

Half-Wave Vacuum Rectifier

9-PIN MINIATURE TYPE

GENERAL DATA

Electrical:

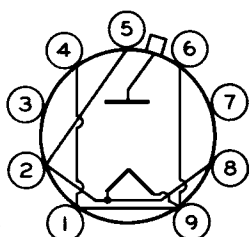
Filament, Coated:

	Min.	Av.	Max.	
Voltage (AC)	1.05	1.25	1.45	volts
Current at 1.25 volts	—	0.2	—	amp
Direct Interelectrode Capacitance (Approx.): ^a				
Plate to filament & internal shield		1		μmf

Mechanical:

Operating Position	Any
Maximum Overall Length	2-27/32"
Seated Length	2-7/16" ± 1/8"
Diameter	0.750" to 0.875"
Dimensional Outline	See <i>General Section</i>
Bulb	T6-1/2
Cap	Skirted Miniature (JEDEC No.C1-2 or C1-33)
Base	Small-Button Noval 9-Pin (JEDEC No.E9-1)
Basing Designation for BOTTOM VIEW	.9Y

Pin 1—Filament,
Internal
Shield
Pin 2—Filament
Pin 3—Limited
Connection^b
Pin 4—Same as Pin 1



Pin 5—Same as Pin 2
Pin 6—Same as Pin 1
Pin 7—Same as Pin 3
Pin 8—Same as Pin 2
Pin 9—Same as Pin 1
Cap—Plate

PULSED-RECTIFIER SERVICE

Maximum Ratings, Design-Maximum Values:

For operation in a 525-line, 30-frame system^c

INVERSE PLATE VOLTAGE:

Total dc and peak ^d	22000 max.	volts
DC	18000 max.	volts
PEAK PLATE CURRENT	45 max.	ma
AVERAGE PLATE CURRENT	0.5 max.	ma

Characteristics, Instantaneous Value:

Tube Voltage Drop for plate ma. = 7	100	volts
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^a Without external shield.

^b See *Operating Considerations*.

^c As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.

^d The duration of the voltage pulse must not exceed 15 per cent of one horizontal scanning cycle. In a 525-line, 30-frame system, 15 per cent of one horizontal scanning cycle is 10 microseconds.

← Indicates a change.



1X2B

OPERATING CONSIDERATIONS

Socket Connections. Socket terminals 3 and 7 may be used as tie points for components at or near filament potential; otherwise, do not use.

Measurement of Filament Voltage. To measure the filament voltage when the filament is at a high dc potential with respect to ground, it is recommended that a simple method utilizing visual comparison of the filament temperature be used. The color temperature of the filament, operating from a pulse-or-rf-power source, may be checked by observing in a darkened room the reflection of the incandescent filament upon the surface of the internal shield. A visual comparison of this color temperature with that obtained when the filament of another 1X2B is operated from a dc or low-frequency ac supply of 1.25 volts, provides a convenient means for adjusting the amount of excitation to produce 1.25 volts (rms) at the filament terminals.

The high voltages at which the 1X2B is operated are very dangerous. Great care should be taken in the design of apparatus to prevent the operator from coming in contact with these high voltages. Particular care against fatal shock should be taken in the measurement of filament voltage. Under all circumstances, circuit parts which may be at high potentials should be enclosed or adequately insulated.

X rays. The voltages employed in some television receivers and other high-voltage equipment are sufficiently high that high-voltage rectifier tubes may produce *X rays* which can constitute a health hazard unless such tubes are adequately shielded. Relatively simple shielding should prove adequate, but the need for this precaution should be considered in equipment design.