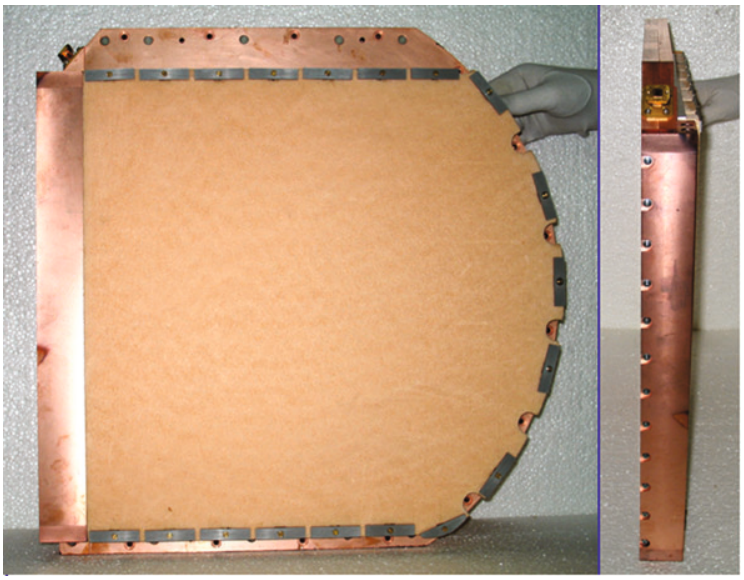
W-BAND MULTI-BEAM DIFFRACTION TYPE ANTENNA



W-band multi-beam diffraction type antenna

Areas of Application

The antenna is designed for use in a passive (radiometric) system to detect hidden weapons on the human body. It can be used in active and passive imaging and radar systems.

Specification

Frequency range: 84-100 GHz.
The gain is 43 dB,
the beam width is 0,35°,
the side lobes level is better -18 dB,
and the total loss level is 3,2 dB.
Dispersion properties provide the ability to form a multi-beam pattern and frequency scanning.

Advantages

Scanning of the antenna beam in space is carried out at a constant antenna position. The thickness of the antenna is less than 30 mm. The multi-beam version of the antenna has a single output, high manufacturability, and low manufacturing cost.

IPR Protection

IPR 1, IPR3, IPR5.
Numerous know-how. Actual patent of Ukraine for invention. Actual patents of the USA, China, and the European Union.

Stage of Development

IRL6, TRL5.
Product and production technology was tested. Custom design and production of a sample to start production using a broader technological base is carried out to order, trial research product can be proposed to the markets.

Contacts

Logvinov Yuriy Fedorovich; O.Ya.Usikov Institute of Radiophysics and Electronics, National Academy of Sciences of Ukraine; +38-057-315-20-09; logvinov@ire.kharkov.ua