

May 24, 1957

SEMI-REMOTE CUTOFF PENTODE TYPES 3BZ6, 4BZ6, AND 6BZ6

The 3BZ6, 4BZ6, and 6BZ6 are 7-pin miniature semi-remote-cutoff pentodes designed for service as intermediate frequency amplifiers in television receivers. They are characterized by high transconductance and low inter-electrode capacitances which permit them to perform well as wide band, high frequency amplifiers. In addition, they feature a cutoff characteristic designed to operate the tube without distortion over a wide range of input signal amplitudes.

The 3BZ6 and 4BZ6 have been designed for use in receivers which employ series connected heaters, especially in television receivers where the picture-tube heater is in series with other heaters. When each is employed in this type of circuit with other tubes similarly designed having the same heater current rating, heater voltage surges across individual tubes are minimized inasmuch as heater warm-up characteristic is controlled.

GENERAL DATA

ELECTRICAL:

Cathode	Coated Unipotential			
Heater	3BZ6	4BZ6	6BZ6	
Voltage (ac or dc)	3.15	4.2	6.3	Volts
Current	0.60	0.45	0.30	Ampere
Warm-up Time Δ	11	11	...	Seconds
Direct Interelectrode Capacitances:				
	Shielded Δ	Unshielded		
Grid 1 to Plate	0.015	0.025		uuf
Input	7.0	7.0		uuf
Output	3.0	2.0		uuf

MECHANICAL:

Bulb	T-5-1/2
Base	Miniature 7-Pin (JETEC E7-1)
Outline	5-2
Basing	7CM
Mounting Position	Any

MAXIMUM RATINGS:

Design Maximum Values	
Plate Voltage	330 max. Volts
Grid 2 Supply Voltage	330 max. Volts
Grid 2 Voltage	See Grid 2 Input Rating Curve
Plate Dissipation	2.3 max. Watts
Grid 2 Dissipation	0.55 max. Watts
Grid 1 Voltage	
Positive Value	0 max. Volts
Heater-Cathode Voltage	
Heater Negative with Respect to Cathode:	
Total DC and Peak	200 max. Volts
Heater Positive with Respect to Cathode:	
DC Component	100 max. Volts
Total DC and Peak	200 max. Volts

TYPICAL OPERATION AND CHARACTERISTICS

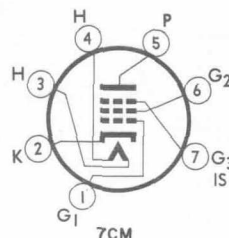
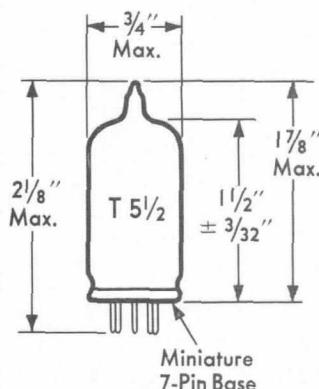
Plate Voltage	125	Volts
Grid 3 (Suppressor)	Connected to Cathode at Socket	
Grid 2 Voltage	125	Volts
Cathode Bias Resistor	56	Ohms
Plate Resistance	0.26	Megohm
Transconductance	8000	umhos
Plate Current	14	Ma.
Grid 2 Current	3.6	Ma.
Grid 1 Cutoff Bias*	-19	Volts

NOTES

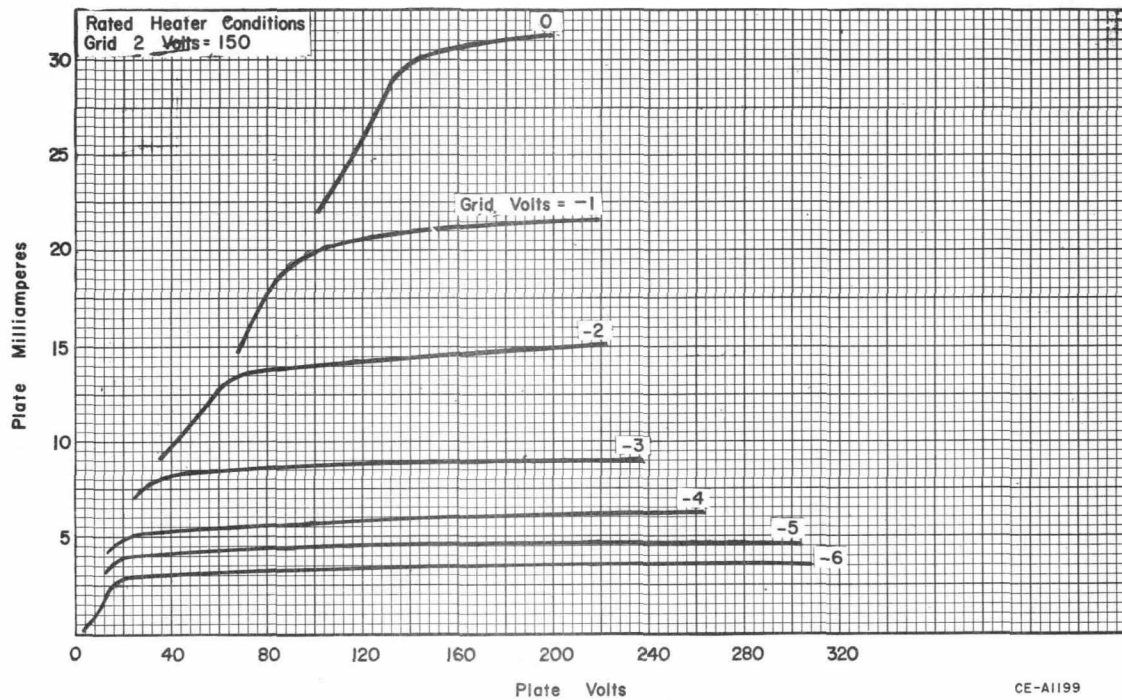
- Δ Heater Warm-up Time is defined as the time required for the voltage across the heater to reach 80% of its rated value after applying 4 times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to three times rated heater voltage divided by rated heater current.

* For transconductance of 50 umho.

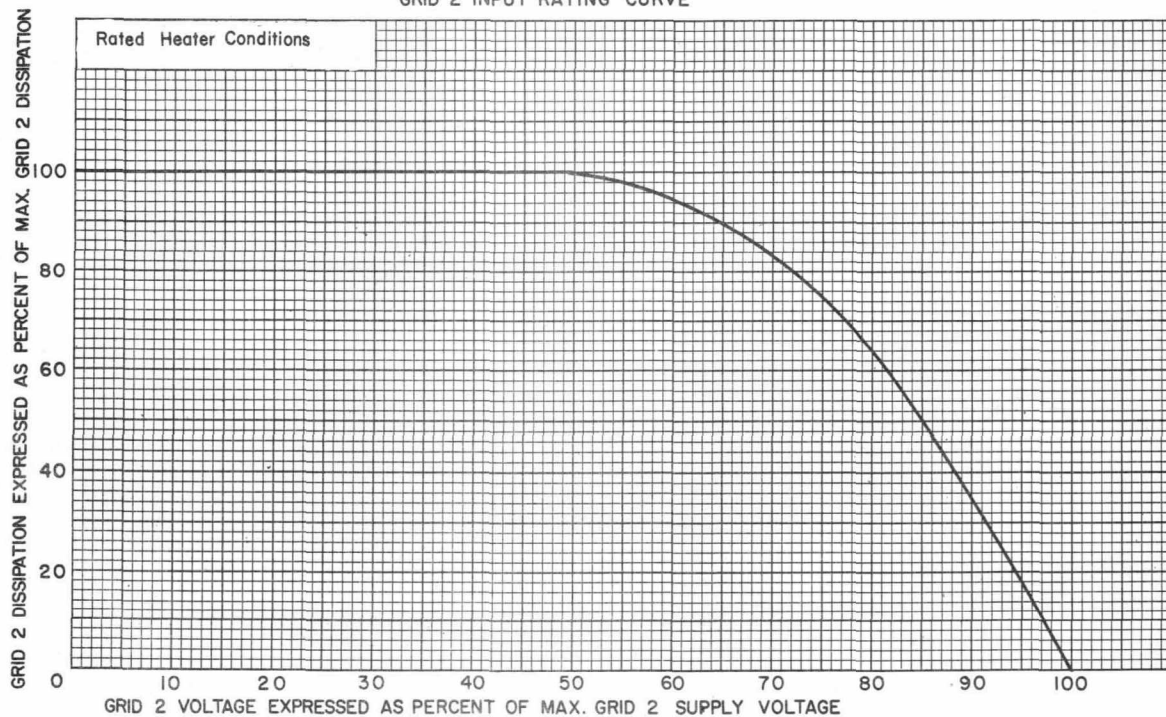
Δ JETEC Shield No. 316 connected to cathode.



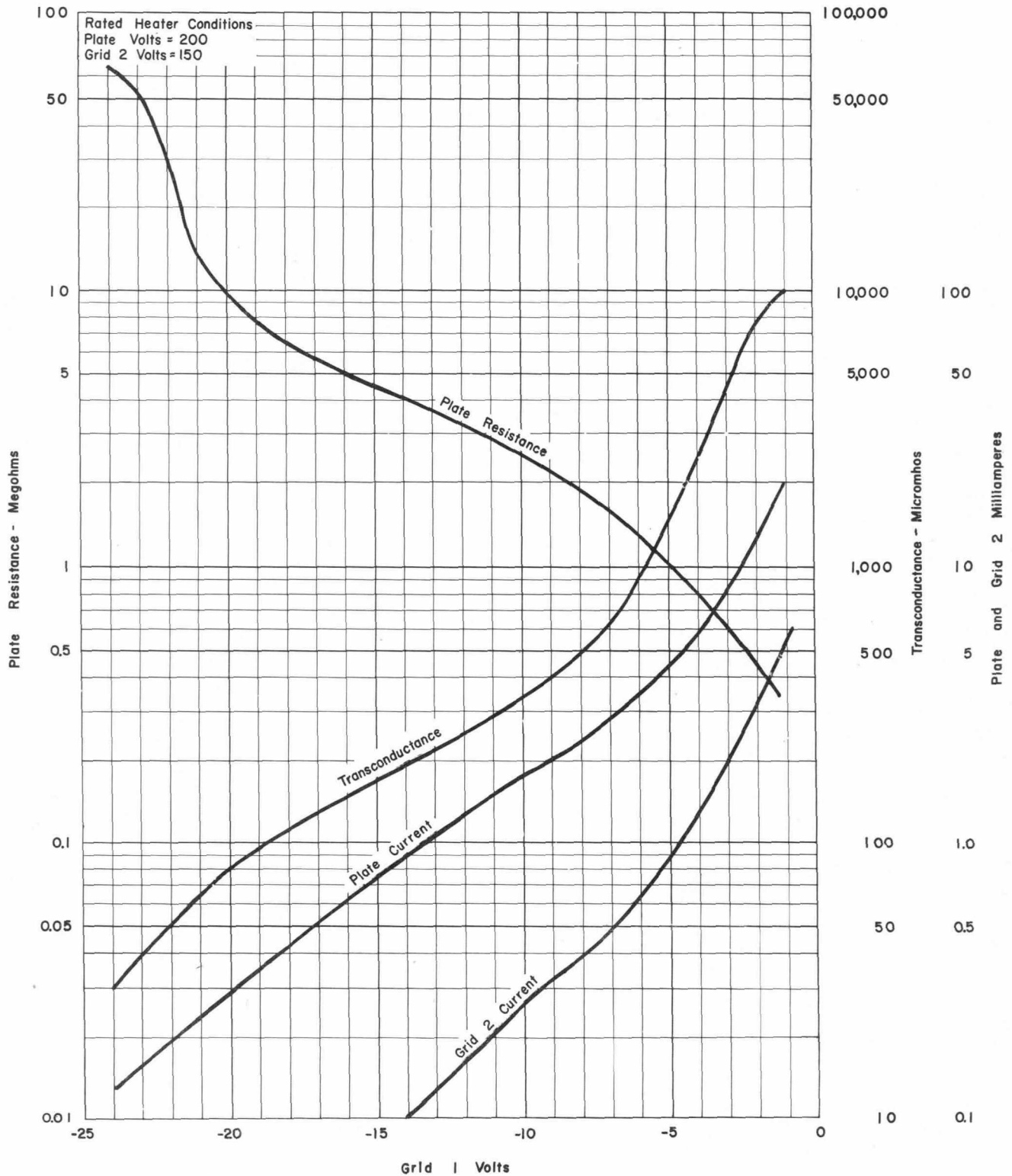
AVERAGE PLATE CHARACTERISTICS



GRID 2 INPUT RATING CURVE



AVERAGE TRANSFER CHARACTERISTICS



CE-B1200

