

TUNG-SOL

DOUBLE-DIODE TRIODE

MINIATURE TYPE

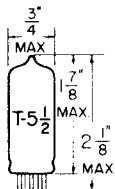
COATED UNIPOTENTIAL CATHODE

HEATER

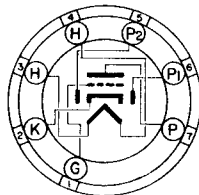
6.3 VOLTS 300 MA.

AC OR DC

ANY MOUNTING POSITION



GLASS BULB



BOTTOM VIEW

MINIATURE BUTTON
7 PIN BASE

THE 6AV6 COMBINES A HIGH-MU TRIODE AND TWO INDEPENDENT DIODE UNITS IN THE 7-PIN MINIATURE CONSTRUCTION. IT PERMITS A SINGLE TUBE TO FUNCTION AS DETECTOR, AVC RECTIFIER, AND AUDIO AMPLIFIER. COUPLING BETWEEN THE DIODE AND TRIODE SECTIONS IS MINIMIZED BY THE USE OF INTERNAL SHIELDING.

RATINGS

INTERPRETED ACCORDING TO RMA STANDARD M8-210

| | | |
|--|-----|-------|
| FILAMENT VOLTAGE | 6.3 | VOLTS |
| MAXIMUM HEATER-CATHODE VOLTAGE | 90 | VOLTS |
| MAXIMUM PLATE VOLTAGE | 300 | VOLTS |
| MAXIMUM DIODE CURRENT EACH PLATE FOR CONTINUOUS OPERATION | 1.0 | MA. |

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

TRIODE UNIT - CLASS A₁ AMPLIFIER

| | | | |
|----------------------|--------|--------|-------|
| FILAMENT VOLTAGE | 6.3 | 6.3 | VOLTS |
| FILAMENT CURRENT | 300 | 300 | MA. |
| PLATE VOLTAGE | 100 | 250 | VOLTS |
| GRID VOLTAGE | -1 | -2 | VOLTS |
| PLATE CURRENT | 0.5 | 1.2 | MA. |
| PLATE RESISTANCE | 80 000 | 62 500 | OHMS |
| TRANSCONDUCTANCE | 1 250 | 1 600 | μMHOS |
| AMPLIFICATION FACTOR | 100 | 100 | |

DIODE UNITS - TWO

THE DIODE UNITS ARE INDEPENDENT OF THE TRIODE UNIT EXCEPT FOR THE COMMON CATHODE SLEEVE.

DIODE BIASING OF THE TRIODE UNIT IS NOT SUITABLE.

SIMILAR TYPE RPPRRNROR: Ratings and characteristics somewhat similar to 6AV6 except for the use of more thorough shielding of the diode units from the triode.

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PRINTED IN U. S. A.

PLATE
1959
FEB. 2,
1948

TUNG-SOL

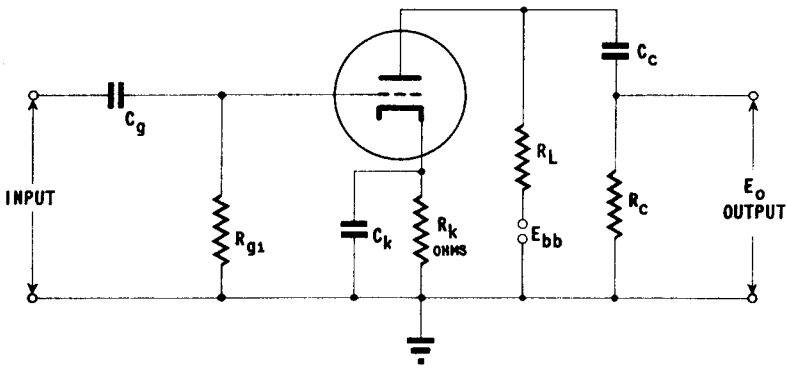
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RESISTANCE COUPLED AMPLIFIER

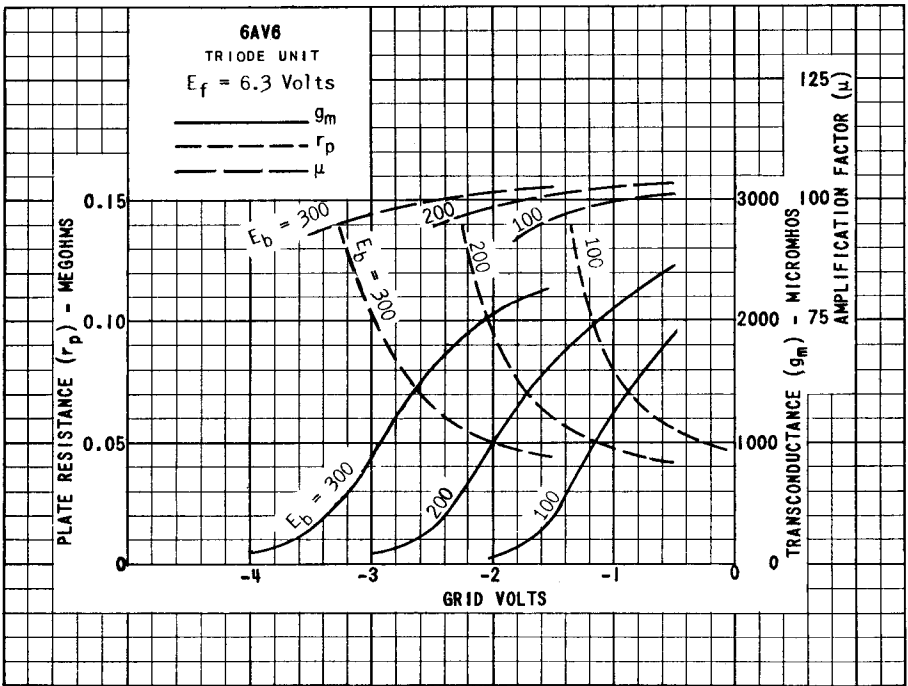
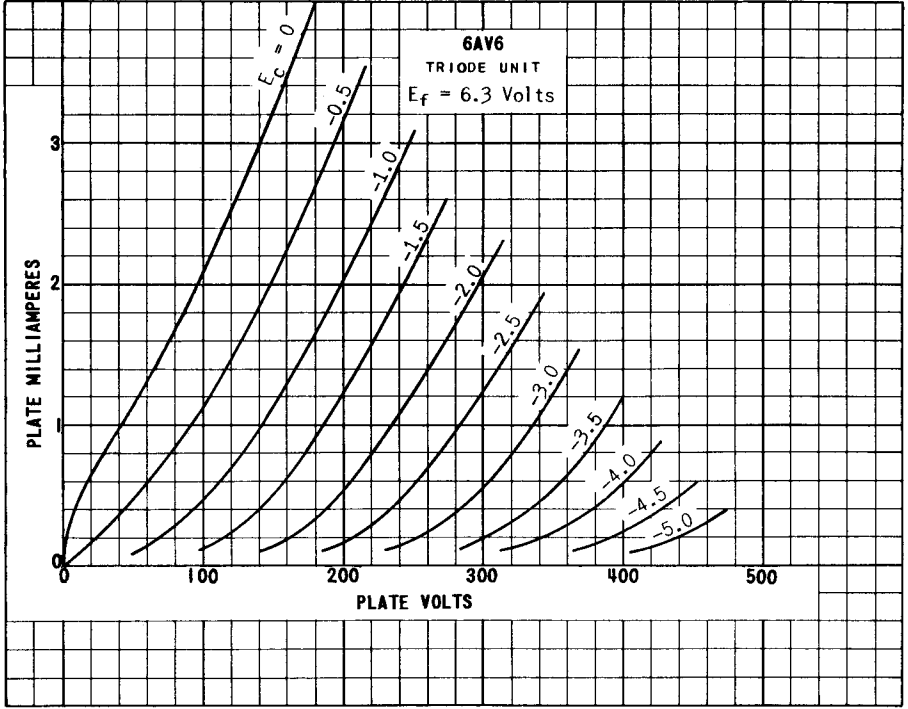
| R_L MEG. | R_C MEG. | $E_{bb} = 90$ VOLTS | | | $E_{bb} = 180$ VOLTS | | | $E_{bb} = 300$ VOLTS | | |
|---------------|---------------|---------------------|-----------------|-------|----------------------|------|-------|----------------------|------|-------|
| | | R_k | GAIN | E_o | R_k | GAIN | E_o | R_k | GAIN | E_o |
| 0.1 | 0.22 | 4700 | 35 ^A | 4 | 2000 | 47 | 18 | 1500 | 52 | 40 |
| 0.22 | 0.47 | 7400 | 45 ^B | 6 | 3500 | 59 | 24 | 2800 | 65 | 49 |
| 0.47 | 1.0 | 13000 | 52 ^C | 8 | 6700 | 66 | 28 | 5200 | 73 | 54 |

 E_o IS RMS OUTPUT AT GRID CURRENT POINT.

GAIN MEASURED AT 5.0 VOLTS RMS OUTPUT EXCEPT AS INDICATED.

^A OUTPUT VOLTAGE OF 2 VOLTS RMS.^B OUTPUT VOLTAGE OF 3 VOLTS RMS.^C OUTPUT VOLTAGE OF 4 VOLTS RMS.

NOTE: COUPLING CAPACITORS C_g AND C_c SHOULD BE SELECTED TO GIVE DESIRED FREQUENCY RESPONSE. R_k SHOULD BE ADEQUATELY BY-PASSED BY CAPACITOR C_k .



PRINTED IN U. S. A.

PLATE 1961
FEB. 2, 1948

6AV6

6AV6
EACH DIODE UNIT
 $E_f = 6.3$ Volts

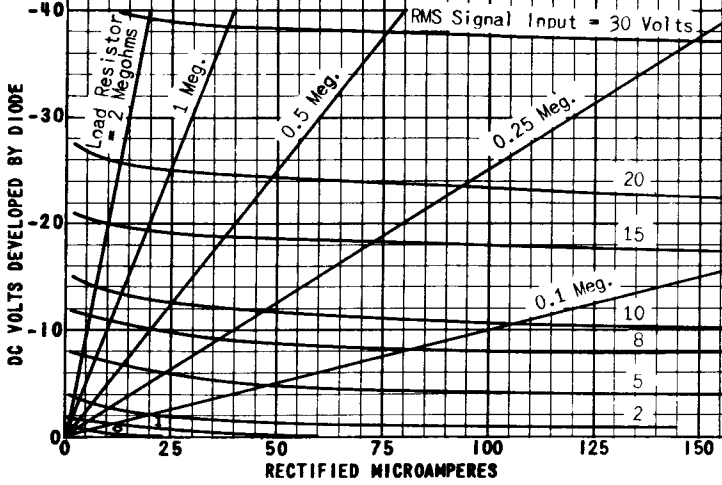
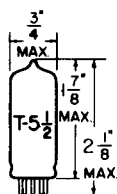


PLATE
1962
FEB. 2,
1948

TUNG-SOL

DOUBLE-DIODE TRIODE

MINIATURE TYPE



GLASS BULB

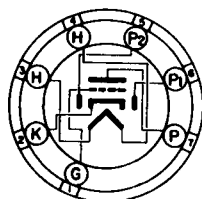
COATED UNIPOTENTIAL CATHODE

HEATER

6.3±10 VOLTS 0.3 AMP.

AC OR DC

ANY MOUNTING POSITION



BOTTOM VIEW

MINIATURE BUTTON
7 PIN BASE

78T

THE 6AV6 COMBINES A HIGH- μ TRIODE AND TWO INDEPENDENT DIODE UNITS IN THE 7 PIN MINIATURE CONSTRUCTION. IT PERMITS A SINGLE TUBE TO FUNCTION AS DETECTOR, AVC RECTIFIER, AND AUDIO AMPLIFIER. COUPLING BETWEEN THE DIODE AND TRIODE SECTIONS IS MINIMIZED BY THE USE OF INTERNAL SHIELDING.

DIRECT INTERELECTRODE CAPACITANCES

| | WITH SHIELD ^A | WITHOUT SHIELD | |
|---|--------------------------|----------------|---------|
| GRID TO PLATE: (G TO P) | 2 | 2 | μ f |
| INPUT: G TO (H+K) | 2.2 | 2.2 | μ f |
| OUTPUT: P TO (H+K) | 1.2 | 0.8 | μ f |
| COUPLING: #2 DIODE PLATE TO GRID (MAX.) | 0.04 | 0.04 | μ f |

^AEXTERNAL SHIELD #316 CONNECTED TO PIN #2.

RATINGS ←

INTERPRETED ACCORDING TO DESIGN MAXIMUM SYSTEM

| | | |
|--|---------|-------|
| HEATER VOLTAGE | 6.3±10% | VOLTS |
| MAXIMUM PLATE VOLTAGE | 330 | VOLTS |
| MAXIMUM PEAK HEATER-CATHODE VOLTAGE: | | |
| HEATER NEGATIVE WITH RESPECT TO CATHODE | 200 | VOLTS |
| HEATER POSITIVE WITH RESPECT TO CATHODE | 200 | VOLTS |
| DC COMPONENT | 100 | VOLTS |
| MAXIMUM PLATE DISSIPATION | 0.55 | WATT |
| MAXIMUM POSITIVE DC GRID #1 VOLTAGE | 0 | VOLTS |
| MAXIMUM DIODE CURRENT EACH UNIT FOR CONTINUOUS OPERATION | 1 | MA. |

→ INDICATES A CHANGE.

TUNG-SOL

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TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CLASS A₁ AMPLIFIER

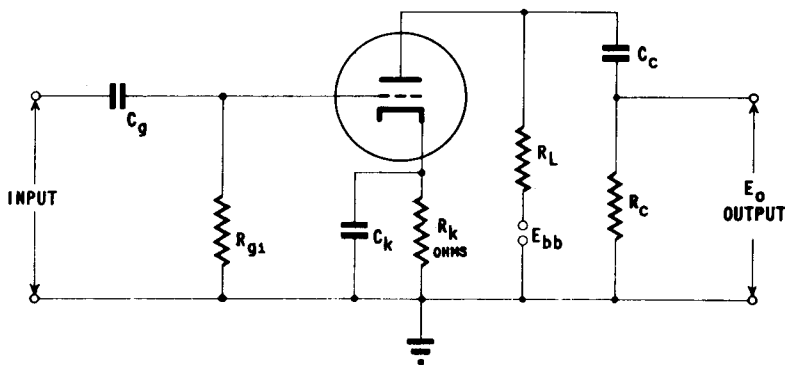
| | | | |
|---|--------|--------|-------|
| PLATE VOLTAGE | 100 | 250 | VOLTS |
| GRID #1 VOLTAGE | -1 | -2 | VOLTS |
| PLATE RESISTANCE | 80 000 | 62 500 | OHMS |
| AMPLIFICATION FACTOR | 100 | 100 | |
| TRANSCONDUCTANCE | 1 250 | 1 600 | μMHOS |
| PLATE CURRENT | 0.5 | 1.2 | MA. |
| AVERAGE DIODE CURRENT AT 10 VOLTS DC (EACH UNIT) | 2.0 | 2.0 | MA. |

RESISTANCE COUPLED AMPLIFIER

TRIODE UNIT

| | | | |
|----------------------------------|---------|---------|----------|
| PLATE SUPPLY VOLTAGE | 90 | 250 | VOLTS |
| CONTROL GRID VOLTAGE | 0 | 0 | VOLTS |
| PLATE LOAD RESISTOR | 220 000 | 470 000 | OHMS |
| CONTROL GRID RESISTOR | 10.0 | 10.0 | MEG OHMS |
| INPUT CONDENSER | 0.01 | 0.01 | μf |
| OUTPUT CONDENSER | 0.01 | 0.01 | μf |
| GRID RESISTOR OF FOLLOWING STAGE | 470 000 | 470 000 | OHMS |
| SIGNAL SOURCE IMPEDANCE (MAX.) | 1 000 | 1 000 | OHMS |
| DISTORTION | 5 | 5 | PERCENT |
| OUTPUT VOLTAGE | 5.5 | 30 | VOLTS |
| VOLTAGE GAIN AT 400 CPS | 42 | 63 | |

→ INDICATES A CHANGE OR ADDITION.



NOTE: COUPLING CAPACITORS C_g AND C_c SHOULD BE SELECTED TO GIVE DESIRED FREQUENCY RESPONSE. R_k SHOULD BE ADEQUATELY BY-PASSED BY CAPACITOR C_k .