

Beam Power Tube

7-PIN MINIATURE TYPE

For Audio Output Service in TV and Radio Receivers

ELECTRICAL CHARACTERISTICS – Bogey Values^a

Heater Voltage, ac or dc E_h	6.3	V
Heater Current I_h	0.8	A
Direct Interelectrode Capacitances: ^b		
Grid No.1 to plate c_{g1-p}	0.19	pF
Input: G1 to (K, G3, G2, H) . . c_i	9.5	pF
Output: P to (K, G3, G2, H) . . c_o	6.3	pF

TYPICAL OPERATION AND CHARACTERISTICS

Cathode-Bias Operation

For the following characteristics, see Conditions below:

Zero-Signal Plate Current . . . I_b	34.5	27	mA
Max.-Signal Plate Current . . . $I_{b(max.-sig.)}$	32.5	25	mA
Zero-Signal Grid-No.2 Current . I_{c2}	3.5	3	mA
Max.-Signal Grid-No.2 Current . $I_{c2(max.-sig.)}$	9	9	mA
Plate Resistance (Approx.) . . r_p	28000	28000	Ω
Transconductance g_m	6000	5800	μmho
Load Resistance R_l	6000	8000	Ω
Total Harmonic Distortion. . . D_t	10	10	%
Max.-Signal Power Output . . . P_o	2.8	3.6	W

Conditions:

Heater Voltage E_h	6.3	6.3	V
Plate Supply Voltage E_{bb}	200	250	V
Grid-No.2 Voltage E_{c2}	200	200	V
Cathode-Bias Resistor R_k	180	270	Ω
Peak AF Grid-No.1 Voltage . . e_{clm}	7.5	9.2	V

Fixed-Bias Operation

For the following characteristics, see Conditions below:

Zero-Signal Plate Current . . . I_b	35	29	mA
Max.-Signal Plate Current . . . $I_{b(max.-sig.)}$	36	32	mA
Zero-Signal Grid-No.2 Current . I_{c2}	3	3	mA
Max.-Signal Grid-No.2 Current . $I_{c2(max.-sig.)}$	9	10	mA
Plate Resistance (Approx.) . . r_p	28000	28000	Ω
Transconductance g_m	6000	5800	μmho
Load Resistance R_l	6000	8000	Ω

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Total Harmonic Distortion. D_t	9	10	%
Max.-Signal Power Output. P_o	3	3.8	W
<i>Conditions:</i>			
Heater Voltage. E_h	6.3	6.3	V
Plate Voltage. E_b	200	250	V
Grid-No.2 Voltage. E_{c2}	200	200	V
Grid-No.1 (Control-Grid) Voltage. E_{c1}	-7.5	-8.5	V
Peak AF Grid-No.1 Voltage. . . e_{c1m}	7.5	8.5	V

MECHANICAL CHARACTERISTICS

Dimensional Outline.	JEDEC 5-3		
Maximum Overall Length.	2.625 in (66.67 mm)		
Maximum Seated Length.	2.375 in (60.32 mm)		
Maximum Diameter.	0.750 in (19.05 mm)		
Bulb.	T 5-1/2		
Base.	Small-Button Miniature 7-Pin (JEDEC No.E7-1)		
Terminal Connections (See <i>TERMINAL DIAGRAM</i>)	JEDEC Designation 7BZ		
Type of Cathode.	Coated Unipotential		
Mounting Position.	Any		

MAXIMUM RATINGS — Design-Maximum Values^c

Plate Voltage. E_b	275	V
Grid-No.2 Voltage. E_{c2}	275	V
Grid-No.1 Voltage:		
Positive bias value. E_{c1}	0	V
Plate Dissipation. P_b	9	W
Grid-No.2 Input. P_{g2}	2.2	W
Heater Voltage. E_h	5.7 to 6.9	V
Heater-Cathode Voltage:		
Peak. e_{hkm}	+200	V
DC. E_{hk}	100	V
Envelope Temperature (At hottest point on envelope surface) T_E	250	°C

MAXIMUM CIRCUIT VALUES

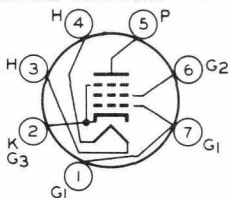
Grid-No.1-Circuit Resistance:	$R_{g1(ckt)}$	
For fixed-bias operation.	0.1	MΩ
For cathode-bias operation.	1.0	MΩ

^a Unless otherwise specified.

^b Without external shield. Measured in accordance with the current issue of EIA Standard RS-191.

^c As defined in the current issue of EIA Standard RS-239.

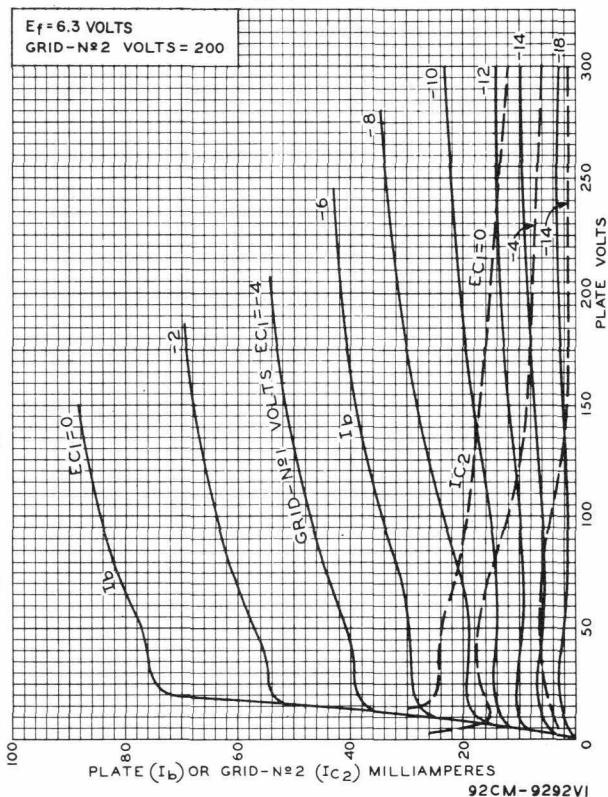
TERMINAL DIAGRAM - Bottom View



JEDEC 7BZ

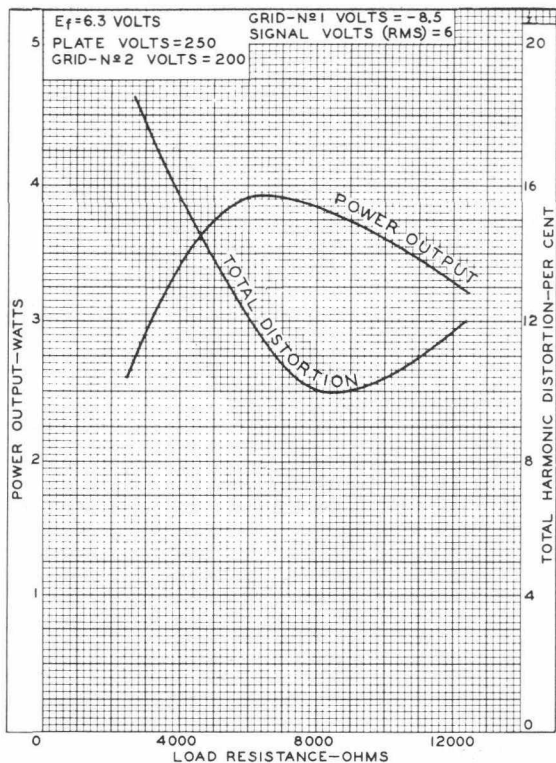
- Pin 1 - Grid No.1
 Pin 2 - Cathode,
 Grid No.3
 Pin 3 - Heater
 Pin 4 - Heater
 Pin 5 - Plate
 Pin 6 - Grid No.2
 Pin 7 - Grid No.1

AVERAGE CHARACTERISTICS



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OPERATION CHARACTERISTICS



92CM-9293VI