

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

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

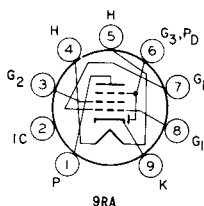
MECHANICAL CHARACTERISTICS

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

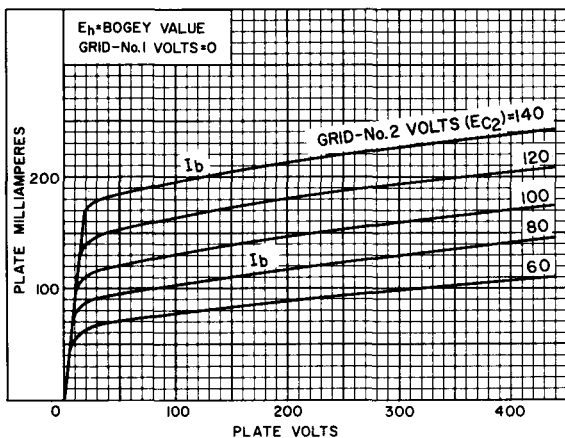
MAXIMUM CIRCUIT VALUES

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

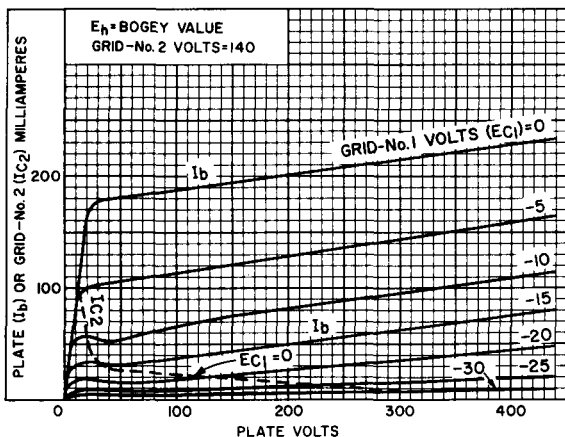
- ^a With grid No.3 and diode plate connected to cathode and with grid No.2 connected to plate at socket.
- ^b This value can be measured by a method involving a recurrent waveform such that the Maximum Ratings of the tube will not be exceeded.
- ^c Unless otherwise specified.
- ^d This rating is applicable 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



92CS-14660



92CS-14661

