

Beam Power Tube

with an Integral Diode

9-PIN MINIATURE TYPE

PLATE DISSIPATION = 10 WATTS

DARK HEATER

*For Feedback-Stabilized Vertical Deflection
Amplifier Applications in Black-and-White and Color TV Receivers*

ELECTRICAL CHARACTERISTICS

Bogey Values

Heater Voltage (AC or DC)	E_h	6.3	V
Heater Current	I_h	1.2	A
Direct Interelectrode Capacitances			
Without external shield			
Grid No.1 to plate	e_{g1-p}	0.32	pF
Input: G1 to (K, G3+ P_D , G2, H) .	c_i	13.0	pF
Output: P to (K, G3+ P_D , G2, H) .	c_o	6.0	pF

For the following characteristics, see Conditions

Amplification Factor

(Triode Connection) ^a	μ	6.5	
Plate Resistance (Approx.)	r_p	10.5	k Ω
Transconductance	g_m	4200	μ mho
DC Plate Current	I_b	150 ^b	35 mA
DC Grid-No.2 Current	I_{c2}	20 ^b	2.5 mA
Cutoff DC Grid-No.1 Voltage.	$E_{c1}(co)$	-37	V

Plate mA = 1

Instantaneous Diode-Plate-to-
Cathode-Voltage Drop for
instantaneous diode-plate current

($r_b(d)$) = 2 mA.	$e_b(d)$	5	V
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Conditions

Heater	E_h	6.3	6.3	V
DC Plate Voltage	E_b	40	140	V
DC Grid-No.3 Voltage	E_{c3}	0	0	V
DC Grid-No.2 Voltage	E_{c2}	120	140	V
DC Grid-No.1 Voltage	E_{c1}	0	-18	V

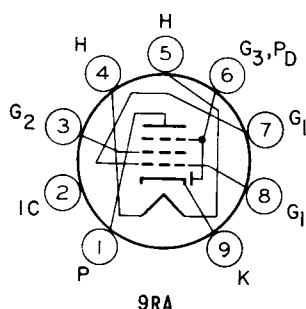
MECHANICAL CHARACTERISTICS

Operating Position	Any
Type of Cathode.	Coated Unipotential
Dimensional Outline (JEDEC 6-4).	See General Section
Maximum Overall Length	.3.062 in (77.77 mm)
Maximum Seated Length.	.2.812 in (71.42 mm)
Maximum Diameter	.0.875 in (22.22 mm)
Envelope	JEDEC Designation T6-1/2
Base	Small-Button Noval 9-Pin (JEDEC Designation E9-1)
Terminal Diagram	9RA



TERMINAL DIAGRAM (Bottom View)

- Pin 1 - Plate
 Pin 2 - Do Not Use
 Pin 3 - Grid No.2
 Pin 4 - Heater
 Pin 5 - Heater
 Pin 6 - Grid No.3,
 Diode Plate
 Pin 7 - Grid No.1
 Pin 8 - Grid No.1
 Pin 9 - Cathode



DESIGN-MAXIMUM RATINGS^c

For operation as a Feedback-Stabilized Vertical-Deflection-Amplifier Tube in Black-&-White & Color Television Receivers in a 525-line, 30-frame system

DC Plate Voltage	E_b	425	V
Peak Positive-Pulse Plate Voltage (Absolute-Maximum Value) ^d	e_{bm}	2000	V
		+10	V
DC Grid-No.3 & Diode-Plate Voltage.	$E_{c3}, E_b(d)$	-150	V
DC Grid-No.2 (Screen-Grid) Voltage.	E_{c2}	330	V
Peak Negative-Pulse Grid-No.1 (Control-Grid) Voltage	e_{c1m}	150	V
Heater-Cathode Voltage			
Peak	e_{hkm}	±200	V
Average ^e	$E_{hk(av)}$	100	V
Heater Voltage (AC or DC).	E_h	5.7 to 6.9	V
Cathode Current			
Peak	i_{km}	250	mA
Average ^e	$i_{k(av)}$	70	mA
Average Diode-Plate (& Grid-No.3) Current ^e	$I_{b(av)} (d)$	1	mA
Grid-No.2 Input	P_{g2}	2	W
Plate Dissipation	P_b	10	W
Envelope Temperature (At hottest point on envelope surface).	T_E	240	°C

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance	$R_{g1}(ckt)$		
For grid-No.1-resistor-bias operation.	-	2.2	MΩ
For cathode-bias operation	-	2.2	MΩ

- ^a With grid No.3 and diode plate connected to cathode and with grid No.2 connected to plate at socket.
^b This value can be measured by a method involving a recurrent waveform such that the Maximum Ratings of the tube will not be exceeded.
^c Unless otherwise specified.
^d This rating is applicable where the duration of the voltage pulse does not exceed 15 per cent of one vertical scanning cycle. In a 525-line, 30-frame system, 15 per cent of one vertical scanning cycle is 2.5 ms.
^e Measured with a dc meter.

Typical Characteristics

