SPLIT ELECTROMETER TUBE

The 6196 is a split tetrode miniature tube for electrometer applications. It consists of a low filament power, a space-charge grid no. 1 and two grid no. 2-anode elements which are geometrically similar and are symmetrically situated on each side of the filament plane.

One of the no. 2 grids is connected to the top of the bulb. The tube has been treated both inside and outside to provide this grid with maximum leakage resistance and absolute minimum current.

The use of this tube in a balanced Wheatstone bridge arrangement provides not only a means of compensating for fluctuations in anode voltage and filament current but also for random filament emission fluctuations. For these reasons the circuit drift is reduced to the lowest value.

**ELECTRICAL:**
- Filament, coated:
  - Voltage: Min. 45, Nominal 50, Max. 55 Volts
  - Current: 3 mA
- Capacitance: Grid no. 2 3.7 μF

**MECHANICAL:**
- Maximum overall length: 2-1/2"
- Maximum diameter: 7/8"
- Base: Small button, Noval 9 pin

**CHARACTERISTICS**

**MAXIMUM RATINGS** (each element):
- Plate voltage 9 Volts max.
- Grid no. 1 voltage 6 Volts max.
- Grid no. 2 voltage -2 Volts max.

**TYPICAL OPERATION** (each element):
- Plate voltage 9 volts
- Grid no. 1 voltage 6 volts
- Grid no. 2 voltage -4 volts
- Plate current 40 μA
- Grid no. 1 current 500 μA
- Transconductance 20 μmho
- Grid no. 2 Leakage resistance (measuring element): $> 10^{15}$ ohms
- Grid no. 2 total inverse current (measuring element): $2.10^{-15}$ amp.

**Basic designation (bottom view):**
- Pin 1 - Grid no. 1
- Pin 2 - Compensating element, Grid no. 2
- Pin 3 - Filament (+)
- Pin 4 - Filament (-)
- Pin 5 - Compensating element, Plate
- Pin 6 - Grid no. 1
- Pin 7 - No connection
- Pin 8 - Measuring element, Plate
- Pin 9 - Measuring element, Plate

The measuring element grid no. 2 is connected to the top of the bulb.

* Control grid of the measuring element to all other electrodes in parallel.

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