

EXPLOSIVE SOURCES OF ELECTROMAGNETIC SIGNALS

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As usual the high power sources of electromagnetic signals consist from a power supply, the generator, a feeder and antenna. Application in such sources Magneto Compression Generators of the radio-frequency range (RF MCG) allows providing its high mobility. Design MCG consists of a spiral and the liner which is filled by explosive. The basis of traditional designs spiral MCG is made with a spiral and the metal liner which is filled by explosive. The liner brings losses in the generator and results in failure of oscillations. Therefore attempts of creation on base MCG the generator of electric oscillations were unsuccessful. We made a new design of the explosive generator in which there is no traditional liner. On a basis of this design has formed the explosive generators of the radio-frequency range.

To reduce weight and sizes of high power sources of electromagnetic signals had used explosive plasma antenna. The radiating surface in plasma antennas is a plasma jet, which is formed by explosive. To radiate electromagnetic signals in RF band it is necessary forms extended plasma jets.

The special structure of explosive is developed, for formation of extended plasma jets. The experimental data had shown considerable promise of these researches.