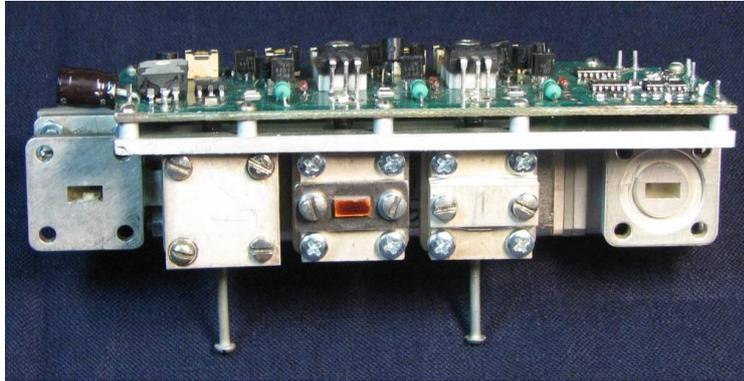




33–36 GHz pulse power amplifier



APPLICATION

Pulsed amplifier **M322005** is designed for application in Ka-band transmitting devices as a power amplifier. In a band of operating frequencies $F_0 \pm 0.5$ GHz the amplifier provides output pulse power level not less than 50 W at pulse width 30–200 ns and pulse ratio Q not less than 800.

DESCRIPTION

Amplifying module **M322005** is made by scheme of consecutive power combining of three pulse stages operating in injection locking mode. Power value (pulse or continuous) in the first stage input is approximately 50 mW.

Amplifying stages are parted by the isolators. The input and output of the amplifier are protected from external load also by the isolators.

Special silicon double drift highly effective IMPATT-diodes of RI "Orion" production are used as active elements. Each of three IMPATT-diodes contained in the amplifier is supplied by pulse current source delivered complete with the pulse amplifier. The pulse current source has protection against the wrong sequence and duration of control pulses.



SPECIFICATIONS

Central operating frequency, F_0^* , GHz	33–36
Operating frequency band, GHz	$F_0 \pm 0.5$
Output pulse power, W, not less	50
Pulse duration of output signal, ns	30–200
Pulse ratio, Q (ratio of pulse repetition period of start to microwave pulse width), not less	800
Gain, dB, not less	30
Power of input signal (pulse or CW), mW	50–100
Pulse duration of input signal, nsec	30–200
Supply voltage, V/ current consumption, mA	+90/55 +5/15
<i>Electrical characteristics of start control pulse</i>	
Input levels on load 50 Ohm, V	
low	0...+0.4
high	+2.4...4.0
Input resistance at control input, Ohm	50
Start pulse duration, nsec	30–200
Start pulse ratio, not less	800

* F_0 value is specified by a customer.