

BEAM-POWER TETRODE

GS-3A

The GS-3A beam-power tetrode amplifies RF power.

GENERAL

Cathode: indirectly heated, oxide-coated.
 Envelope: metal-ceramic.
 Cooling: forced water.
 Height: at most 128 mm.
 Diameter: at most 91 mm.
 Mass: at most 800 g.

OPERATING ENVIRONMENTAL CONDITIONS

Vibration loads:
 frequency, Hz **1-200**
 acceleration, m/s² **59**
 Multiple impacts:
 acceleration, m/s² **392**
 impact duration, ms **10**
 Ambient temperature, °C **-60 to +70**
 Relative humidity at +35 °C,% **98**

BASIC DATA Electrical Parameters

Heater voltage (AC or DC), V **26**
 Heater current, A **3.1-3.8**
 Mutual conductance (at anode voltage 1500 V, grid 2 voltage 600 V, grid 1 voltage change and anode current 1.5 A), mA/V **-10V**
 Gain coefficient (grid 1 -grid 2) (at anode voltage 2,000 V, grid 2 voltage 500 V, grid 2 voltage change -50 V and anode current 1 A) **30-50**
 Output power (at anode voltage 2,500 V, grid 2 voltage 500 V, anode current 2 A, driving power 250 V, wavelength 50 cm), kW, at least **8-13**
 Interelectrode capacitance, pF:
 input **26-34**
 output, at most **0.07**
 transfer **17-23**

Limit Operating Values

Heater voltage (AC or DC), V **23.4-27.3**
 Heater starting current, A **5.6**
 Anode voltage (DC), kV **2.7**
 Grid 2 voltage, V **700**
 Driving power, W **300**
 Dissipation, W:
 anode **3-10³**
 grid 1 **30**
 grid 2 **60**
 Anode current (DC component), A **2.6**
 Warm up time, s **120**
 Operating frequency, MHz **300-800**
 Anode temperature, °C **110**
 Temperature of cathode and grids, °C **150**

