

POWER PENTODE TYPES 6EH5, 12EH5, 25EH5 and 50EH5

The 6EH5, 12EH5, 25EH5 and 50EH5 are 7-pin miniature power pentode types designed for service as audio output tubes in radio and television receivers and audio amplifiers in record players and tape recorders. The outstanding feature of these types is their high power sensitivity permitting very low drive voltage.

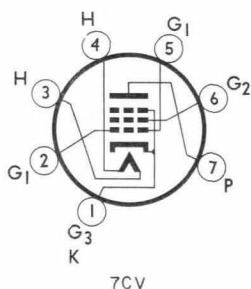
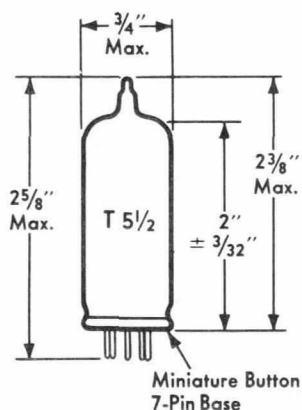
The 12EH5 has been designed for use in receivers which employ series-connected heaters, especially in television receivers where the picture-tube heater is in series with other heaters. When it is employed in this type of circuit with other tubes having a current rating of 600 ma., heater voltage surges across individual tubes are minimized inasmuch as the heater warm-up characteristic is controlled.

ELECTRICAL:

Cathode.....	Coated Unipotential				
Heater:	6EH5	12EH5	25EH5	50EH5	
Voltage (ac or dc)	6.3	12.6	25.0	50.0	Volts
Current	1.20	0.60	0.30	0.15	Ampere
Warm-up Time♦	--	11	--	--	Seconds
Direct Interelectrode Capacitances (Unshielded):					
Grid 1 to Plate	0.65				$\mu\mu\text{f}$
Input	17				$\mu\mu\text{f}$
Output	9				$\mu\mu\text{f}$

MECHANICAL:

Bulb	T-5½
Base	7-Pin Miniature (JEDEC E7-1)
Outline	5-3
Basing	7CV
Mounting Position	Any



MAXIMUM RATINGS

Design Center Values

Plate Voltage	135 max.	Volts
Grid 2 Voltage (Screen)	117 max.	Volts
Grid 1 Positive Voltage	0 max.	Volts
Plate Dissipation	5 max.	Watts
Grid 2 Dissipation	1.75 max.	Watts
Bulb Temperature□	220 max.	°C
Grid 1 Circuit Resistance:		
Fixed Bias	0.1 max.	Megohms
Cathode-Resistor Bias	0.5 max.	Megohms
Heater-Cathode Voltage: 6EH5 12EH5		
Heater Negative with Respect to cathode: 25EH5 50EH5		
Total DC + Peak	200	300 max. Volts
Heater Positive with Respect to Cathode:		
DC component	100	100 max. Volts
Total DC + Peak	200	200 max. Volts

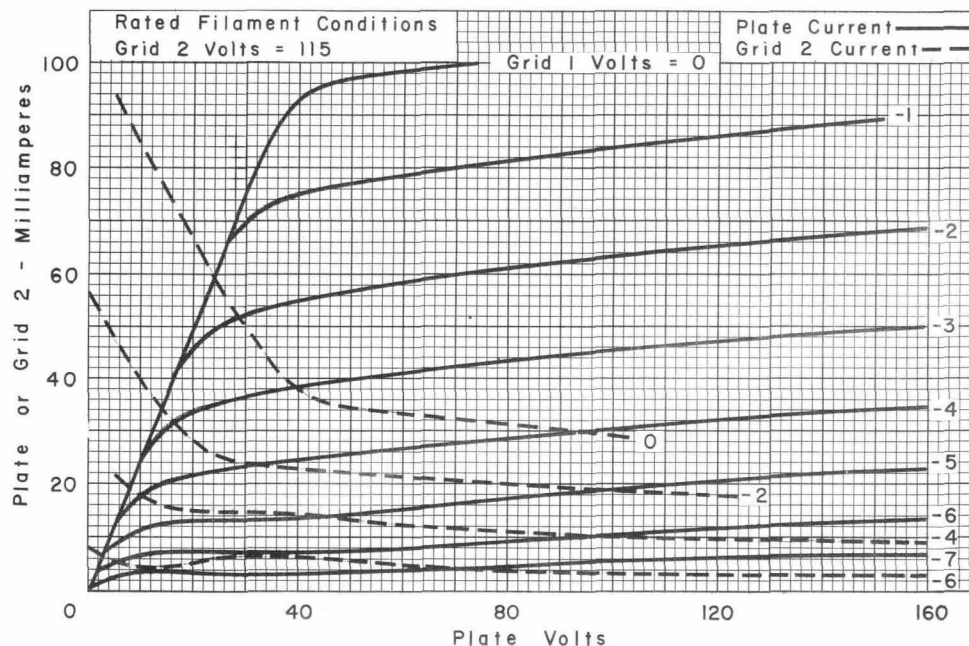
TYPICAL OPERATING CHARACTERISTICS

Plate Voltage	110	Volts
Grid 2 Voltage	115	Volts
Cathode Bias Resistor	62	Ohms
Peak AF-Signal Grid 1 Voltage	3	Volts
Zero-Signal Plate Current	42	Ma.
Max.-Signal Plate Current	42	Ma.
Zero-Signal Grid 2 Current (Screen)	11.5	Ma.
Max.-Signal Grid 2 Current (Screen)	14.5	Ma.
Plate Resistance (approx.)	11000	Ohms
Transconductance	14600	μmhos
Load Resistance	3000	Ohms
Power Output	1.4	Watts
Total Harmonic Distortion	7	Per Cent

♦ 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.

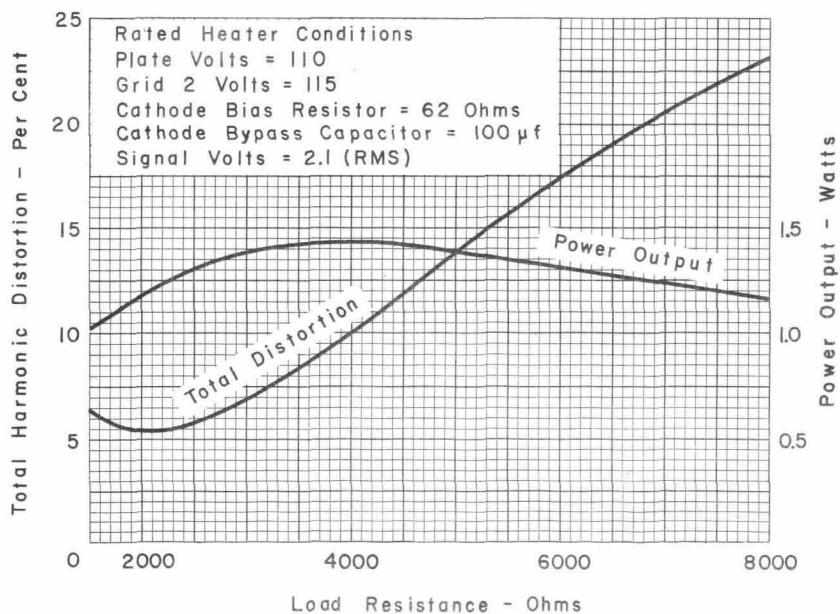
□ High ambient temperature and shielding may necessitate a reduction in operating dissipation. When tube shields are used, it is advisable to paint both inside and outside surfaces of the tube shield a dull black and to provide ventilation slots to reduce operating temperature.

AVERAGE PLATE CHARACTERISTICS



CE-A1505

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