +5,3V



LEANGEN-2450M-250-M Generator	
LEANGEN-2450M-250-M-A	*Analogue control interface*
LEANGEN-2450M-250-M-D	*RS485 control interface*

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