

# Half-Wave Vacuum Rectifier

## 9-PIN MINIATURE TYPE

For High-Voltage Rectifier Service in Transistorized TV Receivers

### ELECTRICAL

#### Heater Characteristics and Ratings

Voltage (AC)	2.30 ± 0.30	V
Current at 2.30 V.	0.300	A

#### Direct Interelectrode Capacitance (Approx.)

Without external shield		
P to (K + IS + H)	1.0	pF

### MECHANICAL

Operating Position	Any
Type of Cathode	Coated Unipotential
Maximum Overall Length	2-27/32 in
Seated Length	2-7/16 ± 1/8 in
Diameter	0.750 to 0.875 in
Dimensional Outline (JEDEC No.6-7)	See General Section
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	9RT

Pin 1 - Heater, Cathode,  
Internal Shield

Pin 2 - Heater

Pin 3 - Do Not Use

Pin 4 - Same as Pin 1

Pin 5 - Heater

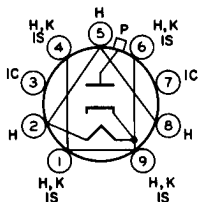
Pin 6 - Same as Pin 1

Pin 7 - Do Not Use

Pin 8 - Heater

Pin 9 - Same as Pin 1

Cap - Plate



### PULSED-RECTIFIER SERVICE

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

#### Maximum Ratings, Design-Maximum Values

Peak Inverse Plate Voltage <sup>a</sup>	20000	V
Peak Plate Current	80	mA
Average Plate Current	1.0	mA

#### Characteristic, Instantaneous Value

Tube Voltage Drop for plate mA = 7	80	V
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<sup>a</sup> This rating is applicable where the duration of the voltage pulse does 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.



## OPERATING CONSIDERATIONS

**Socket Connections.** The base pins of the 2BJ2 fit the Noval 9-contact socket. Socket terminals 3 and 7 should not be used as tie points for external-circuit components.

The high voltages at which the 2BJ2 is operated are very dangerous. Great care should be taken in the design of equipment to prevent the operator from coming in contact with these high voltages. Particular care against fatal shock should be taken in the measurement of heater voltage. Under all circumstances, circuit parts which may be at high potentials should be enclosed or adequately insulated.

**X-radiation.** The voltages employed in some television receivers and other high-voltage equipment are sufficiently high that high-voltage rectifier tubes may produce X-radiation 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.

