

PLT12-102S



1000W
162,50 MHz Amplifier

ISM CW AMPLIFIER

GENERAL INFORMATION

The PLT12-102S power amplifier operates at frequency of 162,50MHz and it is rated for continuous duty at an RF output power of 1000 Watts. It is mainly designed as final power stage and it uses a single last generation LDMOS device capable of 1000 W RF output. The module is realized with a very compact layout to maximize the number of pallet in high power amplifiers and include the bias circuits, matching network and circuits for stabilization of the operating point. The configuration of the amplifier is a “push-pull” stage coupled by means of the combining network fully integrated in the RF block. This design allows obtaining broadband high efficiency and extremely low harmonic emissions.

TECHNICAL SPECIFICATIONS ($t_h = 25\text{ }^{\circ}\text{C}$; $50\text{ }\Omega$ loaded ; $V_{dc} = 50\text{V}$)

- Output power: $\geq 1000\text{ W CW @1dB c.p.}$
- Power Gain: $\geq 22\text{ dB (@ full power) ; 24dB Max.}$
- Input power: 6 W (nominal)
- Frequency range: $162,50\text{MHz } \pm 2\text{MHz}$
- Class operation: AB
- Drain current: 29 typical
- Drain efficiency: $> 70\% (@ 1000\text{ W CW})$
- Input return loss: $\geq 17\text{ dB}$
- Insertion phase variation: $\pm 5^{\circ}\text{ max}$
- Gain variation: $\pm 0,25\text{dB max}$
- Harmonic emissions: $\leq 30\text{dBc}$
- Power supply requirement: $50\text{Vdc } \pm 2\% ; 30\text{A max.}$
- Heat sink requirement: $\leq 0.05\text{ }^{\circ}\text{C/W}$
- Operating temperature: $0^{\circ}\text{C to } +45^{\circ}\text{C}$
- Heatsink temperature: $0^{\circ}\text{C to } +75^{\circ}\text{C}$
- Dimensions: $115 \times 52 \times 20\text{mm}$
- Weight: 250 gr

RF MODULE LAYOUT

