



## LEANGEN-2450M-250-M

### Solid-State Microwave Generator

**LEANGEN-2450M-250-M** is the cutting-edge tool for ISM microwave applications, born after the perfect matching between LEANFA's unique know-how and the call for innovation soundly raised by worldwide industrial operators.

**LEANGEN-2450M-250-M** is a compact, light-weight 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.



### QUICK OVERVIEW

*Compact, light-weight 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

## Solid-State Microwave Generator

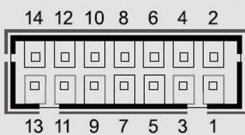
### Technical Specifications

<b>Output Power</b>	0-250W CW @2450MHz
<b>Power Modes</b>	Tested with CW and Pulsed modes, compliant with industrial applications
<b>Output Connector</b>	N female, 50Ω
<b>Technology</b>	Fully Solid-State: LDMOS driver and power stage
<b>Output RF Isolation</b>	Built-in circulator with integrated dummy load
<b>Operating Frequency</b>	2400-2500MHz step 2MHz (option: step 10kHz)
<b>Operating Temperature</b>	Max 60°C <sup>(1)</sup>
<b>Power Supply</b>	28-32Vdc
<b>Power Efficiency</b>	50%
<b>Output Power Measurement</b>	Real-time
<b>Reflected Power Measurement</b>	Real-time, better than 5% full-scale accuracy
<b>Output Protection</b>	Hardware Protection against 100% load mismatch <sup>(2)</sup>
<b>Control&amp;Monitoring</b>	Analogue interface (standard), Serial interface (optional)
<b>Spurious Emissions</b>	<50dBc
<b>GUI for PC Control</b>	Available on request
<b>Cooling Option</b>	Forced-air heatsink or liquid-cooling cold plate available on request
<b>Size</b>	172x65x27mm
<b>Weight</b>	1kg

(1) Internal generator temperature as measured by the embedded sensor

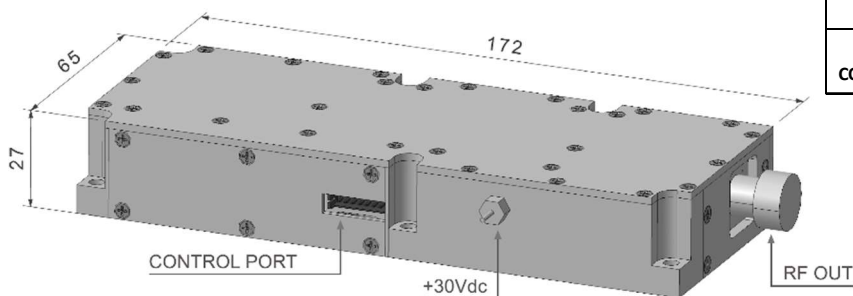
(2) The integrator shall avoid excessive load mismatch by proper reflected power monitoring

Standard Control Port pinout



<b>1</b>	Forward Power (out)	0-5V	<b>2</b>	GROUND	0V
<b>3</b>	Reflected Power (out)	0-5V	<b>4</b>	Temperature (out)	1°C/10mV
<b>5</b>	ON/OFF (in)	Open-ON/0V-OFF	<b>6</b>	Power Supply*	+5V (250mA)
<b>7</b>	VDrive	+30V	<b>8</b>	VDrive	+30V
<b>9</b>	Not Used (leave open)		<b>10</b>	Gain Control (in)	0-5V
<b>11</b>	Not Used (leave open)		<b>12</b>	PLL Lock signal (out)	UnLock-0V/Lock-3,3V
<b>13</b>	Not Used (leave open)		<b>14</b>	Not Used (leave open)	

\*Max voltage +5,3V



GEMD-0005XNN - 250W 2450MHz Generator

OUTPUT CONNECTOR	N SMA	CONTROL VOLTAGE	0-5V 0-30V	CONTROL INTERFACE	ANALOGUE RS485
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LEANFA Srl

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

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