

LEANGEN-433M-200-M

Solid-State Microwave Generator

LEANGEN-433M-200-M is a state-of-the-art 433MHz solid-state generator, born after the close technological cooperation between LEANFA's R&D department and the main semiconductor devices manufacturers, and thanks to the valuable in-field feedback obtained from global industrial operators.

LEANGEN-433M-200-M is a compact, light-weight and super-reliable OEM microwave generator module for different applications at 433MHz, fully based on steady solid-state technology with high power efficiency. The module is powered by a single 28Vdc power supply and it features a 0-200W CW output with exceptional spectral purity at all power levels and absolute reliability thanks to in-built circulator with integrated dummy load. Its output power can be precisely regulated from zero to 200W and its output frequency can be selected in the range 423-443MHz. 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 for applications as materials or food heating, clinical hyperthermia, organic tissue ablation, chemical processing, plasma lighting and scientific experimentation.

LEANGEN-433M-200-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 based on perfect interaction between finely-tuned modular hardware and smart distributed software systems, a revolution in microwave processing allowing customized architectures and fully automated workflows, thanks to an intelligent use of innovative solid-state generators.



QUICK OVERVIEW

Compact, light-weight and top-reliable

CW 0-200W with top spectrum purity in full power range

Single 28Vdc power supply

423-443MHz frequency range

Real-time measurement of reflected power

User-friendly control interface

Designed for CW and pulsed power applications

High-efficiency

Perfect with forced air cooling

In-built circulator with integrated dummy load

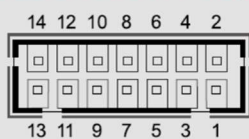
LEANGEN-433M-200-M

Solid-State Microwave Generator

Technical Specifications

| | |
|------------------------------------|---|
| Output Power | 0-200W CW @433MHz |
| Power Modes | Tested with CW and Pulsed modes, compliant with industrial applications |
| Output Connector | N female, 50Ω |
| Technology | Fully Solid-State: LDMOS driver and power stage |
| Output RF Isolation | In-built circulator with integrated dummy load |
| Operating Frequency | 423-443MHz step 500kHz |
| Power Supply | 28Vdc |
| Power Efficiency | 70% |
| 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) |
| Spurious Emissions | T.B.D. |
| GUI for PC Control | Available on request |
| Cooling Option | Forced-air heatsink or liquid-cooling cold plate available on request |
| Size | 180x65x27mm |
| Weight | 1kg |

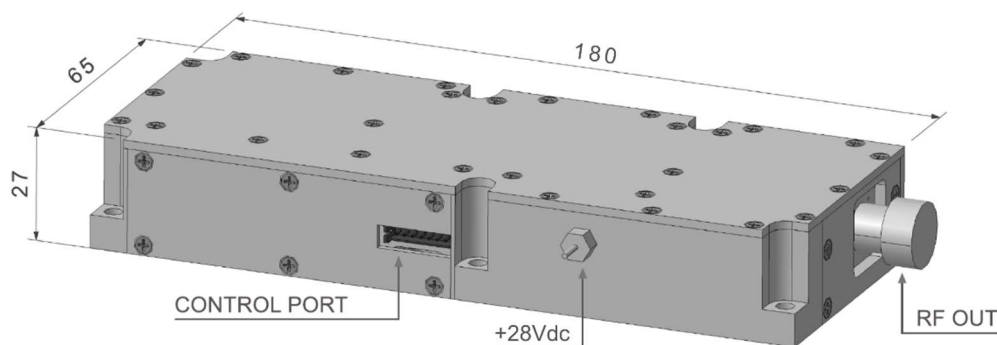
Standard Control Port pinout



| | | |
|-----------|-----------------------|----------------|
| 1 | Forward Power (out) | 0-5V |
| 3 | Reflected Power (out) | 0-5V |
| 5 | ON/OFF (in) | Open-ON/0V-OFF |
| 7 | VDrive | +28V |
| 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 | +28V |
| 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



LEANFA Srl
Via C. A. Dalla Chiesa, 6
70037 Ruvo di Puglia - Bari – ITALY
www.leanfa.com
leanfa@leanfa.com

LEANFA® and KOPERNICOOK® are international registered trademarks, property of LEANFA Srl
Due to our continuous improvement effort, specifications are subject to change without prior notice
Rev. 1.1 – 11 January 2019

