

October 1, 1962

DUAL-CONTROL-GRID PENTODE TYPE 6HZ6

The 6HZ6 is a miniature 7-pin dual-control-grid pentode designed for service as combined limiter, FM detector and audio voltage amplifier in television receivers.

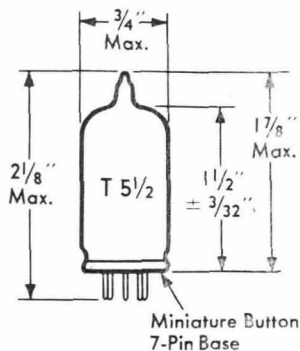
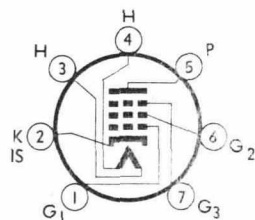
The 6HZ6 has been designed for use in receivers which employ series connected heaters especially in television receivers where the picture-tube heater is in series with other heaters. When it is employed in this type of circuit with other tubes similarly designed having the same heater current rating, heater voltage surges across individual tubes are minimized inasmuch as heater warm-up characteristic is controlled.

ELECTRICAL

Cathode	Coated Unipotential
Heater:	
Voltage (ac or dc)	6.3 Volts
Current	0.45±6% Ampere
Warm-up Time (Note 1)	11 Seconds
Direct Interelectrode Capacitances:	Unshielded
Grid 1 to Plate	0.023 $\mu\mu\text{f}$
Grid 3 to Plate	1.6 $\mu\mu\text{f}$
Grid 1 Input	8.2 $\mu\mu\text{f}$
Grid 3 Input	7.2 $\mu\mu\text{f}$
Grid 1 to Grid 3	0.09 $\mu\mu\text{f}$

MECHANICAL

Bulb	T-5½
Base	Miniature 7-Pin (JEDEC E7-1)
Outline	5-2
Basing	7EN
Mounting Position	Any



7EN

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LIMITER FM DETECTOR SERVICE

MAXIMUM RATINGS

Design Maximum Values

Plate Voltage	300 max.	Volts
Grid 3 Voltage:		
Positive DC & Peak Value	25 max.	Volts
Negative DC & Peak Value	100 max.	Volts
Grid 2 Supply Voltage	300 max.	Volts
Grid 2 Voltage	See Grid 2 Input Rating Chart	
Grid 1 Voltage:		
Positive DC Value	0 max.	Volts
Negative DC Value	50 max.	Volts
Plate Dissipation	1.7 max.	Watts
Grid 3 Dissipation	0.1 max.	Watts
Grid 2 Dissipation	1 max.	Watt
Heater-Cathode Voltage:		
Heater Positive with respect to Cathode:		
DC Component	100 max.	Volts
Total DC & Peak	200 max.	Volts
Heater Negative with respect to Cathode:		
Total DC & Peak	200 max.	Volts

TYPICAL OPERATION

Plate Voltage	150	Volts
Grid 3 Voltage	0	Volts
Grid 2 Voltage	100	Volts
Cathode Bias Resistor	180	Ohms
Plate Resistance (Approx.)	0.11	Megohms
Grid 1 Transconductance	3400	μmhos
Grid 3 Transconductance	600	μmhos
Grid 1 Cutoff Bias (Note 2)	-4.5	Volts
Grid 3 Cutoff Bias (Note 2)	-7	Volts
Plate Current	3.2	Ma.
Grid 2 Current	3.2	Ma.

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 three times rated heater voltage divided by rated heater current.
2. For Plate Current of 20 μamp .