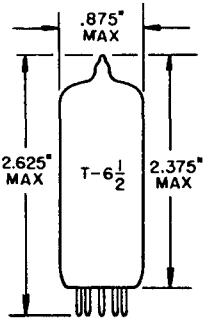
**TUNG-SOL**

# TRIODE PENTODE
MINIATURE TYPE

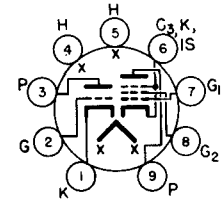



GLASS BULB
MINIATURE BUTTON
9 PIN BASE E9-1
OUTLINE DRAWING
JEDEC 6-3

COATED UNIPOTENTIAL CATHODE

FOR COMBINED VIDEO
AMPLIFIER AND GENERAL
PURPOSE T.V. APPLICATIONS

ANY MOUNTING POSITION




BOTTOM VIEW
BASING DIAGRAM
JEDEC 9DX

THE 8JV8 IS A TRIODE PENTODE IN THE 9 PIN MINIATURE CONSTRUCTION. THE TRIODE SECTION IS DESIGNED FOR USE IN SOUND IF, KEYED A.G.C., SYNC-SEPARATION, SYNC-AMPLIFICATION OR NOISE SUPPRESSION CURCUITS; THE PENTODE SECTION IS DESIGNED FOR USE AS A VIDEO AMPLIFIER. THE HEATER MAY BE OPERATED FROM A TRANSFORMER OR IN A SERIES STRING.

## DIRECT INTERELECTRODE CAPACITANCES
WITHOUT EXTERNAL SHIELD

| | | |
|---|---|---|
| **TRIODE:** | | |
| GRID TO PLATE: Tg TO Tp | 2.2 | pf |
| INPUT: Tg TO (h+Tk+Pk, Pg3, i.s.) | 3.0 | pf |
| OUTPUT: Tp TO (h+Tk+Pk, Pg3, i.s.) | 2.0 | pf |
| **PENTODE:** | | |
| GRID 1 TO PLATE: Pg1 to Pp (MAX) | 0.08 | pf |
| INPUT: Pg1 TO (h+Pg2+Pk, Pg3, i.s.) | 8.0 | pf |
| OUTPUT: Pp TO (h+Pg2+Pk, Pg3, i.s.) | 3.2 | pf |
| **COUPLING:** | | |
| PENTODE GRID 1 TO TRIODE PLATE: Pg1 TO Tp (MAX.) | 0.012 | pf |
| PENTODE PLATE TO TRIODE PLATE: Pp TO Tp (MAX.) | 0.24 | pf |

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## HEATER CHARACTERISTICS AND RATINGS

DESIGN MAXIMUM SYSTEM - SEE EIA STANDARD RS-239

| | | | |
|---|---|---|---|
| AVERAGE CHARACTERISTICS | 8.5 VOLTS | 450 | MA. |
| HEATER WARM-UP TIME | | 11 | SECONDS |
| LIMITS OF SUPPLIED CURRENT | | 450 ± 30 | MA. |
| MAXIMUM HEATER-CATHODE VOLTAGE - BOTH SECTIONS | | | |
| 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 |

## MAXIMUM RATINGS

DESIGN MAXIMUM SYSTEM - SEE EIA STANDARD RS-239

| | TRIODE | PENTODE | |
|---|---|---|---|
| PLATE VOLTAGE | 330 | 330 | VOLTS |
| PLATE DISSIPATION | 1.1 | 4.0 | WATTS |
| GRID 2 VOLTAGE | ---- | 330 | VOLTS |
| GRID 2 DISSIPATION | ---- | 1.7 | WATTS |
| NEGATIVE GRID 1 VOLTAGE | 50 | 50 | VOLTS |
| POSITIVE GRID 1 VOLTAGE | 0 | 0 | VOLTS |
| GRID 1 CIRCUIT RESISTANCE: | | | |
| FOR CATHODE-BIAS OPERATION | 1.0 | 1.0 | MEGOHMS |
| FOR FIXED BIAS OPERATION | 0.5 | 0.25 | MEGOHM |

## AVERAGE CHARACTERISTICS

| | TRIODE | PENTODE | | |
|---|---|---|---|---|
| PLATE VOLTAGE | 200 | 125 | 200 | VOLTS |
| GRID 2 VOLTAGE | ---- | 125 | 200 | VOLTS |
| GRID 1 VOLTAGE | -2.0 | -1.0 | -2.9 | VOLTS |
| PLATE CURRENT | 4 | 22 | 22 | MA. |
| GRID 2 CURRENT | ---- | 4 | 4 | MA. |
| TRANSCONDUCTANCE | 4,000 | 11,500 | 10,700 | μMHOS |
| PLATE RESISTANCE - APPROX. | 17.5 | 100 | 150 | KOHMS |
| AMPLIFICATION FACTOR | 70 | ---- | ---- | |
| GRID 1 VOLTAGE FOR Ib=20μA (APPROX.) | -5 | -5.5 | -9 | VOLTS |

KNEE CHARACTERISTICS
Ec1 = 0 INSTANTANEOUSLY

| | | | | |
|---|---|---|---|---|
| PLATE VOLTAGE | ---- | 40 | 60 | VOLTS |
| GRID 2 VOLTAGE | ---- | 125 | 200 | VOLTS |
| PLATE CURRENT | ---- | 28 | 51 | MA. |
| GRID 2 CURRENT | ---- | 9 | 14 | MA. |

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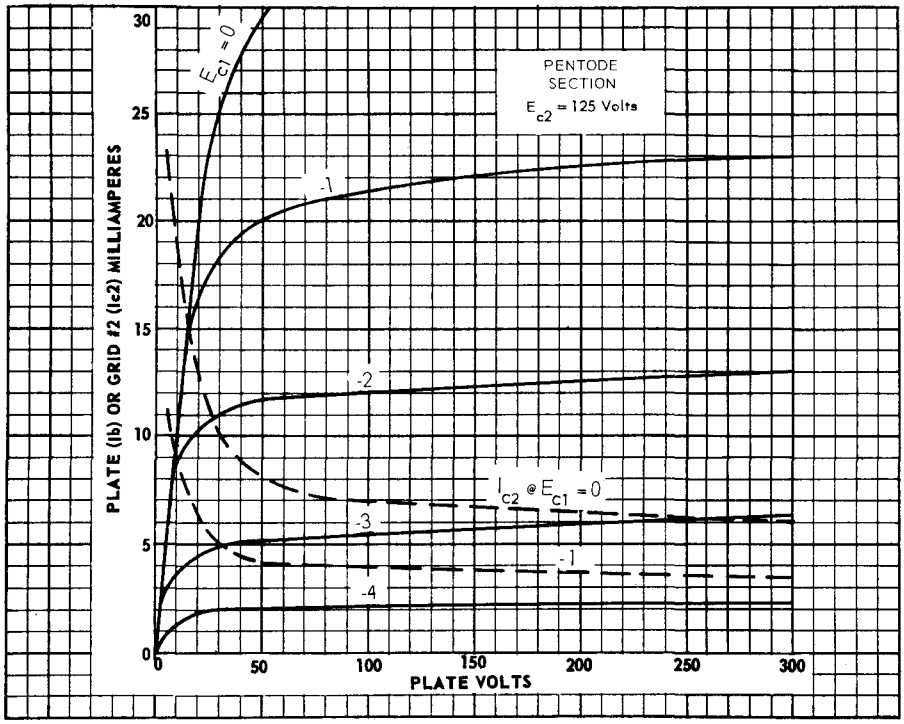


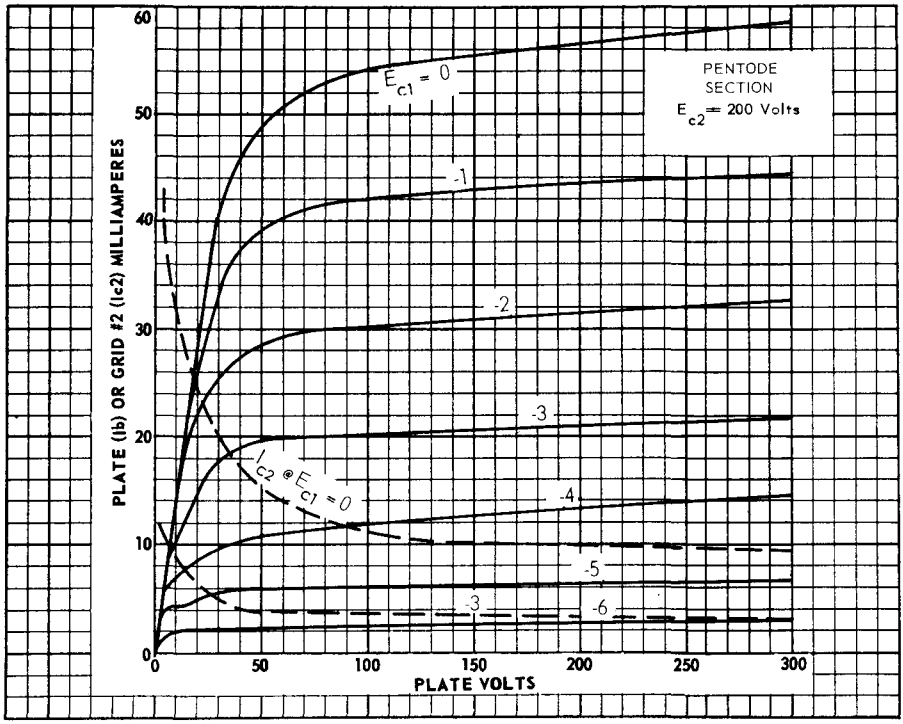


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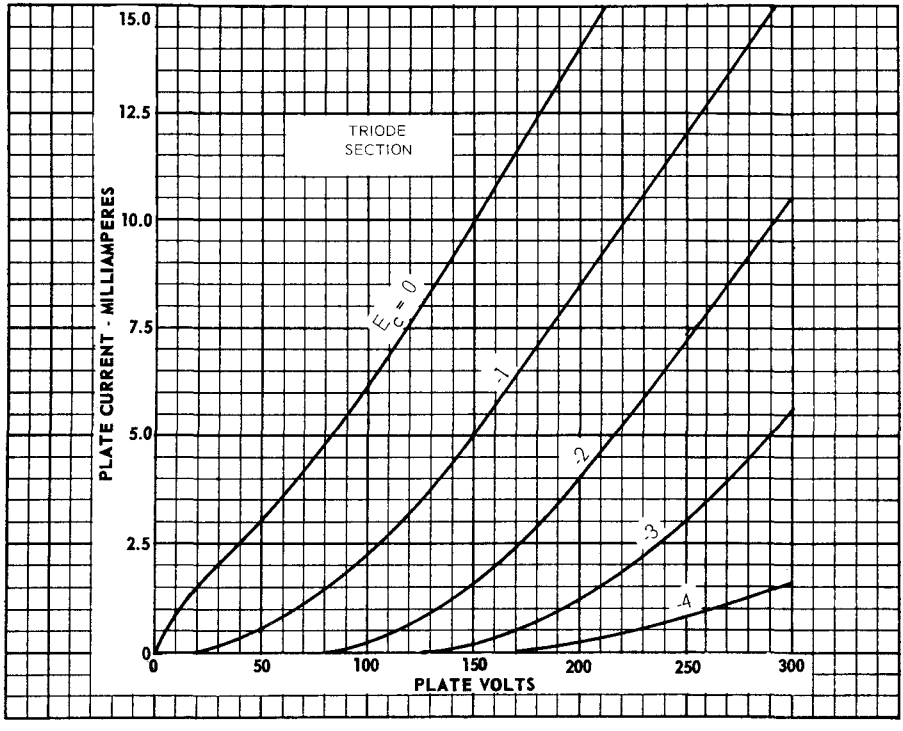
8JV8


TRIODE
SECTION
PLATE CURRENT - MILLIAMPERES
15.0
12.5
10.0
7.5
5.0
2.5
0
0
50
100
150
200
250
300
PLATE VOLTS
$E_{cc} = 0$
-1
-2
-3
-4