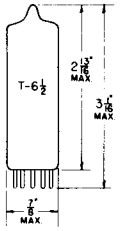
TUNG-SOL

PENTODE

MINIATURE TYPE



GLASS BULB

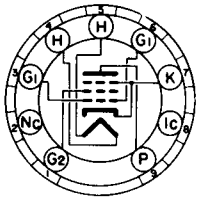
UNIPOTENTIAL CATHODE

HEATER

6.3 VOLTS 0.8 AMP.

AC OR DC

ANY MOUNTING POSITION



BOTTOM VIEW

SMALL-BUTTON NOVAL
9 PIN BASE

9HN

THE 6EM5 IS A BEAM POWER PENTODE IN THE 9 PIN MINIATURE CONSTRUCTION AND IS INTENDED FOR USE AS THE VERTICAL DEFLECTION AMPLIFIER IN HIGH-EFFICIENCY DEFLECTION CIRCUITS OF TV RECEIVERS WHICH USE PICTURE TUBES WITH A 110° DIAGONAL DEFLECTION ANGLE. WITH THE EXCEPTION OF HEATER RATINGS AND HEATER WARM-UP TIME, THE 6EM5 IS IDENTICAL TO THE 8EM5.

DIRECT INTERELECTRODE CAPACITANCES

WITHOUT EXTERNAL SHIELD

GRID #1 TO PLATE	0.7	μμf
GRID #1 TO CATHODE & G3, G2, AND HEATER	10	μμf
PLATE TO CATHODE & G3, G2, AND HEATER	5.1	μμf

RATINGS

INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

VERTICAL DEFLECTION AMPLIFIER

HEATER VOLTAGE	6.3	VOLTS
MAXIMUM PLATE VOLTAGE:		
DC	315	VOLTS
PEAK POSITIVE PULSE (ABS. MAX.)[B]	2 200[C]	VOLTS
MAXIMUM GRID #2 VOLTAGE	285	VOLTS
MAXIMUM PEAK NEGATIVE-PULSE GRID #1 VOLTAGE	-250	VOLTS
MAXIMUM CATHODE CURRENT:		
PEAK	210	MA.
AVERAGE	60	MA.
MAXIMUM PLATE DISSIPATION	10	WATTS
MAXIMUM GRID #2 INPUT	1.5	WATTS
MAXIMUM PEAK HEATER-CATHODE VOLTAGE:		
HEATER NEGATIVE WITH RESPECT TO CATHODE	200	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE	200[D]	VOLTS
MAXIMUM BULB TEMPERATURE (AT HOTTEST POINT)	250	°C
MAXIMUM CIRCUIT VALUES:		
GRID #1 CIRCUIT RESISTANCE:		
FOR FIXED-BIAS OPERATION	2.2	MEGOHMS
FOR CATHODE-BIAS OPERATION	2.2	MEGOHMS

CONTINUED ON FOLLOWING PAGE

TUNG-SOL

CONTINUED FROM PRECEEDING PAGE

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CLASS A_1 AMPLIFIER

HEATER VOLTAGE	6.3	6.3	VOLTS
HEATER CURRENT	0.8	0.8	AMP.
PLATE VOLTAGE	60	250	VOLTS
GRID #2 (SCREEN-GRID) VOLTAGE	250	250	VOLTS
GRID #1 (CONTROL-GRID) VOLTAGE	0	-18	VOLTS
MU-FACTOR, GRID #1 TO GRID #2	---	8.7	
TRANSCONDUCTANCE	---	5100	μMHOS
PLATE CURRENT	180[E]	40	MA.
GRID #2 CURRENT	30[E]	3	MA.
PLATE RESISTANCE (APPROX.)●		50 000	OHMS
GRID #1 VOLTAGE FOR PLATE CURRENT 0.2 MA.	---	-37	

● INDICATES AN ADDITION.

[B] FOR OPERATION IN A 525-LINE, 30-FRAME SYSTEM AS DESCRIBED IN "STANDARDS OF GOOD ENGINEERING PRACTICE FOR TELEVISION BROADCAST STATIONS: FEDERAL COMMUNICATIONS COMMISSION", THE DUTY CYCLE OF THE VOLTAGE PULSE MUST NOT EXCEED 15% OF ONE SCANNING CYCLE.

[C] UNDER NO CIRCUMSTANCES SHOULD THIS ABSOLUTE VALUE BE EXCEEDED.

[D] THE DC COMPONENT MUST NOT EXCEED 100 VOLTS

[E] THESE VALUES CAN BE MEASURED BY A METHOD INVOLVING A RE-CURRENT WAVEFORM SUCH THAT THE PLATE DISSIPATION AND GRID #2 INPUT WILL BE KEPT WITHIN RATINGS IN ORDER TO PREVENT DAMAGE TO THE TUBE.