

ELECTRONIC TUBE REFERENCE

7675

Specialized - Gauge Tube electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

GAUGE

Bayard-Alpert inverted-geometry ionization gauge designed to measure ultra-high-vacuum pressures down to approximately 10⁻¹⁰ mm Hg.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	2 V / —	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Gauge
No fixed ratings recorded.
Source-derived physical/electrical section.

Westinghouse July 1, 1961 LOW PRESSURE ION GAUGE TUBE TYPE 7675 The 7675 is an ionization type of vacuum-gauge tube for measurement of gas pressures as low as 10⁻¹⁰ mm of mercury. The tube has a hard glass bulb with a one-half-inch diameter tubulation. The 7675 employs an electrode structure having a minimum of metal surface with the result that the tube is easily out-gassed. The 7675 is a triode of the Bayard-Alpert inverted geometry design having two tungsten filaments, one of which is a spare. The grid structure is operated at a positive potential with respect to the filament while the ion collector is at a negative potential. Electrons are accelerated from the filament to the grid; they bombard and ionize gas molecules, and the resultant positive ions are attracted to the collector. The ratio of the collector current (positive ion current) to the grid current is proportional to the gas pressure. ELECTRICAL: Filament Type (Note 1). o v i u v Tungsten Operating Filament V

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1947 Westinghouse

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1947 WESTINGHOUSE

Section 1 · Gauge

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
The	10	The 7675 is an ionization type of vacuum-gauge tube for measurement of gas pressures as low as 10— 10 mm of
Operating Filament Voltage (Approx.)	7	Operating Filament Voltage (Approx.) 7 ac or dc Volts
QOperating Filament Current 0	8	QOperating Filament Current o0 o0 2.5 £ 8% Amperes
lon Collector Voltage =	100	. lon Collector Voltage =100 max. Velts
Grid Voltage. e e e e	500	Grid Voltage. e e e e +500 max. Volts
—	0.001	— 2" — Gos Pressure Ce e e 0.001 max. mm Mg
1 iy Filament Voltage (Note 2} 10 max. Vol	10	1 iy Filament Voltage (Note 2} 10 max. Volis
l fi lon Collector Yoltage =	30	:l fi lon Collector Yoltage oo v v o vt i i e s =30 Volts
Grid Yoltage. et e e e	150	Grid Yoltage. et e e e +150 Volts
Sensitivity oo .. e v e e e	5	Sensitivity oo .. e v e e e 140a./10=5 mm Hg
Grid Voltage. v oo v L e	500	Grid Voltage. v oo v L e +500 mox. Volis
Porallel . . ,	10	Porallel .. ,..... 10 max. Volts
—r —	100	—r — 1 Grid & Collector Power. - 0 cuv v 100 mox. Watts
hos been reduced to	0.001	hos been reduced to 0.001 mm of mercury. The power-supply

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
may be present. A grid voltage of	150	may be present. A grid voltage of 150 volts is sufficient, and
Outgassing of metal and glass parts can be accomplished con- The second supply circuit, Figure	3	Outgassing of metal and glass parts can be accomplished con- The second supply circuit, Figure 3 provides continuous regulation
collector should not exceed	500	collector should not exceed +500 volts and maximum outgas power temperature is regulated by a varying impedance in series with the
is	100	is 100 watts. DC supply is recommended for outgassing, although primary of the filament transformer. This series impedance is the
Resistor value in ohms P, ~	115	Resistor value in ohms P, ~ 115-volt pilot lamp, green
RLa ~	6.3	RLa ~ 115-volt relay T — Transformer; 110v primary; 6.3v, la. secondary
P	115	P1 — 115-volt pilot lamp, red
Resistor value in ohms T — Stancor PMB	12	Resistor value in ohms T — Stancor PMB412 or equivalent
Resistors are	8412	Resistors are 1/2 watt except as specified, T, — Stancor PM-8412 or equivalent

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
slon current is adjusted by increasing the filament voltage until the voltage potential drop across	6	slon current is adjusted by increasing the filament voltage until the voltage potential drop across the plate load resistance of the 6AUS.

TUBE TINKER

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