SHARP-CUTOFF PENTODE TYPES 3CB6, 4CB6 AND 6CB6

The 3CB6, 4CB6 and 6CB6 are 7-pin miniature sharp-cutoff pentode types designed for service as wide-band radio-frequency or intermediate-frequency amplifiers in television receivers. They feature very high transconductance combined with low interelectrode capacitance values. Separate pins are provided for grid 3 and the cathode to permit the use of an unbypassed cathode resistor to minimize the effects of regeneration.

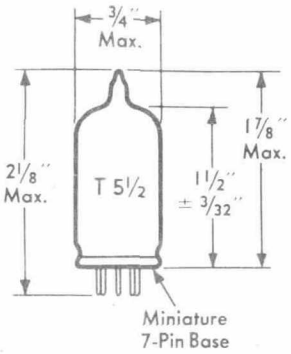
The 3CB6 and 4CB6 have been designed for use in receivers which employ series connected heaters especially in television receivers where the picture-tube heater is in series with other heaters. When each is employed in this type of circuit with other tubes similarly designed having the same heater current rating, heater voltage surges across individual tubes are minimized inasmuch as heater warm-up characteristic is controlled.

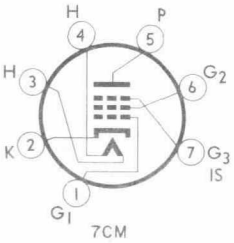
ELECTRICAL:

Cathode	Coated Unipotential			
Heater:	3CB6	4CB6	6CB6	
Voltage (ac or dc)	3.15	4.2	6.3	Volts
Current	0.60	0.45	0.30	Ampere
Warm-up Time▲	11	11	- -	Seconds
Direct Interelectrode Capacitances (Unshielded):				
Grid 1 to Plate	0.025	max.		μμf
Input	6.5			μμf
Output	2.0			μμf

MECHANICAL:

Bulb	T-5½
Base	Miniature, 7-Pin (JEDEC 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 Chart		
Plate Dissipation	2.3	max.	Watts
Grid 2 Input	0.55	max.	Watt
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
DC + Peak	200	max.	Volts

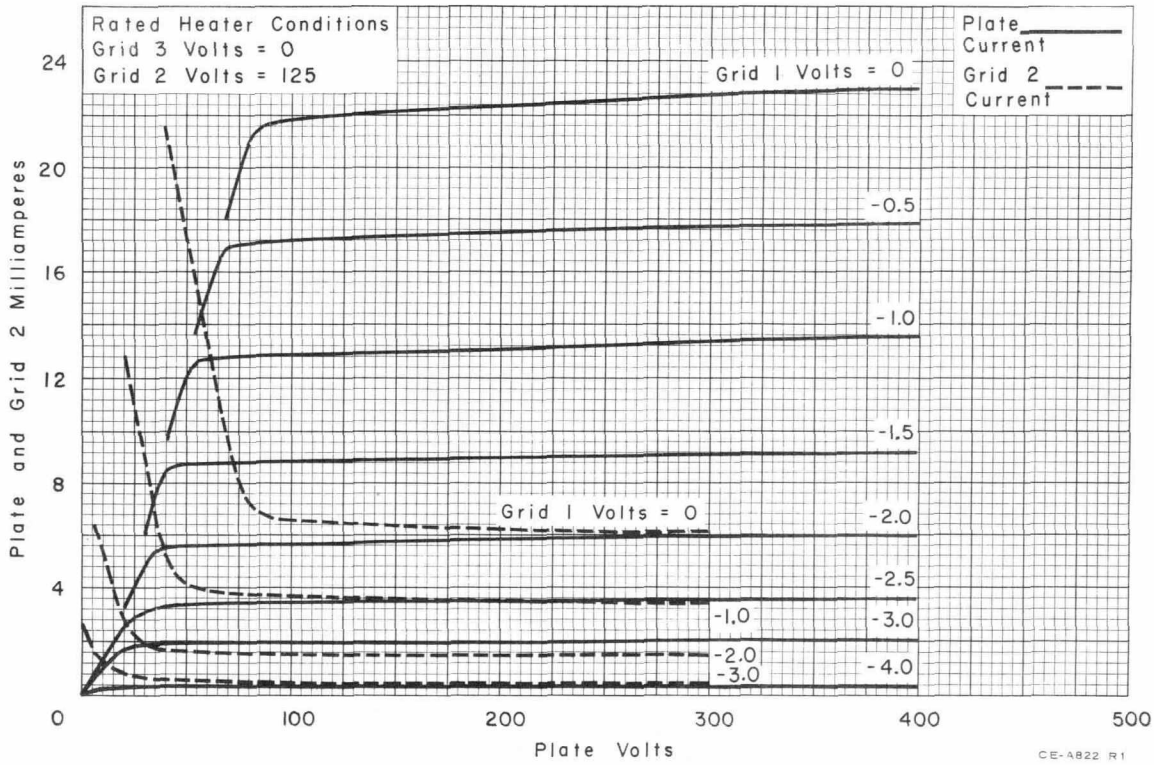
CHARACTERISTICS AND TYPICAL OPERATION

Plate Voltage	125	Volts
Grid 3 (Suppressor)	Connected to cathode at socket	
Grid 2 Voltage	125	Volts
Cathode-Bias Resistor	56	Ohms
Plate Resistance (approx.)	0.28	Megohm
Transconductance	8000	μmhos
Grid 1 Cutoff Bias⊕	-6.5	Volts
Plate Current	13	Ma.
Grid 2 Current	3.7	Ma.
Grid 1 to Cathode Voltage for Plate Current of 2.8 ma.	-3	Volts

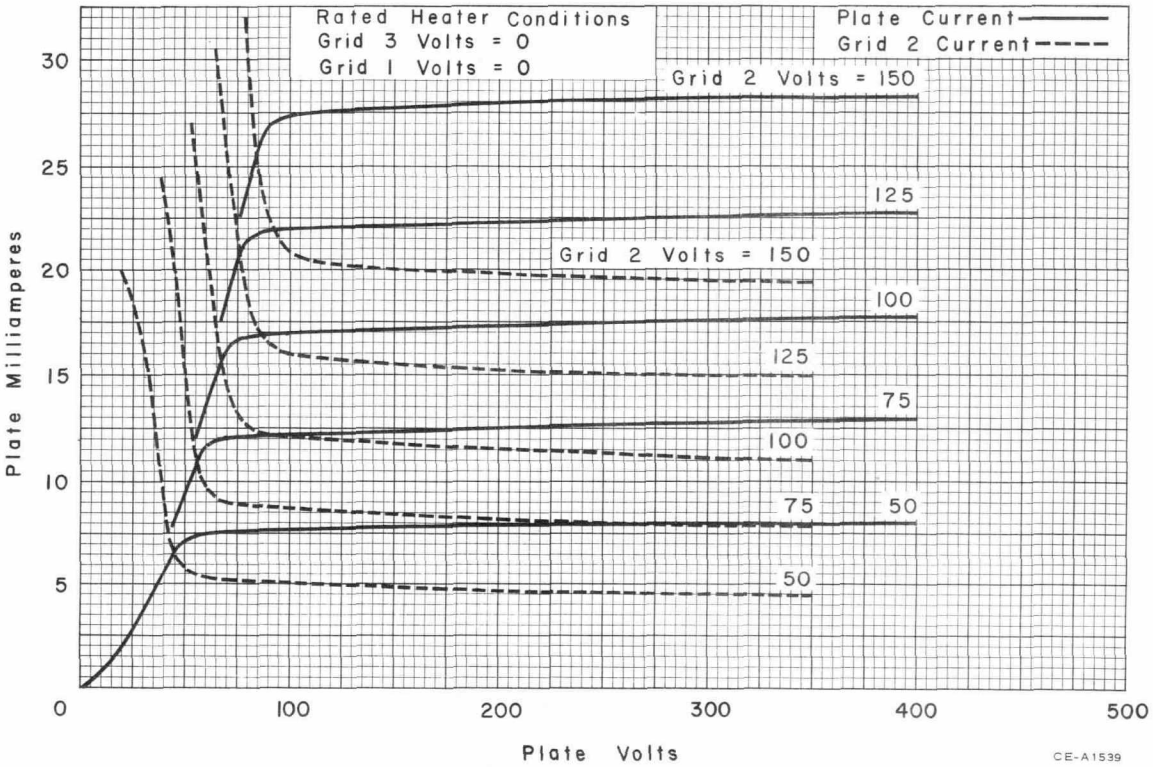
⊕ For plate current of 20 microamperes.

▲ 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 3 times rated heater voltage divided by rated heater current.

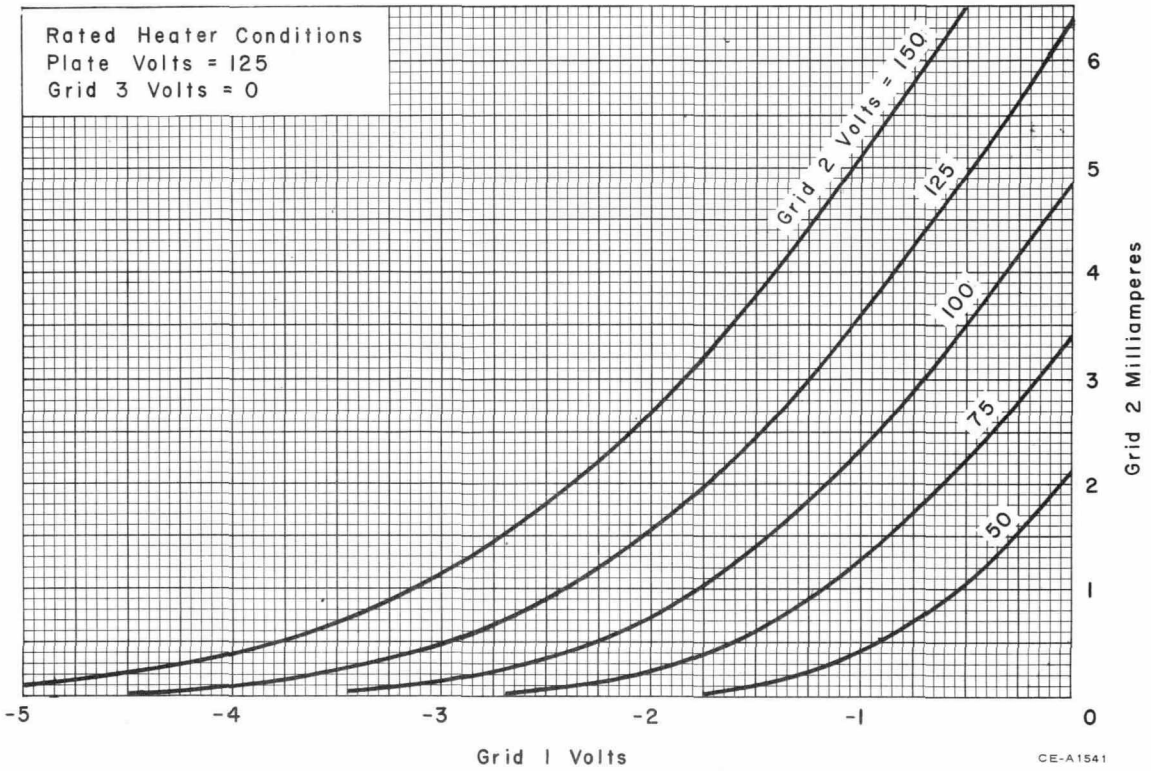
AVERAGE PLATE CHARACTERISTICS



AVERAGE PLATE CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



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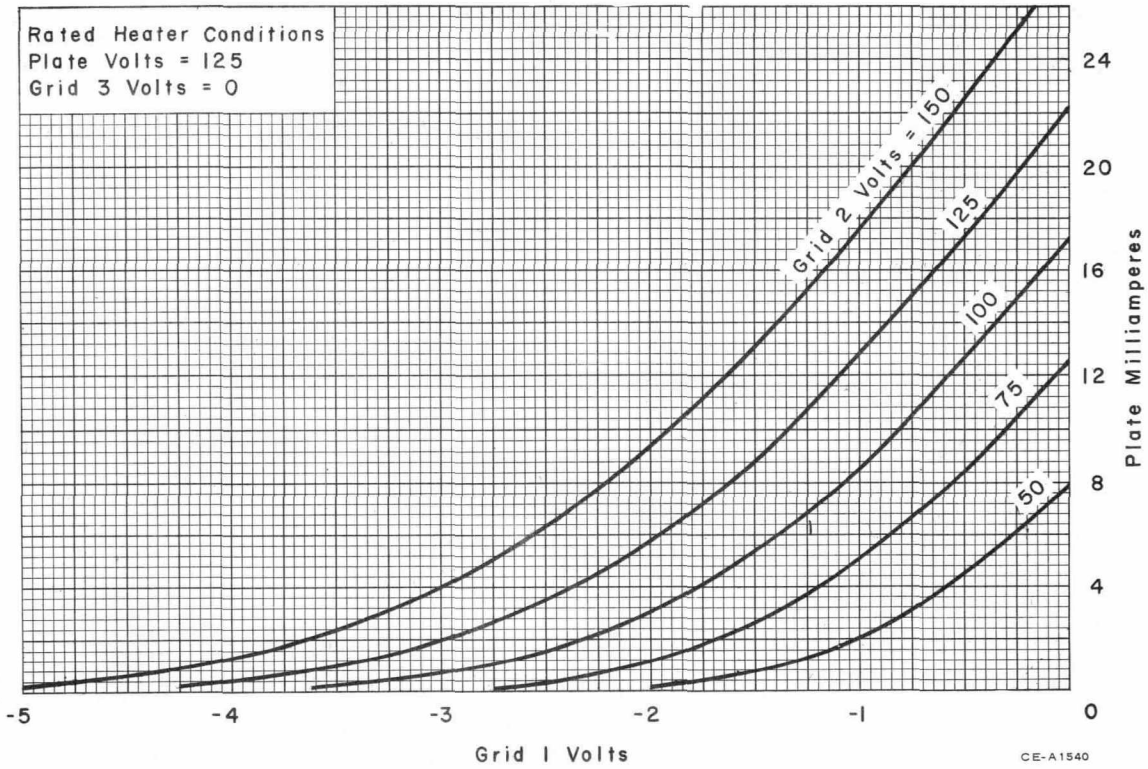
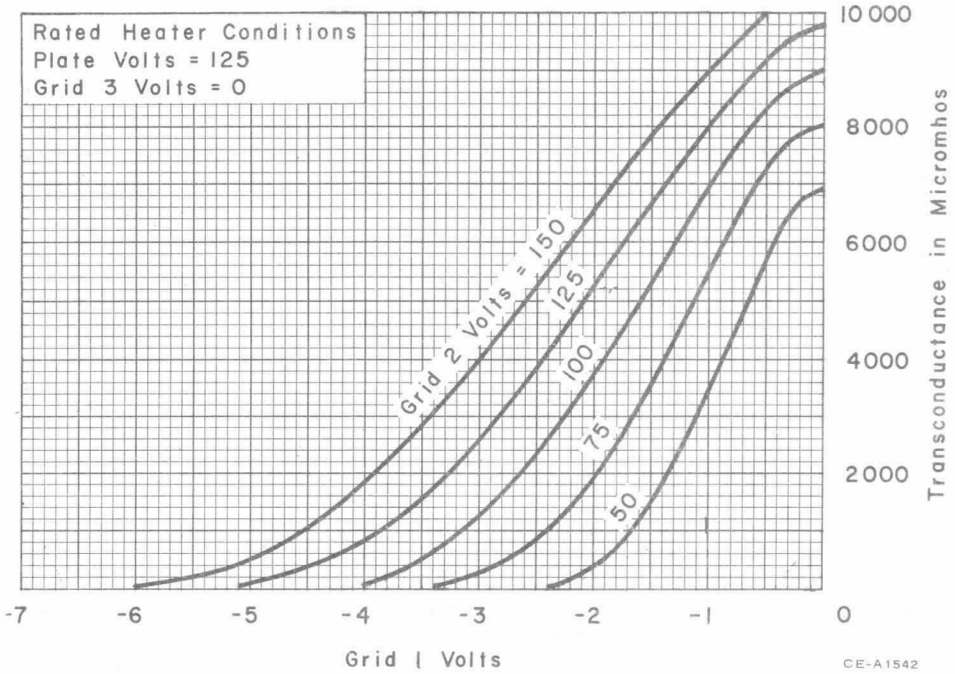
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