

SHARP-CUTOFF PENTODE TYPES 3HM6, 4HM6 AND 6HM6

The 3HM6, 4HM6 and 6HM6 are sharp-cutoff, 9-Pin miniature frame-grid pentode types designed for service in television receiver I.F. amplifier stages. They feature very-high transconductance and low interelectrode capacitance values. The cathode is provided with 2 terminals to increase input impedance at high frequencies. Grid 3 is connected to a separate pin to facilitate grounding.

The 3HM6 and 4HM6 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:	3HM6	4HM6	6HM6
Voltage (ac or dc)	3.15	4.2	6.3
Current	0.60	0.45	0.30
Warm-up Time (Note 1)	11	11	--
Direct Interelectrode Capacitances:			
	Shielded (Note 2)		Unshielded
Grid 1 to Plate	0.024		0.031
Input	8.70		8.70
Output	3.00		2.15

MECHANICAL

Bulb	T-5½
Base	Miniature, 9-Pin (JEDEC E9-1)
Outline	6-2
Basing	9PM
Mounting Position	Any

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.)	0.156	Megohm
Transconductance	15000	μmhos
Grid 1 Cutoff Bias (Note 3)	-3.0	Volts
Plate Current	13	Ma.
Grid 2 Current	3.2	Ma.
Hot Input Resistance (Note 4)	13000	Ohms
Hot Input Capacitance (Note 4)	7.40	μμf

NOTES

1. 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.
2. With JEDEC Shield No. 315 connected to ground.
3. For transconductance of 100 μmhos.
4. Measured at 44 Mc. with unbypassed 56 ohm cathode resistor.

RATINGS

Design Maximum Values

Plate Voltage	250	max.	Volts
Grid 2 Supply Voltage	250	max.	Volts
Grid 2 Voltage	See Grid 2 Input Rating Chart		

Plate Dissipation	2.5	max.	Watts
Grid 2 Input	0.6	max.	Watt
Grid 1 Negative Voltage	50	max.	Volts
Cathode Current	25	max.	Ma.

Grid 1 Circuit Resistance:

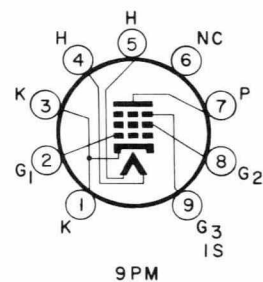
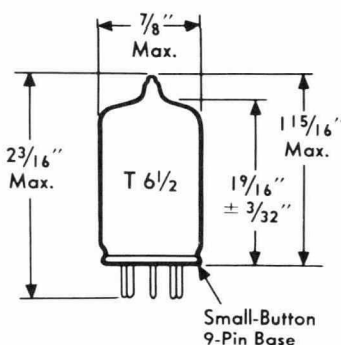
Cathode Resistor Bias	1	max.	Megohm
Fixed Bias	0.25	max.	Megohm

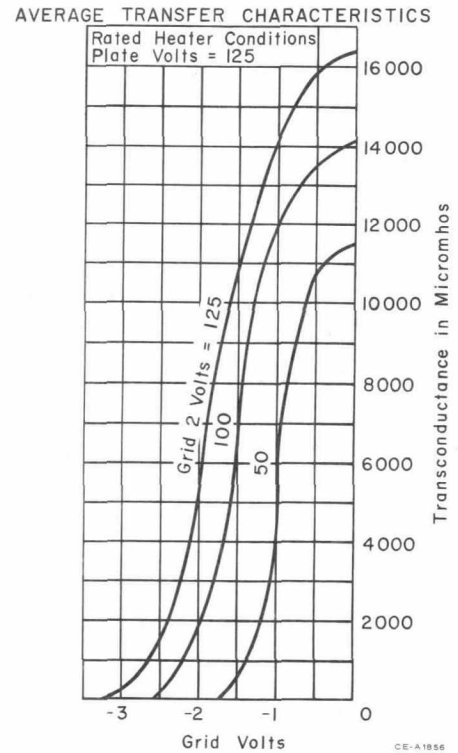
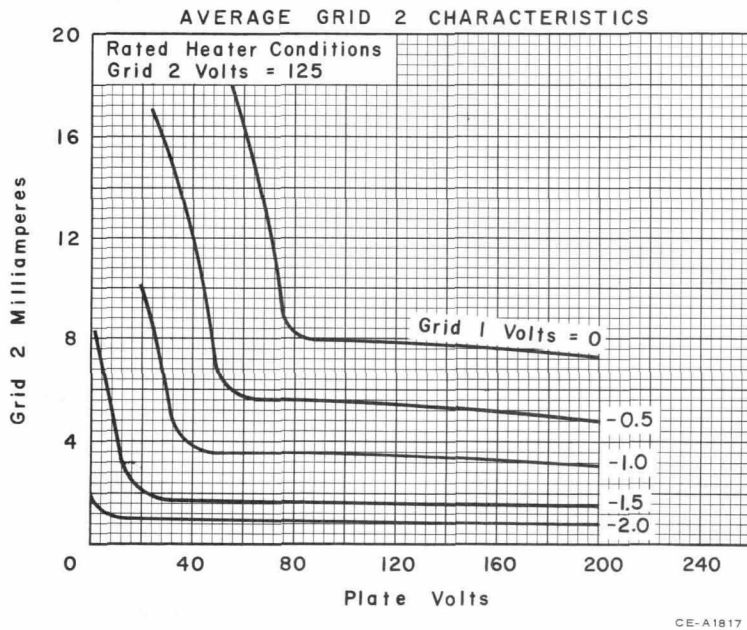
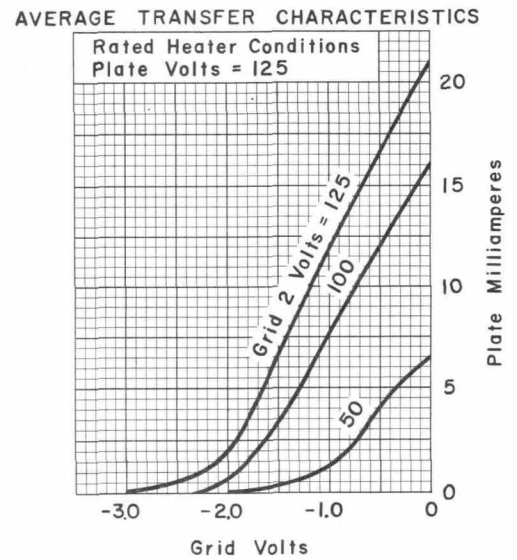
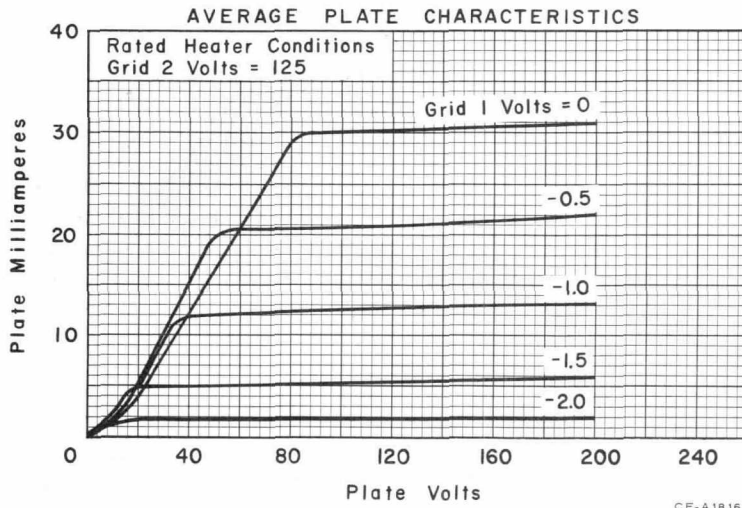
Heater:

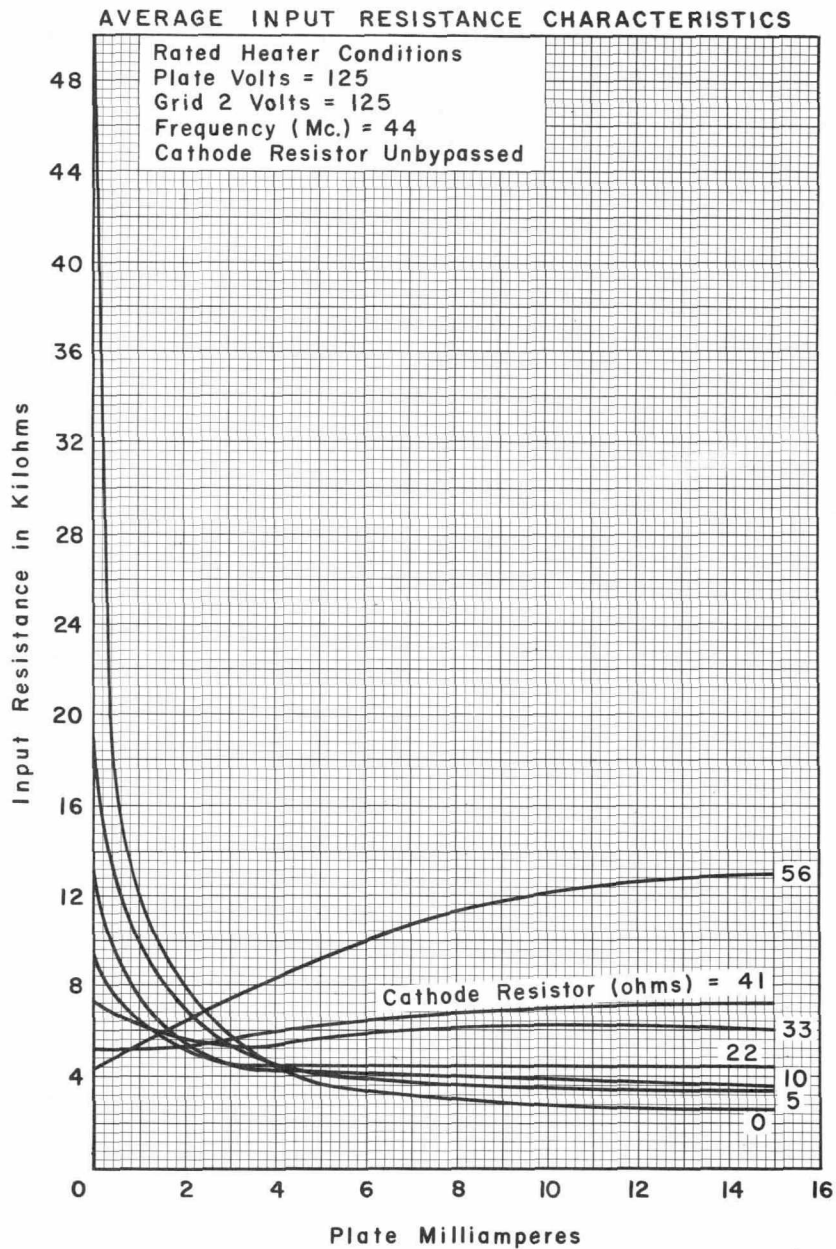
Voltage:	Minimum	Maximum	
6HM6	5.7	6.9	Volts
Current:			
3HM6	560	640	Ma.
4HM6	420	480	Ma.

Heater-Cathode Voltage:

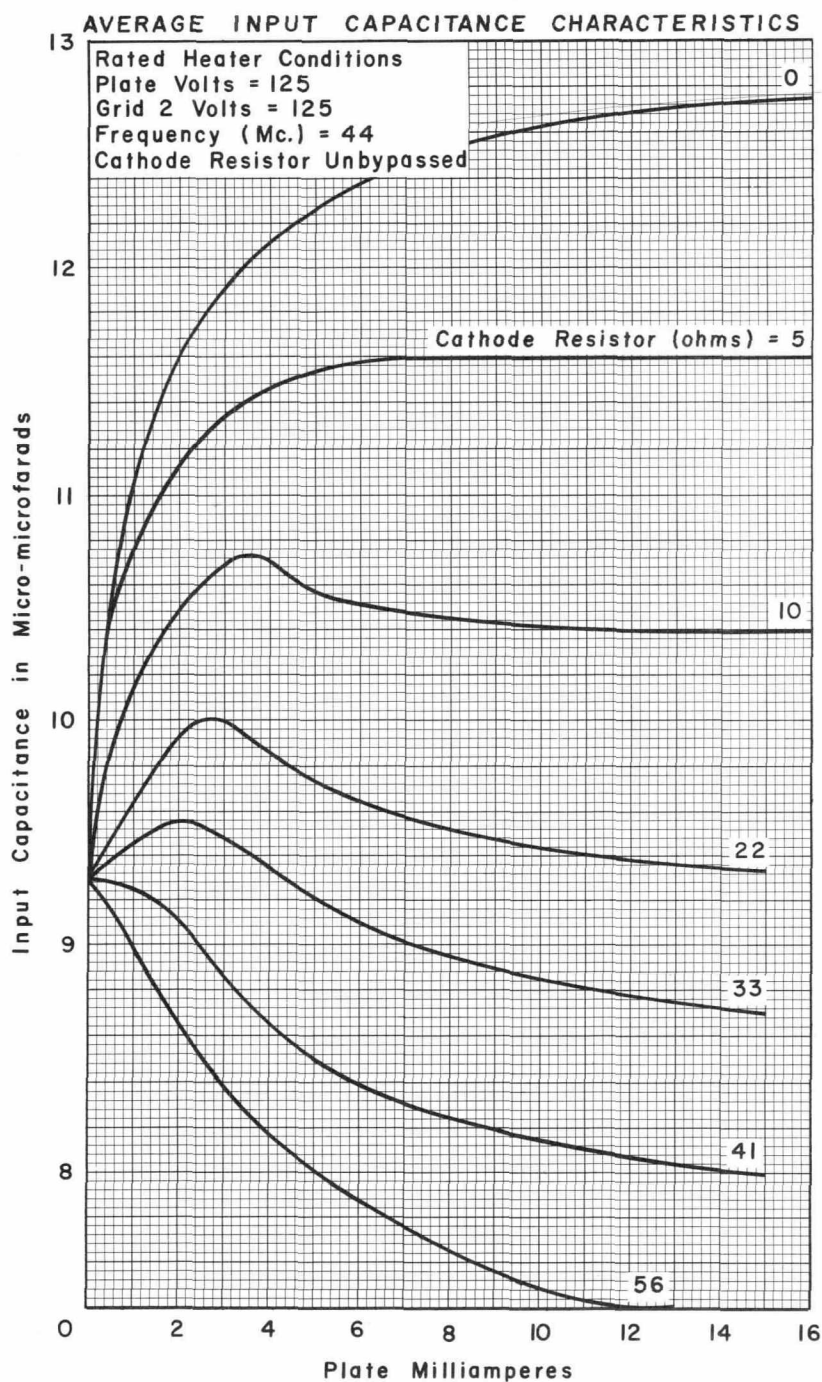
Heater Negative with Respect to Cathode			
Total DC and Peak	200	max.	Volts
Heater Positive with Respect to Cathode			
DC + Peak	200	max.	Volts







CE-A1819



CE-A 1820