Specifications

- ***Working Frequency Range 2,9 – 3,15 GHz***
- ***Pulsed output power 120 W***
- ***VSWR input max. 2***
- ***Power supply +28 V 1,1 A; -12 V 0,05 A***

The microwave power amplifier UM 100 is intended to operate as a preamplifier or a final power amplifier in radio navigation and detection systems and may be used to amplify pulsed signals in S-band.

The power amplifier has an internal system of automatic input power control which allows to stabilize output power when input power is changing within 15,5 dB in relation to nominal value.

The monitoring system cuts off power supply of the amplifier when the temperature of enclosure reaches 70 C°, when the value of positive voltage is exceeded, as well as when negative voltage is lost. The monitoring system will also automatically limit the width and duty cycle of the input radio pulse to acceptable values.

Structurally the amplifier is made as two sealed modules in aluminum enclosures mounted on a heat sink. It has coaxial input and output (female) with 7/3 mm section. There is an isolator at the unit output.

Maximum allowable operating conditions

Parameter	Value		
	min	typical	max
Positive supply voltage, V	24	28	30
Negative supply voltage, V	minus 9	minus 12	minus 15
Maximum allowable input power, mW	-	-	50
*Output radio pulse width, μsec	1	-	35
*Input pulse repetition period, μsec	700	-	-
Maximum allowable temperature of enclosure, ºC	-	-	70°C
Working temperature range, ºC	-50	-	+60

* Limited by software and can be changed on customer's demand, without change of design and integrity of the product.

Main specifications

Parameters and conditions of measurement	min	typical	max
Frequency range, GHz	2,9	-	3,15
Input pulse power (τ=24 μsec, Q=100), mW:	0,8	1,5	20
Output pulse power (τ=24 μsec, Q=100), W	100	120	-
Gain flatness, dB	-	0,8	1,5
Consumption current from positive voltage supply (at τ=24μsec, Q=100), A	0,9	1,1	1,5
Consumption current from negative voltage supply, mA	-	30	50
VSWR input	-	1,7	2

Outline drawing