TAL12-35 – Transmitting Triode, Forced-Air Cooled

This is a huge forced-air cooled transmitting triode, intended for use as AF amplifier or as RF oscillator or amplifier up to 37,5 MHz. Plate power dissipation up to18 kW with proper air cooling. At sea level and 45ºC air temperature, 29.5 m^3 per minute of air at a pressure of 170 mm H_2O are required. The tube is high about 61 cm and weighs 20 kg. TAL12-35 is an impressive masterpiece of glass and metal craftmanship. Filament and grid connections are terminated to side bolt connectors, on glass stems all around the glass dome. Chrome-iron to glass sealing proprietary process probably used, according to Peter den Boer.

Three-phase tungsten filamentary cathode, each phase requiring 48.5 amps at about 28.3 volts. The exact operating voltage, for a total emission of 23 amps, is given for each tube. The three filaments can be parallel connected, requiring 145.5 amps for a total heating power of about 4117 watts.

A single tube operated in class C telegraphy at frequencies up to 20 MHz and plate voltage of 15 kV can give 48.5 kW in output. Operation at higher frequencies is possible at derated anode voltage: output power of 26 kW can be granted at 37.5 MHz with anode voltage lowered to 10 kV. In class B audio amplifier applications two tubes can give up to 80 kW.

This tube comes from the collection of Peter den Boer.

Data for TAL 12/35.

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