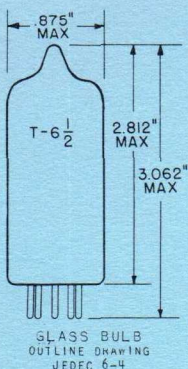


TUNG-SOL

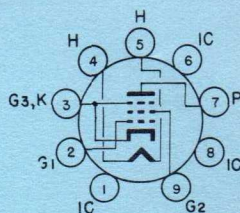
PENTODE
MINIATURE TYPE

COATED UNIPOTENTIAL CATHODE

HEATER

6.3 VOLTS 760 MA.

ANY MOUNTING POSITION

BOTTOM VIEW
BASING DIAGRAM
JEDEC 9CV

THE 7189 IS A POWER PENTODE IN THE 9 PIN MINIATURE CONSTRUCTION. IT IS DESIGNED FOR USE AS A POWER AMPLIFIER IN HIGH FIDELITY AUDIO EQUIPMENT, INTENDED FOR USE IN AMPLIFIERS OF OVER 20 WATT CAPABILITIES.

DIRECT INTERELECTRODE CAPACITANCES

INPUT CAPACITANCE	10.8	pf
OUTPUT CAPACITANCE	6.5	pf
PLATE TO GRID #1	0.5	pf
GRID #1 TO HEATER	0.25	pf

RATINGS

INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM
CLASS AB₁ FIXED BIAS AUDIO AMPLIFIER
PENTODE CONNECTION

MAXIMUM PLATE VOLTAGE	400	VOLTS
MAXIMUM PLATE DISSIPATION	12	WATTS
MAXIMUM GRID #2 VOLTAGE	300	VOLTS
MAXIMUM GRID #2 DISSIPATION (ZERO SIGNAL)	2.0	WATTS
MAXIMUM GRID #2 DISSIPATION (MAX. SIGNAL)	4.0	WATTS
MAXIMUM CATHODE CURRENT	65	MA.
MAXIMUM GRID RESISTANCE (FIXED BIAS)	300 000	OHMS
MAXIMUM HEATER TO CATHODE VOLTAGE	100	VOLTS

TYPICAL CHARACTERISTICS

PLATE VOLTAGE	250	VOLTS
GRID #2 VOLTAGE	250	VOLTS
PLATE CURRENT	48	MA.
GRID #2 CURRENT	5.5	MA.
GRID #1 VOLTAGE	-7.3	VOLTS
TRANSCONDUCTANCE	11 300	μMHOS
PLATE RESISTANCE	40 000	OHMS
AMPLIFICATION FACTOR (GRID #1 TO GRID #2)	19.5	

CONTINUED ON FOLLOWING PAGE

TUNG-SOL

CONTINUED FROM PRECEDING PAGE

TYPICAL OPERATION

FIXED BIAS - TWO TUBES - PUSH PULL

PLATE VOLTAGE	400	VOLTS
GRID #2 VOLTAGE	300	VOLTS
GRID #1 VOLTAGE	-15	VOLTS
PLATE TO PLATE LOAD RESISTANCE	8 000	OHMS
PLATE CURRENT (ZERO SIGNAL)	2x7.5	MA.
PLATE CURRENT (MAX. SIGNAL)	2x52.5	MA.
GRID #2 CURRENT (ZERO SIGNAL)	2x0.8	MA.
GRID #2 CURRENT (MAX. SIGNAL)	2x12.5	MA.
INPUT SIGNAL VOLTAGE (RMS)	10.5	VOLTS
POWER OUTPUT	24	WATTS
PERCENT DISTORTION	4.0	PERCENT

RATINGS

INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

CLASS AB₁ AUDIO AMPLIFIER

ULTRA-LINEAR AMPLIFIER

PLATE AND GRID #2 SUPPLY VOLTAGE	375	VOLTS
PLATE DISSIPATION	12	WATTS
GRID #2 DISSIPATION (ZERO SIGNAL)	2	WATTS
GRID #2 INPUT (MAX SIGNAL)	4	WATTS
CATHODE CURRENT	65	MA.
GRID RESISTANCE (CATHODE BIAS)	1	MEGOHM
HEATER TO CATHODE VOLTAGE	100	VOLTS

TYPICAL OPERATION

CATHODE BIAS - TWO TUBES - PUSH PULL

PLATE SUPPLY VOLTAGE	375	VOLTS
GRID #2 SUPPLY VOLTAGE ^A		
COMMON CATHODE RESISTANCE	220	OHMS
PLATE TO PLATE LOAD RESISTANCE	11 000	OHMS
PLATE AND GRID #2 CURRENT (ZERO SIGNAL)	2x35	MA.
PLATE AND GRID #2 CURRENT (MAX. SIGNAL)	2x40.5	MA.
INPUT SIGNAL VOLTAGE, RMS	12.5	VOLTS
POWER OUTPUT	16.5	WATTS
PERCENT DISTORTION	3	PERCENT

^A SCREEN VOLTAGE IS OBTAINED FROM TAPS LOCATED AT 43% OF THE PLATE WINDING TURNS.

7189

 $E_f = 6.3$ Volts $E_{c2} = 300$ Volts