Westinghouse®

2EV5
3EV5
6EV5

May 15, 1959

SHARP-CUTOFF TETRODE TYPES 2EV5, 3EV5 and 6EV5

The 2EV5, 3EV5 and 6EV5 are high gain, sharp-cutoff, seven-pin miniature tetrodes designed particularly for service in V.H.F. television tuners. Their high transconductance, extremely low screen current and high input impedance at 200 Mc. results in an improved noise figure.

Although the 2EV5, 3EV5 and 6EV5 are designed for high B+ operation, their low screen voltage requirements permit excellent performance with low B+ voltages.

The 2EV5, and 3EV5 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.

MECHANICAL DATA

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

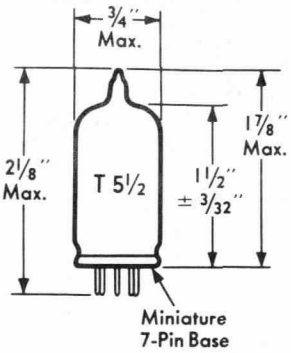
ELECTRICAL DATA

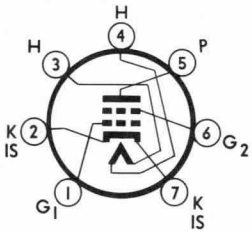
Heater Characteristics:	2EV5	3EV5	6EV5	
Voltage (ac or dc)	2.4	2.9	6.3	Volts
Current	0.60	0.45	0.20	Ampere
Warm-up Time ▲	11	11	--	Seconds

Direct Interelectrode Capacitance (Shielded) *:		
Grid 1 to Plate	0.035 max.	μμf
Input	4.50	μμf
Output	2.90	μμf

CHARACTERISTICS & TYPICAL OPERATION:

Plate Voltage	250	Volts
Grid 2 Voltage	80	Volts
Grid 1 Voltage	-1	Volts
Plate Resistance	0.150	Megohm
Transconductance	8800	μmhos
Grid 1 Cutoff Bias #	4.5	Volts
Plate Current	11.5	Ma.
Grid 2 Current	0.90	Ma.





7EW

RATINGS

Design Maximum Values **

Plate Voltage			275 max.	Volts
Grid 2 Supply Voltage			180 max.	Volts
Grid 2 Voltage			See Grid 2 Input Rating Chart	
Plate Dissipation			3.25 max.	Watts
Grid 2 Dissipation			0.2 max.	Watts
Grid 1 Voltage:				
Positive Value			0 max.	Volts
Cathode Current			20 max.	Ma.
Heater Ratings:	2EV5	3EV5	6EV5	
Allowable Heater Voltage				
Maximum	--	--	6.9 max.	Volts
Minimum	--	--	5.7 min.	Volts
Allowable Heater Current				
Maximum	640	480	-- max.	Ma.
Minimum	560	420	-- min.	Ma.
Heater-Cathode Voltage:				
Heater Negative with Respect to Cathode, Total DC and Peak	200	200	100 max.	Volts
Heater Positive with Respect to Cathode:				
DC	100	100	50 max.	Volts
Total DC and Peak	200	200	100 max.	Volts
Grid Circuit Resistance	0.5	0.5	0.5	Megohm

▲ 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 four 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.

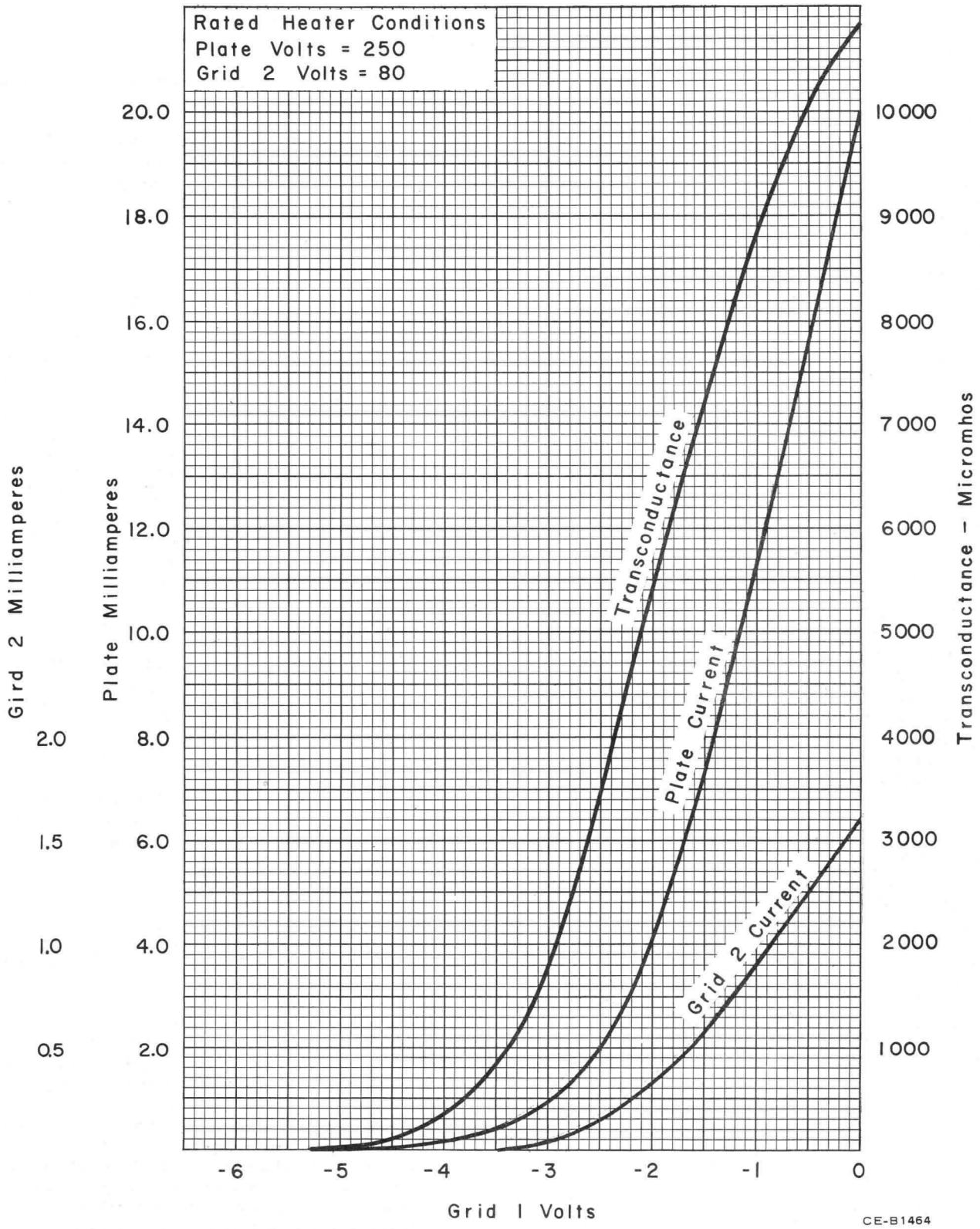
For Transconductance of 100 μmhos.

* With JETEC shield No. 316 connected to Pin 2.

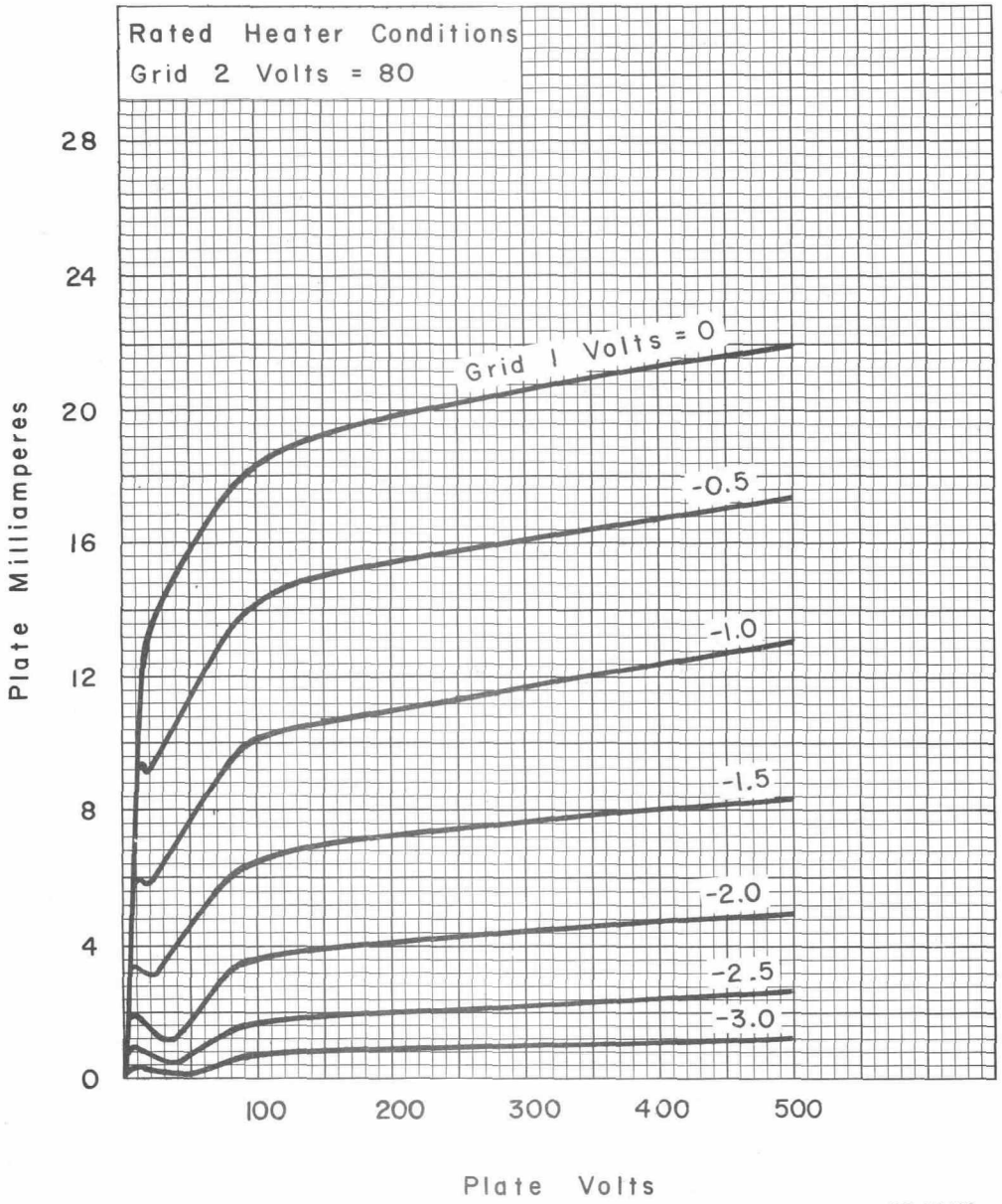
** Design-Maximum ratings are limiting values of operating and environmental conditions applicable to a bogey electron divice of a specified type as defined by its published data, and should not be exceeded under the worst probable conditions.
The device manufacturer chooses these values to provide acceptable serviceability of the device, taking responsibility for the effects of changes in operating conditions due to variations in device characteristics.
The equipment manufacturer should design so that initially and throughout life no design-maximum value for the intended service is exceeded with a bogey device under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variation, signal variation, and environmental conditions.

Receiving Tube Section

AVERAGE TRANSFER CHARACTERISTICS



AVERAGE PLATE CHARACTERISTICS



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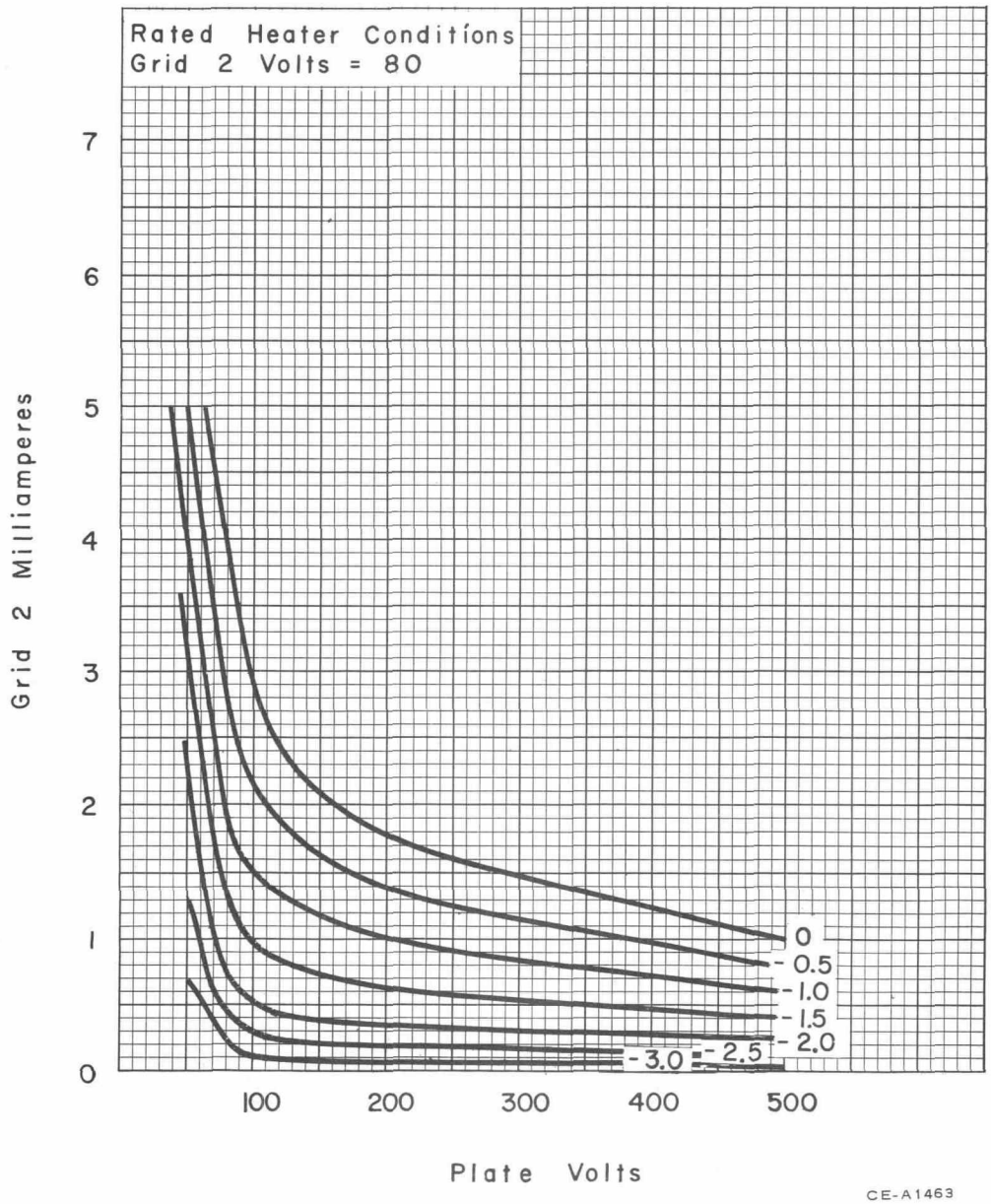
AVERAGE GRID 2 CHARACTERISTICS



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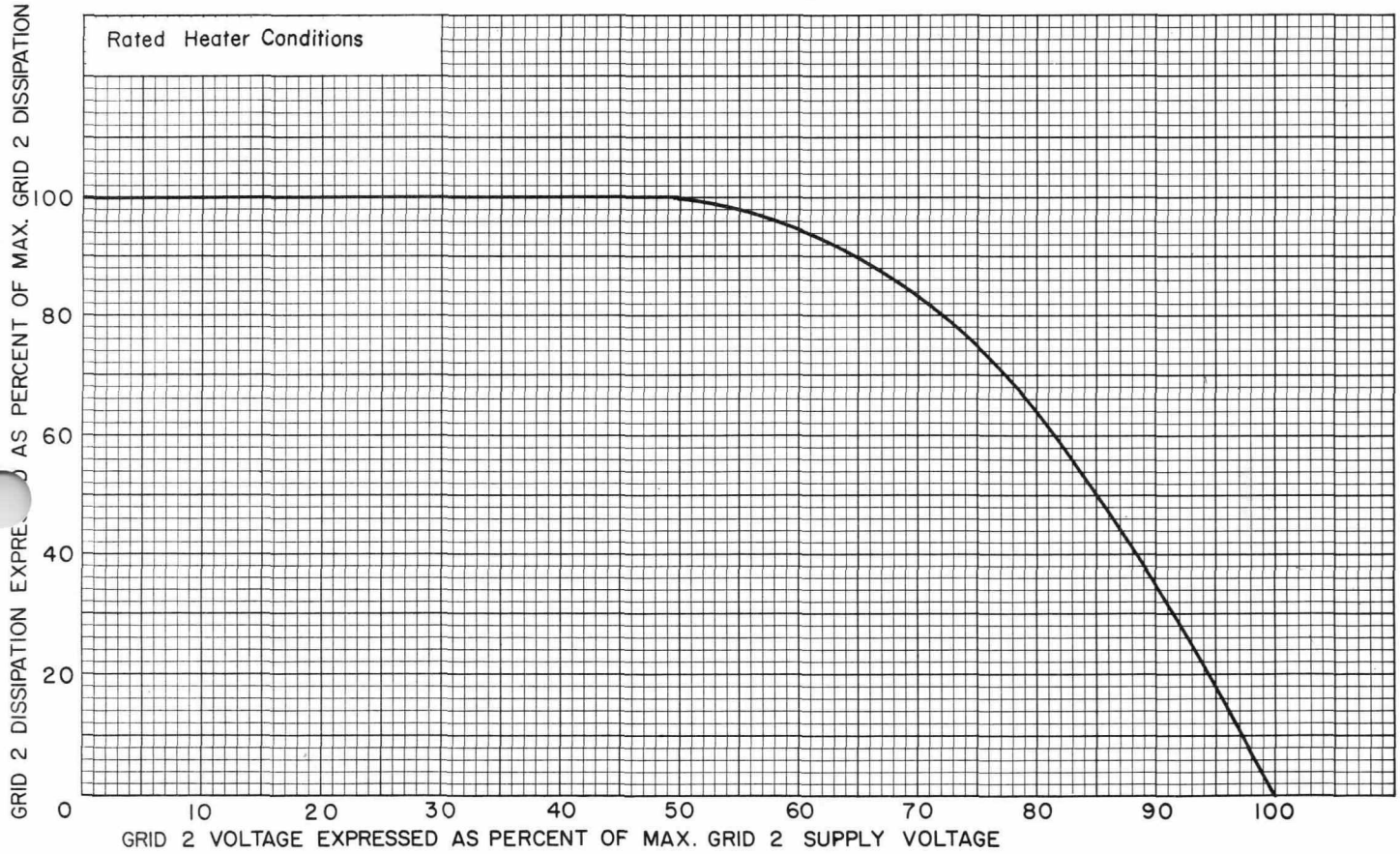
GRID 2 INPUT RATING CURVE



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