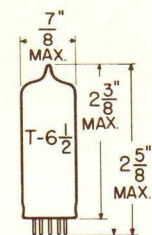


TUNG-SOL

TRIODE PENTODE

MINIATURE TYPE



GLASS BULB

SMALL-BUTTON NOVAL
9 PIN BASE E9-1

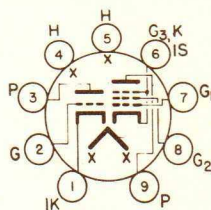
UNIPOTENTIAL CATHODE

HEATER

10.5 VOLTS 0.45±.03 AMP.

AC OR DC

ANY MOUNTING POSITION



BOTTOM VIEW

BASING DIAGRAM
JEDEC 90X

THE 10HF8 IS A HIGH-MU TRIODE AND A SHARP-CUTOFF PENTODE IN THE 9 PIN MINIATURE CONSTRUCTION. IT IS INTENDED FOR USE IN COLOR AND BLACK-AND-WHITE TELEVISION RECEIVERS.

THE PENTODE UNIT IS ESPECIALLY USEFUL AS A VIDEO OUTPUT AMPLIFIER AND THE TRIODE UNIT IS USEFUL IN VOLTAGE-AMPLIFIER APPLICATIONS SUCH AS SYNC-SEPARATOR, SYNC-CLIPPER AND PHASE-INVERTER CIRCUITS.

EXCEPT FOR HEATER RATINGS AND HEATER WARM-UP TIME, THE 10HF8 IS IDENTICAL TO THE 6HF8.

DIRECT INTERELECTRODE CAPACITANCES
WITHOUT EXTERNAL SHIELD

TRIODE UNIT:

GRID TO PLATE	3.5	pf
GRID TO TRIODE CATHODE, PK, G3, I.S. & H.	2.8	pf
PLATE TO TRIODE CATHODE, PK, G3, I.S. & H.	2.6	pf

PENTODE UNIT:

GRID #1 TO PLATE (MAX.)	0.1	pf
GRID #1 TO K, I.S., G3, G2 & H	10	pf
PLATE TO K, I.S., G3, G2 & H.	4.2	pf
TRIODE GRID TO PENTODE PLATE (MAX.)	0.015	pf

RATINGS

INTERPRETED ACCORDING TO DESIGN MAXIMUM SYSTEM
CLASS A₁ AMPLIFIER

	TRIODE UNIT	PENTODE UNIT	
HEATER VOLTAGE		10.5	VOLTS
MAXIMUM PLATE VOLTAGE	330	330	
MAXIMUM GRID #2 SUPPLY VOLTAGE	---	330	VOLTS
MAXIMUM GRID #2 (SCREEN-GRID) VOLTAGE	---	SEE INPUT RATING CHART	
MAXIMUM GRID #1 (CONTROL-GRID) VOLTAGE:			
POSITIVE-BIAS VALUE	0	0	VOLTS

CONTINUED ON FOLLOWING PAGE

TUNG-SOL

CONTINUED FROM PRECEDING PAGE

RATINGS - CONT'D.
 INTERPRETED ACCORDING TO DESIGN MAXIMUM SYSTEM
CLASS A_1 AMPLIFIER

	TRIODE UNIT	PENTODE UNIT	
MAXIMUM PLATE DISSIPATION	1	5	WATTS
MAXIMUM GRID #2 INPUT			
FOR GRID #2 VOLTAGES UP TO 165 V.	---	1.1	WATTS
FOR GRID #2 VOLTAGES BETWEEN 165 AND 330 VOLTS		SEE INPUT RATING CHART	
MAXIMUM PEAK HEATER-CATHODE VOLTAGE:			
HEATER NEGATIVE WITH RESPECT TO CATHODE	200	200	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE	200 ^A	200 ^A	VOLTS
HEATER WARM-UP TIME (AVERAGE)		11	SECONDS

^ATHE DC COMPONENT MUST NOT EXCEED 100 VOLTS.

CHARACTERISTICS

CLASS A_1 AMPLIFIER

	TRIODE UNIT	PENTODE UNIT	
PLATE-SUPPLY VOLTAGE	200	45 200	VOLTS
GRID #2 SUPPLY VOLTAGE	---	125 125	VOLTS
GRID #1 VOLTAGE	-2	0 ---	VOLTS
CATHODE RESISTOR	---	---	68 OHMS
AMPLIFICATION FACTOR	70	---	---
PLATE RESISTANCE (APPROX.)	17500	---	75000 OHMS
TRANSCONDUCTANCE	4000	---	12500 μ MHOS
PLATE CURRENT	4	40 ^B 25	MA.
GRID #2 CURRENT	---	15 ^B 7	MA.
GRID #1 VOLTAGE (APPROX.)			
FOR PLATE CURRENT OF 100 μ A	---	---	-9 VOLTS
GRID #1 VOLTAGE (APPROX.)			
FOR PLATE CURRENT OF 20 μ A	-6	---	---

MAXIMUM CIRCUIT VALUES

	TRIODE UNIT	PENTODE UNIT	
GRID #1 CIRCUIT RESISTANCE:			
FOR CATHODE-BIAS OPERATION (MAX.)	1.0	1.0	MEGOHM
FOR FIXED-BIAS OPERATION (MAX.)	0.5	0.25	MEGOHM

^BTHESE VALUES CAN BE MEASURED BY A METHOD INVOLVING A RECURRENT WAVEFORM SUCH THAT PLATE DISSIPATION AND GRID #2 INPUT WILL BE KEPT WITHIN RATINGS IN ORDER TO PREVENT DAMAGE TO THE TUBE.

