

KU SG 2.45-250 D, Microwave Power Generator

2400 ... 2500 MHz • 0 ... 250 W

- Remote control
- Frequency and output power configurable
- Operational safety through numerous protection circuits and monitoring

With the KU SG 2.45 - 250 D, Kuhne electronic offers an improved successor to the KU SG 2.45 - 250A in the ISM frequency range around 2.45 GHz. Solutions for all industrial applications become clear, such as plasma generation, microwave heating, medical applications or surface and material treatment.

Included supply:

DC-supply connector

Description

With the KU SG 2.45–250 D Kuhne electronic offers a high power microwave generator for the ISM band around 2.45 GHz. This device can be used as power source for microwave heating applications. As well it can also be used in medical applications, for propagation tests of electromagnetic waves, EMC tests, plasma generation and various other applications.

The KU SG 2.45–250 D can be controlled via a serial interface (3.3 V level). Warnings and alarms are signaled through a LED on the signal generator.

The RF output signal can be adjusted between 2400 ... 2500 MHz in steps of up to 10 kHz; the output power is adjustable between 0 and 250 W in steps of 1 W. Protection against mismatch (adjustable) and overtemperature are integrated.

Features

- Adjustment of frequency in steps of 100 kHz or 10 kHz
- Adjustment of the output power from 0 W ... 250 W in 1 W increments
- Frequency-Sweep function
- Pulse-function (pulse width and duty cycle adjustable)
- Algorithm to find the frequency with minimum reflection
- Isolator for protection against high VSWR
- Monitor function of VSWR and (adjustable)
- Monitoring of transistor temperature
- Switch-off if transistor temperature is too high.
- Monitoring of forward and reflected power
- Over- and Undervoltage warning and protection
- ON/OFF – Control over interface or pin (ext. voltage)

Applications

- Warming or heating through microwaves
- Plasma generation
- Scientific investigation of propagation of electromagnetic waves

Important notes

Please notice the following:

- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.

- Further information about dimensioning of heat sinks is available on our FAQ site.



Technical specifications:

| | |
|----------------------------|--|
| Output / impedance | N-female / 50 ohms |
| Frequency range | 2400 ... 2500 MHz |
| Frequency step size | 100 kHz |
| Frequency step option | 10 kHz |
| Frequency accuracy | +/- 3 ppm |
| ON Voltage | 3.3 ... 10 V |
| Output power | 0 ... 250 W |
| Power steps | 1 Watt |
| Pulsewidth | 25 ... 99990 µs |
| Pulsewidth option | 1 ... 24 µs (without ALC), period from 6 µs |
| Pulsewidth option | up to 998 ms width and 999 ms period |
| Pulsperiod | 26 ... 99999 µs |
| Protection functions | VSWR (Isolator), Over Temperature, OVP, UVP, OCP |
| Remote control | analog interface 3.3 V UART Interface |
| Supply Voltage | 32 V DC |
| Current consumption | typ. 16 A, max. 18 A (@ 250 W) |
| Operating case temp. range | -20 ... +60 °C |
| Storage temperature | -40 ... 70 °C |
| Case | milled aluminium / copper |
| Dimensions | 147 x 111 x 25 mm |
| Weight | 900 g (typ.) |