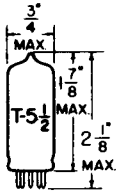
TUNG-SOL

DOUBLE-DIODE TRIODE

MINIATURE TYPE



GLASS BULB

MINIATURE BUTTON
7 PIN BASE E7-1

OUTLINE DRAWING
JEDEC 5-2

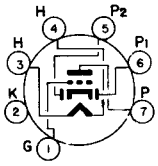
COATED UNIPOTENTIAL CATHODE

HEATER

4.2 VOLTS 0.45±.03 AMP.

AC OR DC

ANY MOUNTING POSITION



BOTTOM VIEW

BASING DIAGRAM
JEDEC 7BT

THE 4AV6 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. EXCEPT FOR HEATER RATINGS AND HEATER WARM-UP TIME, THE 4AV6 IS IDENTICAL TO THE 6AV6.

DIRECT INTERELECTRODE CAPACITANCES

	WITH SHIELD[A]	WITHOUT SHIELD	
GRID TO PLATE: (G TO P)	2	2	μμf
INPUT: G TO (H+K)	2.2	2.2	μμf
OUTPUT: P TO (H+K)	1.2	0.8	μμf
COUPLING: #2 DIODE PLATE TO GRID (MAX.)	0.04	0.04	μμf

[A] EXTERNAL SHIELD #316 CONNECTED TO PIN #2.

RATINGS

INTERPRETED ACCORDING TO DESIGN MAXIMUM SYSTEM

HEATER VOLTAGE	4.2	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.
HEATER WARM-UP TIME (AVG.)	11	SECONDS

PRINTED IN U.S.A.

TUNG-SOL

CONTINUED FROM PRECEDING PAGE

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

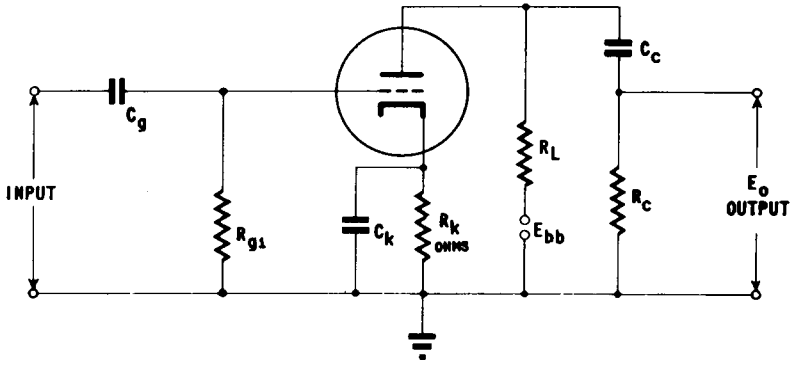
CLASS A_1 AMPLIFIER

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.

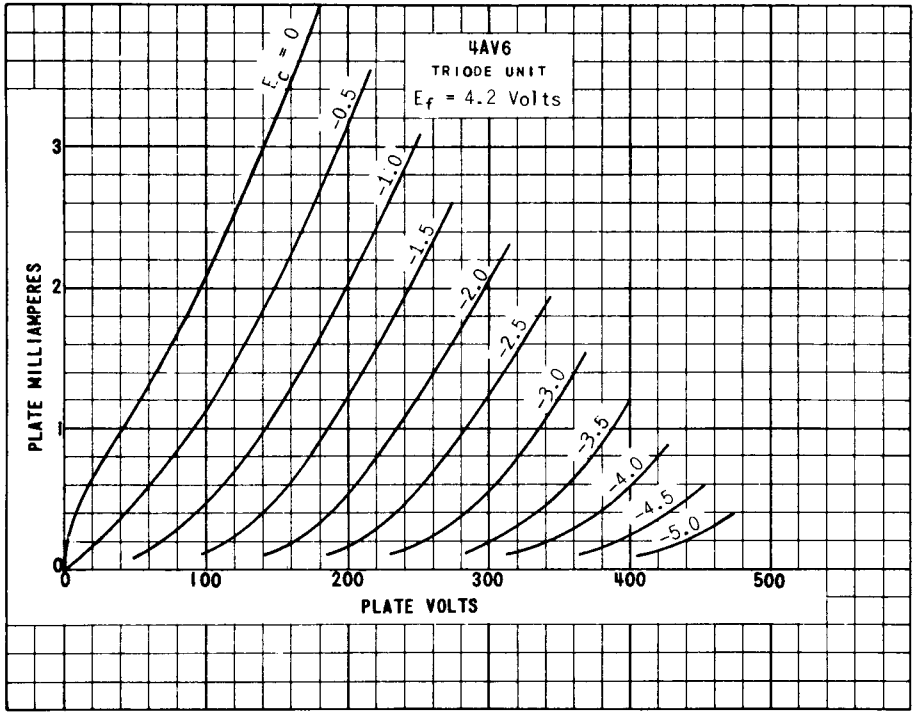
RESISTANCE COUPLED AMPLIFIER

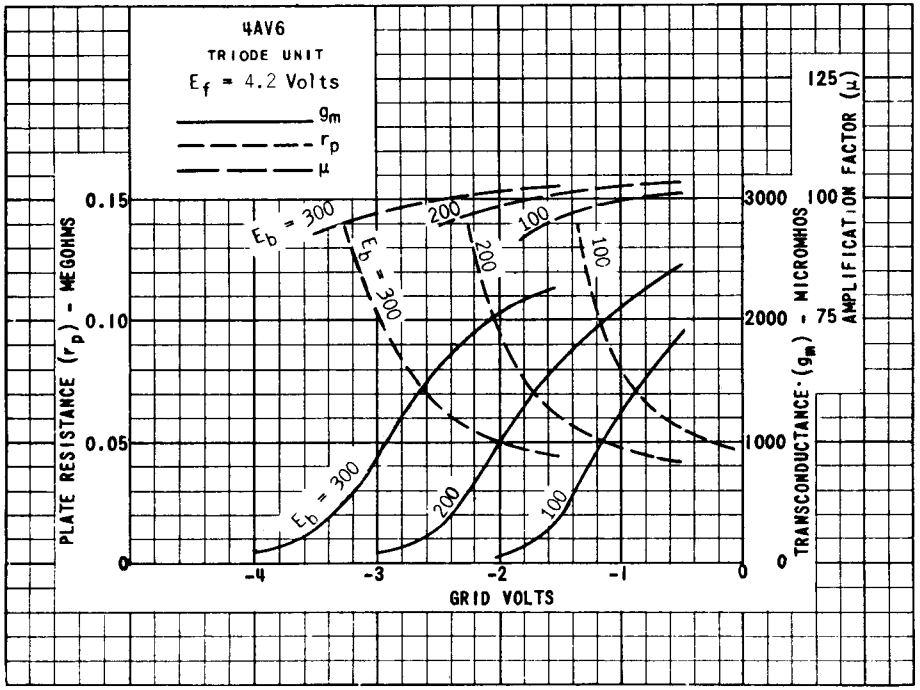
TRIODE UNIT

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	MEGOHMS
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	

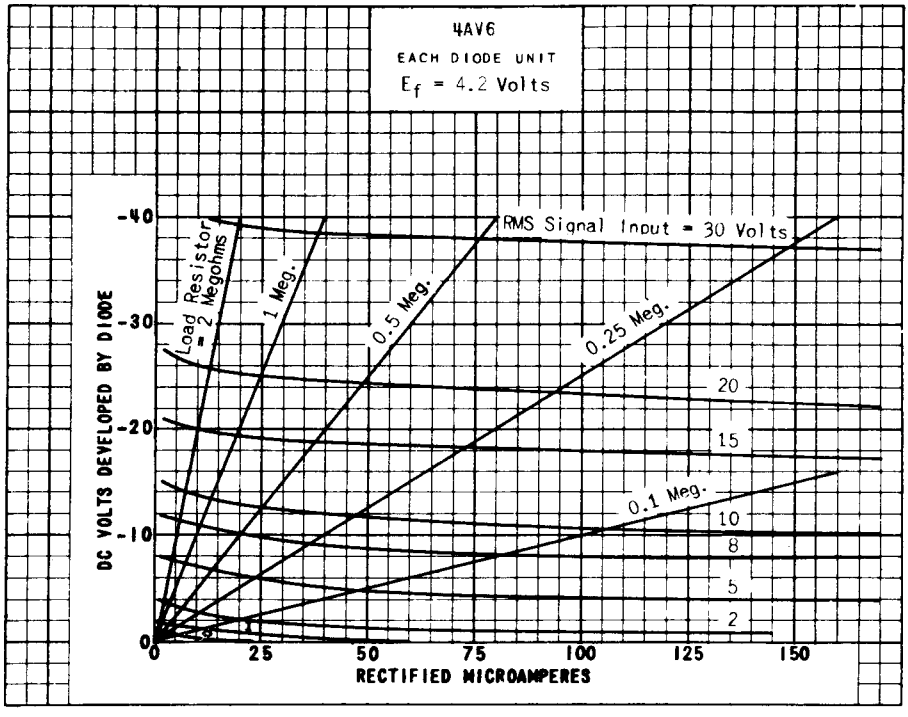


NOTE: COUPLING CAPACITORS C_g AND C_c SHOULD BE SELECTED TO GIVE DESIRED FREQUENCY RESPONSE. R_k SHOULD BE ADEQUATELY BY-PASSED BY CAPALITOR C_k.





PRINTED IN U.S.A.


4AV6
EACH DIODE UNIT
E_f = 4.2 Volts
DC VOLTS DEVELOPED BY DIODE
-40
-30
-20
-10
0
0
25
50
75
100
125
150
RECTIFIED MICROAMPERES
Load Resistor = 2 Megohms
1 Meg.
0.5 Meg.
0.25 Meg.
0.1 Meg.
RMS Signal Input = 30 Volts
20
15
10
8
5
2