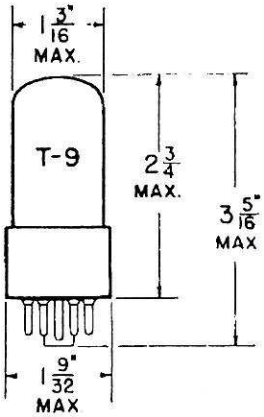
TUNG-SOL

BEAM PENTODE

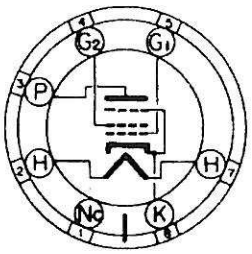


GLASS BULB

COATED UNIPOTENTIAL CATHODE

HEATER
6.3 VOLTS 0.45 AMP.
AC OR DC

ANY MOUNTING POSITION



BOTTOM VIEW
INTERMEDIATE SHELL
7 PIN OCTAL
75

THE 6V6GTA IS A BEAM POWER AMPLIFIER DESIGNED FOR SERVICE IN THE OUTPUT STAGE OF 450 MA. SERIES HEATER OPERATED TV RECEIVERS. IT HAS HIGH POWER SENSITIVITY AND HIGH POWER OUTPUT WITH COMPARATIVELY LOW SUPPLY VOLTAGE. THERMAL CHARACTERISTICS OF THE HEATER ARE CONTROLLED SUCH THAT HEATER VOLTAGE SURGES DURING THE WARM-UP CYCLE ARE MINIMIZED PROVIDED IT IS USED WITH OTHER TYPES WHICH ARE SIMILARLY CONTROLLED.

DIRECT INTERELECTRODE CAPACITANCES

GRID TO PLATE: (G_1 TO P)	0.7	μμf
INPUT: G_1 TO (H+K+G_2+G_3)	9.0	μμf
OUTPUT: P TO (H+K+G_2+G_3)	7.5	μμf

RATINGS
INTERPRETED ACCORDING TO DESIGN CENTER VALUES

HEATER VOLTAGE	6.3	VOLTS
MAXIMUM HEATER-CATHODE VOLTAGE:		
HEATER POSITIVE WITH RESPECT TO CATHODE:		
DC	100	VOLTS
TOTAL DC AND PEAK	200	VOLTS
HEATER NEGATIVE WITH RESPECT TO CATHODE:		
TOTAL DC AND PEAK	200	VOLTS
MAXIMUM PLATE VOLTAGE	315	VOLTS
MAXIMUM GRID #2 VOLTAGE	285	VOLTS
MAXIMUM PLATE DISSIPATION	12	WATTS
MAXIMUM GRID #2 DISSIPATION	2	WATTS
MAXIMUM GRID #1 CIRCUIT RESISTANCE:		
FIXED BIAS OPERATION	0.1	MEGOHM
CATHODE BIAS OPERATION	0.5	MEGOHM

VERTICAL DEFLECTION AMPLIFIER - TRIODE CONNECTION[AB]

HEATER VOLTAGE	6.3	VOLTS
MAXIMUM DC PLATE VOLTAGE	315	VOLTS
MAXIMUM PEAK POSITIVE VOLTAGE (ABSOLUTE MAXIMUM)	1200	VOLTS
MAXIMUM PLATE DISSIPATION[C]	9	WATTS
MAXIMUM PEAK NEGATIVE GRID VOLTAGE	250	VOLTS
MAXIMUM AVERAGE CATHODE CURRENT	35	MA.
MAXIMUM PEAK CATHODE CURRENT	105	MA.
MAXIMUM GRID CIRCUIT RESISTANCE (CATHODE BIAS)	2.2	MEGOHMS
HEATER WARM-UP TIME (APPROX.)*	11.0	SECONDS

[A] ALL VALUES ARE EVALUATED ON DESIGN CENTER SYSTEM EXCEPT WHERE ABSOLUTE MAXIMUM IS STATED.

[B] FOR OPERATION IN A 525-LINE, 30-FRAME SYSTEM AS DESCRIBED IN "STANDARDS OF GOOD ENGINEERING PRACTICE FOR TELEVISION BROADCASTING STATIONS; FEDERAL COMMUNICATIONS COMMISSION". THE DUTY CYCLE OF THE VOLTAGE PULSE NOT TO EXCEED 15% OF A SCANNING CYCLE.

[C] IN STAGES OPERATING WITH GRID-LEAK BIAS, AN ADEQUATE CATHODE BIAS RESISTOR OR OTHER SUITABLE MEANS IS REQUIRED TO PROTECT THE TUBE IN THE ABSENCE OF EXCITATION.

* HEATER WARM-UP TIME IS DEFINED AS THE TIME REQUIRED FOR THE VOLTAGE ACROSS THE HEATER TO REACH 80% OF ITS RATED VOLTAGE AFTER APPLYING 4 TIMES RATED HEATER VOLTAGE TO A CIRCUIT CONSISTING OF THE TUBE HEATER IN SERIES WITH A RESISTANCE OF VALUE 3 TIMES THE NOMINAL HEATER OPERATING RESISTANCE.

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TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CLASS A_1 AMPLIFIER – SINGLE TUBE

HEATER VOLTAGE	6.3	6.3	6.3	VOLTS
HEATER CURRENT	0.45	0.45	0.45	AMP.
PLATE VOLTAGE	180	250	315	VOLTS
GRID #2 VOLTAGE	180	250	225	VOLTS
GRID #1 VOLTAGE	-8.5	-12.5	-13.0	VOLTS
PEAK AF GRID #1 VOLTAGE	8.5	12.5	13.0	VOLTS
ZERO-SIGNAL PLATE CURRENT	29	45	34	MA.
MAXIMUM-SIGNAL PLATE CURRENT	30	47	35	MA.
ZERO-SIGNAL GRID #2 CURRENT	3	4.5	2.2	MA.
MAXIMUM-SIGNAL GRID #2 CURRENT	4	7	6	MA.
PLATE RESISTANCE (APPROX.)	50 000	50 000	80 000	OHMS
TRANSCONDUCTANCE	3 700	4 100	3 750	µMHOS
LOAD RESISTANCE	5 500	5 000	8 500	OHMS
MAXIMUM-SIGNAL POWER OUTPUT	2	4.5	5.5	WATTS
TOTAL HARMONIC DISTORTION (APPROX.)	8	8	12	PERCENT

CLASS A_1 AMPLIFIER – PUSH-PULL

UNLESS OTHERWISE SPECIFIED, VALUES ARE FOR TWO TUBES.

HEATER VOLTAGE	6.3	6.3	VOLTS
HEATER CURRENT	0.45	0.45	AMP.
PLATE VOLTAGE	250	285	VOLTS
GRID #2 VOLTAGE	250	285	VOLTS
GRID #1 VOLTAGE	-15	-19	VOLTS
PEAK AF GRID #1 TO GRID #1 VOLTAGE	30	38	VOLTS
ZERO-SIGNAL PLATE CURRENT	70	70	MA.
MAXIMUM-SIGNAL PLATE CURRENT	79	92	MA.
ZERO-SIGNAL GRID #2 CURRENT	5	4	MA.
MAXIMUM-SIGNAL GRID #2 CURRENT	13	13.5	MA.
PLATE-TO-PLATE LOAD RESISTANCE	10 000	8 000	OHMS
MAXIMUM-SIGNAL POWER OUTPUT	10	14	WATTS
TOTAL HARMONIC DISTORTION	5	5.5	PERCENT

CLASS A_1 AMPLIFIER – TRIODE CONNECTION

HEATER VOLTAGE	6.3	VOLTS
HEATER CURRENT	0.45	AMP.
PLATE VOLTAGE	250	VOLTS
GRID VOLTAGE	-12.5	VOLTS
PLATE CURRENT	49.5	MA.
TRANSCONDUCTANCE	5 000	µMHOS
AMPLIFICATION FACTOR	9.8	
PLATE RESISTANCE (APPROX.)	1 960	OHMS
GRID VOLTAGE FOR I_b = 0.5 MA. (APPROX.)	-36	VOLTS