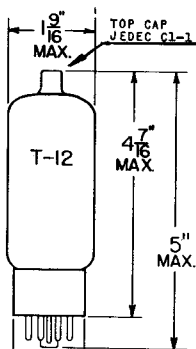


## TUNG-SOL

## BEAM POWER PENTODE



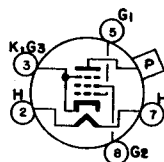
## GLASS BULB

OUTLINE DRAWING  
JEDEC 12-21  
BASE JEDEC B5-123

COATED UNIPOTENTIAL CATHODE

HEATER

6.3±0.6 VOLTS 2.5 AMP.



## BOTTOM VIEW

BASING DIAGRAM  
JEDEC 58T

THE 7867 IS A BEAM POWER PENTODE DESIGNED WITH HIGH POWER SENSITIVITY AND HIGH EFFICIENCY FOR SERVICE IN AUDIO OUTPUT STAGES. IT IS CAPABLE OF HANDLING HIGH POWER AT A VERY LOW HARMONIC DISTORTION LEVEL.

DIRECT INTERELECTRODE CAPACITANCES  
WITHOUT EXTERNAL SHIELD

GRID #1 TO PLATE (APPROX.)	1.1	pf
INPUT	22	pf
OUTPUT	8.5	pf

## RATINGS

INTERPRETED ACCORDING TO DESIGN MAXIMUM SYSTEM<sup>B</sup>

HEATER VOLTAGE <sup>A</sup>	6.3±0.6	VOLTS
MAXIMUM PLATE VOLTAGE	700	VOLTS
MAXIMUM GRID #2 VOLTAGE	175	VOLTS
MAXIMUM PLATE DISSIPATION	24	WATTS
MAXIMUM GRID #2 DISSIPATION	3.6	WATTS
MAXIMUM CATHODE CURRENT—AVERAGE	220	MA.
MAXIMUM GRID #1 CIRCUIT RESISTANCE	0.5	MEGOHM
MAXIMUM BULB TEMPERATURE (HOTTEST POINT)	225	°C
MAXIMUM HEATER—CATHODE VOLTAGE:		
HEATER NEGATIVE WITH RESPECT TO CATHODE		
TOTAL DC AND PEAK	200	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE		
DC	100	VOLTS
TOTAL DC AND PEAK	200	VOLTS

CONTINUED ON FOLLOWING PAGE

## TUNG-SOL

CONTINUED FROM PRECEDING PAGE

## TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

AUDIO SERVICE

CLASS A<sub>1</sub> AMPLIFIER - SINGLE TUBE

PLATE VOLTAGE <sup>C</sup>	250	VOLTS
GRID #2 CURRENT <sup>C</sup>	90	VOLTS
CATHODE RESISTOR	120	OHMS
PEAK GRID #1 SIGNAL	10	VOLTS
ZERO SIGNAL PLATE CURRENT	80	MA.
MAX. SIGNAL PLATE CURRENT	81	MA.
ZERO SIGNAL GRID #2 CURRENT	1	MA.
MAX. SIGNAL GRID #2 CURRENT	6	MA.
PLATE RESISTANCE	12,000	OHMS
TRANSCONDUCTANCE	10,000	μMHOS
LOAD RESISTANCE	3,000	OHMS
TOTAL HARMONIC DISTORTION	10	PERCENT
MAX. SIGNAL POWER OUTPUT	7.5	WATTS

PUSH-PULL AMPLIFIER  
VALUES FOR TWO TUBES

CLASS OF OPERATION	A <sub>1</sub>	AB <sub>1</sub>	AB <sub>1</sub>	
PLATE VOLTAGE <sup>C</sup>	250	250	450	VOLTS
GRID #2 VOLTAGE <sup>C</sup>	90	150	150	VOLTS
CATHODE RESISTOR	60	200	---	OHMS
GRID #1 VOLTAGE	---	---	-35	VOLTS
PEAK GRID #1 TO GRID #1 SIGNAL	19.5	47	69	VOLTS
ZERO SIGNAL PLATE CURRENT	160	114	58	MA.
MAX. SIGNAL PLATE CURRENT	166	128	210	MA.
ZERO SIGNAL GRID #2 CURRENT	2	2	1.4	MA.
MAX. SIGNAL GRID #2 CURRENT	10.5	17	36	MA.
LOAD RESISTANCE (PLATE TO PLATE)	5000	6000	5000	OHMS
TOTAL HARMONIC DISTORTION	1.4	3.0	5.5	PERCENT
MAX. SIGNAL POWER OUTPUT	16	28	65	WATTS

<sup>A</sup> THE EQUIPMENT DESIGNER SHALL SO DESIGN THE EQUIPMENT THAT THE HEATER VOLTAGE IS CENTERED AT THE SPECIFIED BOGEY VALUE. HEATER SUPPLY VARIATIONS SHALL BE RESTRICTED TO MAINTAIN HEATER VOLTAGE WITHIN THE SPECIFIED TOLERANCE.

<sup>B</sup> DESIGN-MAXIMUM RATINGS ARE LIMITING VALUES OF OPERATING AND ENVIRONMENTAL CONDITIONS APPLICABLE TO A BOGEY ELECTRON DEVICE OF A SPECIFIED TYPE AS DEFINED BY ITS PUBLISHED DATA, AND SHOULD NOT BE EXCEEDED UNDER THE WORST PROBABLE CONDITIONS. THE DEVICE MANUFACTURER CHOOSES THESE VALUES TO PROVIDE ACCEPTABLE SERVICEABILITY OF THE DEVICE, TAKING RESPONSIBILITY FOR THE EFFECTS OF CHANGES IN OPERATING CONDITIONS DUE TO VARIATIONS IN DEVICE CHARACTERISTICS. THE EQUIPMENT MANUFACTURER SHOULD DESIGN SO THAT INITIALLY AND THROUGHOUT LIFE NO DESIGN-MAXIMUM VALUE FOR THE INTENDED SERVICE IS EXCEEDED WITH A BOGEY DEVICE UNDER THE WORST PROBABLE OPERATING CONDITIONS WITH RESPECT TO SUPPLY-VOLTAGE VARIATION, EQUIPMENT COMPONENT VARIATION, EQUIPMENT CONTROL ADJUSTMENT, LOAD VARIATION, SIGNAL VARIATION, AND ENVIRONMENTAL CONDITIONS.

<sup>C</sup> SPECIFIED VOLTAGE IS WITH RESPECT TO GROUND.