

2J42 – X-Band Pulse Magnetron



X-band Pulsed Magnetron. 12 resonators vane structure with double ring strapping. Integral magnet, waveguide output, built-in half-wavelength resonant cavity. This magnetron is intended to operate at relatively low voltage, 4 to 8 kv with peak current from 2.5 to 6.5 A. Low-voltage operation was appreciated in airborne radars.

6.3 V at 0.6 A heater. 7 kw typical pulse power, with 5.5 kv, 4.5 A; 0.4 μ s pulse duration, 800 pps. 9375 +/-30 MHz fixed frequency.

The type 2J42H, in the pictures above, differs from standard 2J42 for flying lead connections to the heater, instead of bayonet base; 'C' identifies the cathode lead. H version can operate unpressurized up to 60,000 feet.

2J42 was registered to Sylvania in May 1946. Data in the RMA record [498](#).

More information on magnetrons can be found in the article [‘Magnetron Tubes’](#) edited by Emilio Ciardiello.