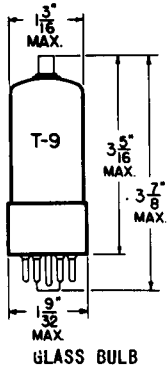
TUNG-SOL

BEAM PENTODE

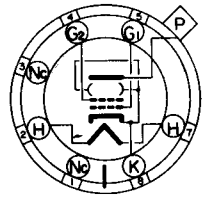


GLASS BULB

COATED UNIPOTENTIAL CATHODE

HEATER
12.6 VOLTS 0.6 AMP.
AC OR DC

ANY MOUNTING POSITION



BOTTOM VIEW
INTERMEDIATE SHELL
7 PIN OCTAL
6AM

THE 12BQ6GT IS A BEAM PENTODE DESIGNED FOR USE IN 600 MA. SERIES HEATER OPERATED RECEIVERS. IT IS SPECIFICALLY INTENDED FOR USE AS A HORIZONTAL DEFLECTION AMPLIFIER IN TELEVISION RECEIVERS USING MAGNETIC DEFLECTION. THE PLATE IS BROUGHT OUT TO A TOP CAP FOR ISOLATION OF THE HIGH VOLTAGE AND CONVENIENCE IN A CIRCUIT LAYOUT. ITS ELECTRICAL CHARACTERISTICS ARE SUCH AS TO PROVIDE GOOD PERFORMANCE WHERE THE SUPPLY VOLTAGES ARE LIMITED. THERMAL CHARACTERISTICS OF THE HEATER HAVE BEEN CONTROLLED SUCH THAT HEATER VOLTAGE SURGES DURING THE WARM-UP CYCLE ARE MINIMIZED PROVIDED IT IS USED WITH OTHER TUBES WHICH ARE SIMILARLY CONTROLLED. EXCEPT FOR HEATER RATINGS, IT IS IDENTICAL TO THE 6BQ6GT.

DIRECT INTERELECTRODE CAPACITANCES

GRID #1 TO PLATE: (G_1 TO P)	0.6	μμf
INPUT: G_1 TO (H+K+G_2+BP)	15	μμf
OUTPUT: P TO (H+K+G_2+BP)	7.5	μμf

RATINGS
INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

HORIZONTAL DEFLECTION AMPLIFIER[A]

HEATER VOLTAGE	12.6	VOLTS
MAXIMUM HEATER-CATHODE VOLTAGE:		
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 DC PLATE SUPPLY VOLTAGE (BOOST + POWER SUPPLY)	550	VOLTS
MAXIMUM PEAK POSITIVE PLATE VOLTAGE (ABSOLUTE MAXIMUM)	5 500	VOLTS
MAXIMUM PEAK NEGATIVE PLATE VOLTAGE	1 250	VOLTS
MAXIMUM PLATE DISSIPATION[B]	11	WATTS
MAXIMUM PEAK NEGATIVE GRID #1 VOLTAGE	300	VOLTS
MAXIMUM DC GRID #2 VOLTAGE	175	VOLTS
MAXIMUM GRID #2 DISSIPATION	2.5	WATTS
MAXIMUM AVERAGE CATHODE CURRENT	110	MA.
MAXIMUM PEAK CATHODE CURRENT	400	MA.
MAXIMUM GRID #1 CIRCUIT RESISTANCE	0.47	MEGOHM
MAXIMUM BULB TEMPERATURE (AT HOTTEST POINT)	220°	CENTIGRADE
HEATER WARM-UP TIME (APPROX.)*	11.0	SECONDS

[A] 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 PERCENT OF A SCANNING CYCLE.

[B] 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

CONTINUED ON FOLLOWING PAGE

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CONTINUED FROM PRECEDING PAGE

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CLASS A_1 AMPLIFIER

HEATER VOLTAGE	12.6	VOLTS
HEATER CURRENT	0.6	AMP.
PENTODE CONNECTION:[C]		
PLATE CURRENT	55	MA.
GRID #2 CURRENT	2.1	MA.
TRANSCONDUCTANCE	5 500	µMHOS
PLATE RESISTANCE	20 000	OHMS
ZERO-BIAS:[D]		
PLATE CURRENT	225	MA.
GRID #2 CURRENT	25	MA.
CUT-OFF:[E]		
GRID #1 VOLTAGE (APPROX.)	-46	VOLTS
TRIODE AMPLIFICATION FACTOR[F]	4.3	

[C] WITH E_b = 250 VOLTS, E_{C2} = 150 VOLTS AND E_{C1} = -22.5 VOLTS.

[D] WITH E_b = 60 VOLTS AND E_{C2} = 150 VOLTS.

[E] FOR I_b = 1 MA. WITH E_b = 250 VOLTS AND E_{C2} = 150 VOLTS

[F] WITH E_b = E_{C2} = 150 VOLTS AND E_{C1} = -22.5 VOLTS.

INDICATES A CHANGE OR ADDITION.