

TUNG-SOL

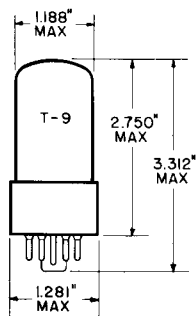
BEAM PENTODE

COATED UNIOPTENTIAL CATHODE

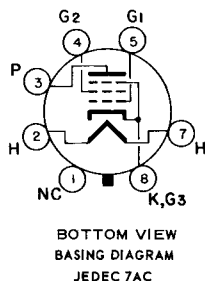
FOR USE AS A VERTICAL
DEFLECTION AMPLIFIER

IN TV RECEIVERS

AC OR DC
ANY MOUNTING POSITION



GLASS BULB
INTERMEDIATE SHELL OCTAL
B6-81 OR B7-7
OR
SHORT INTERMEDIATE
SHELL OCTAL
B6-84 OR B7-59
OUTLINE DRAWING
JEDEC 9-11 OR 9-41



THE 12W6GT IS A BEAM PENTODE POWER AMPLIFIER. IT IS INTENDED FOR SERVICE AS A VERTICAL SCANNING OUTPUT TUBE IN 600 MA. SERIES HEATER OPERATED TELEVISION RECEIVERS. 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. WITH THE EXCEPTION OF HEATER RATINGS, ITS CHARACTERISTICS ARE IDENTICAL TO TYPE 6W6GT.

DIRECT INTERELECTRODE CAPACITANCES WITHOUT EXTERNAL SHIELD

GRID TO PLATE: (G1 TO P)	0.5	pf
INPUT: G1 TO (H+K+G2+G3)	15	pf
OUTPUT: P TO (H+K+G2+G3)	9.0	pf

HEATER CHARACTERISTICS AND RATINGS DESIGN MAXIMUM VALUES - SEE EIA STANDARD RS-239

AVERAGE CHARACTERISTICS	12.6 VOLTS	600	MA.
HEATER WARM-UP TIME*		11	SECONDS
HEATER SUPPLY LIMITS:			
CURRENT OPERATION		600±40	MA.
MAXIMUM HEATER CATHODE VOLTAGE:			
HEATER NEGATIVE WITH RESPECT TO CATHODE			
DC		200	VOLTS
TOTAL DC AND PEAK		300	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE			
DC		100	VOLTS
TOTAL DC AND PEAK		200	VOLTS

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CONTINUED FROM PRECEDING PAGE

→ MAXIMUM RATINGS

DESIGN MAXIMUM VALUES - SEE EIA STANDARD RS-239

CLASS A1 AMPLIFIER

PLATE VOLTAGE	330	VOLTS
GRID 2 VOLTAGE	165	VOLTS
PLATE DISSIPATION	12	WATTS
GRID 2 DISSIPATION	1.35	WATTS
GRID 1 CIRCUIT RESISTANCE:		
FIXED BIAS	0.1	MEGOHM
CATHODE BIAS	0.5	MEGOHM

VERTICAL DEFLECTION AMPLIFIER^{A, B}

	TRIODE CONNECTED	PENTODE CONNECTED	
DC PLATE VOLTAGE	330	330	VOLTS
PEAK POSITIVE PULSE PLATE VOLTAGE	1200	1500	VOLTS
DC GRID 2 VOLTAGE		165	VOLTS
PLATE DISSIPATION	8.5	8	WATTS
GRID 2 DISSIPATION		1.2	WATT
PEAK NEGATIVE PULSE GRID 1 VOLTAGE	275	275	VOLTS
AVERAGE CATHODE CURRENT	65	65	MA.
PEAK CATHODE CURRENT	195	195	MA.
GRID 1 CIRCUIT RESISTANCE			
CATHODE BIAS	2.2	2.2	MEGOHMS

→ INDICATES A CHANGE.

TYPICAL OPERATING CHARACTERISTICS

CLASS A1 AMPLIFIER - SINGLE TUBE

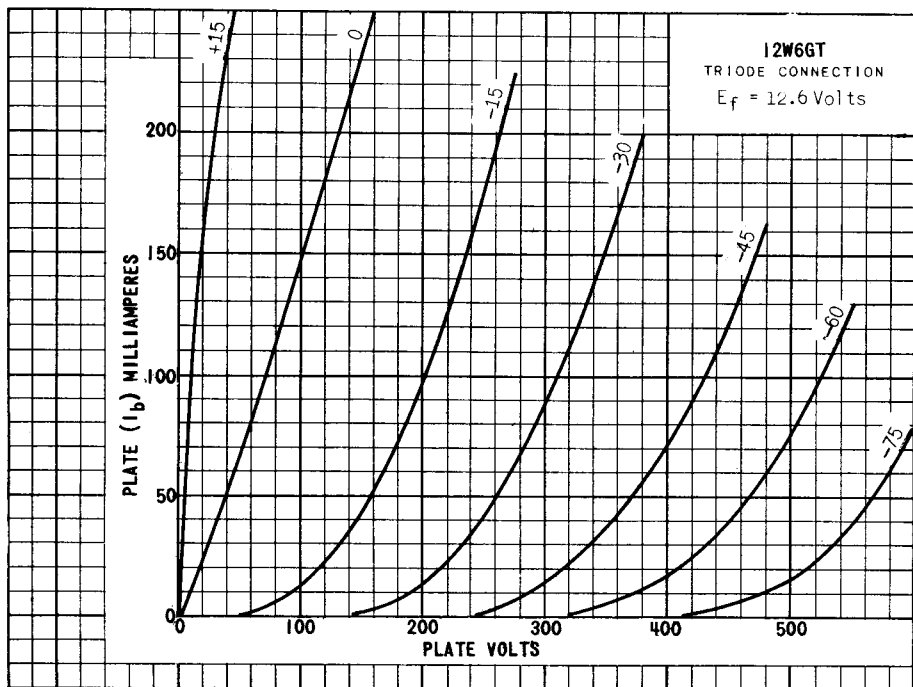
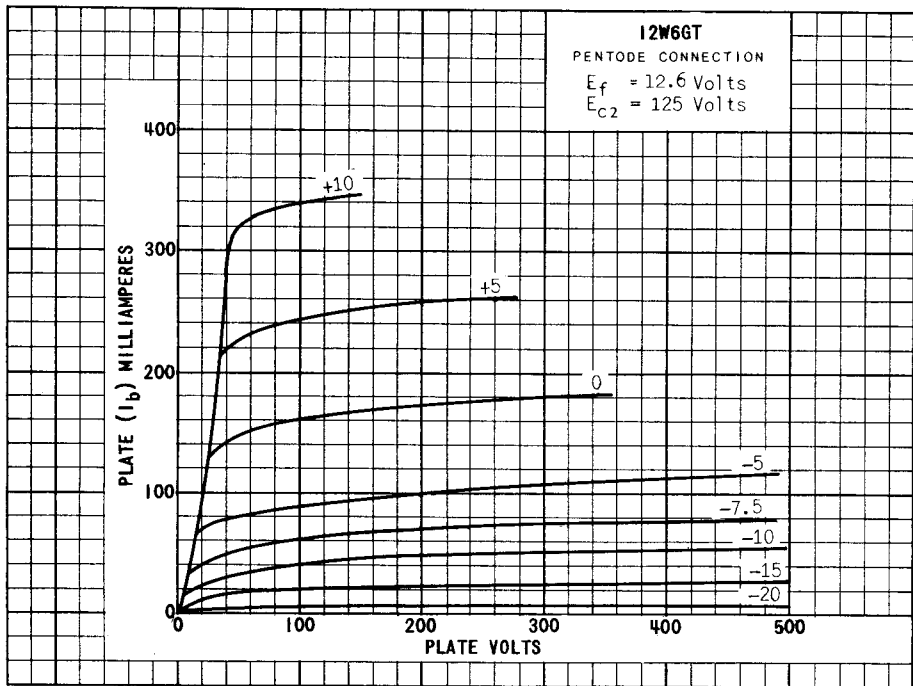
PLATE VOLTAGE	110	200	VOLTS
GRID 2 VOLTAGE	110	125	VOLTS.
GRID 1 VOLTAGE	-7.5	----	VOLTS
CATHODE BIAS RESISTOR	----	180	OHMS
PEAK AF GRID 1 VOLTAGE	7.5	8.5	VOLTS
PLATE RESISTOR (APPROX.)	13,000	28,000	OHMS
TRANSCONDUCTANCE	8,000	8,000	μMHOS
ZERO-SIGNAL PLATE CURRENT	49	46	MA.
MAXIMUM-SIGNAL PLATE CURRENT (APPROX.)	50	47	MA.
ZERO-SIGNAL GRID 2 CURRENT	4.0	2.2	MA.
MAXIMUM-SIGNAL GRID 2 CURRENT (APPROX.)	10	8.5	MA.
LOAD RESISTANCE	2,000	4,000	OHMS
TOTAL HARMONIC DISTORTION	10	10	PERCENT
POWER OUTPUT	2.1	3.8	WATTS

TRIODE CONNECTION

PLATE VOLTAGE	225	VOLTS
GRID VOLTAGE	-30	VOLTS
AMPLIFICATION FACTOR	6.2	
PLATE RESISTANCE (APPROX.)	1,600	OHMS
TRANSCONDUCTANCE	3,800	μMHOS
PLATE CURRENT	22	MA.
GRID VOLTAGE FOR $I_b = 0.5$ MA. (APPROX.)	-42	VOLTS

^A TRIODE CONNECTION - GRID #2 TIED TO PLATE.^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 PERCENT OF A SCANNING CYCLE.

* 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 HEATER OPERATING RESISTANCE.



PRINTED IN U. S. A.

12W6GT

