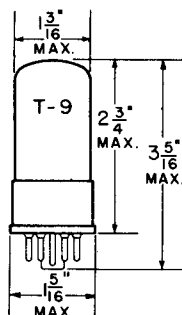


TUNG-SOL

TWIN TRIODE AMPLIFIER



GLASS BULB

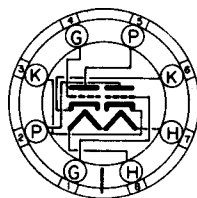
COATED UNIPOTENTIAL CATHODE

HEATER

12.6 VOLTS 0.3 AMPERE

AC OR DC

ANY MOUNTING POSITION



BOTTOM VIEW

INTERMEDIATE SHELL
8 PIN OCTAL BASE

THE 12SX7GT IS A TWIN MEDIUM MU TRIODE WHOSE SECTIONS ARE ELECTRICALLY INDEPENDENT EXCEPT FOR THE COMMON HEATER. IT IS DESIGNED ESPECIALLY FOR USE IN EQUIPMENT WHERE THE OPERATING VOLTAGES ARE OBTAINED FROM A 12 CELL STORAGE BATTERY AND FOR OPERATION AT A PLATE-SUPPLY VOLTAGE HAVING A DESIGN-CENTER OF 26.5 VOLTS. IT IS USEFUL AS AN AUDIO AMPLIFIER, OSCILLATOR, CONVERTER AND MULTI-VIBRATOR.

RATINGS

INTERPRETED ACCORDING TO RMA STANDARD WB-210

PER AMPLIFIER UNIT

HEATER VOLTAGE	12.6	VOLTS
HEATER CURRENT	0.3	AMP.
MAXIMUM PLATE VOLTAGE	300	VOLTS
MAXIMUM GRID VOLTAGE:		
NEG. BIAS VOLTAGE	50	VOLTS
POS. BIAS VOLTAGE	0	VOLTS
MAXIMUM CATHODE CURRENT	20	MA.
MAXIMUM PLATE DISSIPATION	2.5	WATTS
MAXIMUM PEAK HEATER-CATHODE VOLTAGE:		
HEATER NEG. WITH RESPECT TO CATHODE	90	VOLTS
HEATER POS. WITH RESPECT TO CATHODE	90	VOLTS

DIRECT INTERELECTRODE CAPACITANCES

WITH NO EXTERNAL SHIELD

	TRIODE UNIT 1	TRIODE UNIT 2	
GRID TO PLATE	3.6	3.6	μf
INPUT	3.0	2.8	μf
OUTPUT	0.8	1.2	μf

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CLASS A₁ AMPLIFIER - PER UNIT

PLATE VOLTAGE	26.5	90	250	VOLTS
GRID VOLTAGE:				
USING FIXED SUPPLY	---	0	-8	VOLTS
USING GRID RESISTOR	0.05	---	---	MEG OHM
PLATE CURRENT	1.8	10	9.0	MA.
GRID CIRCUIT RESISTANCE (MAX.)	1.0	1.0	1.0	MEG OHM
PLATE RESISTANCE	11 500	6 700	7 700	OHMS
TRANSCONDUCTANCE	1 800	3 000	2 600	μMHOS
AMPLIFICATION FACTOR	21	20	20	

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TUNG-SOL

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TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

RESISTANCE COUPLED AMPLIFIER - PER UNIT

PLATE SUPPLY-VOLTAGE ^A	90	180	300	VOLTS
LOAD RESISTANCE	0.1	0.1	0.1	MEGOHM
GRID RESISTOR	0.25	0.25	0.25	MEGOHM
CATHODE RESISTOR	3 940	2 830	2 440	OHMS
CATHODE BY-PASS CONDENSER	1.29	1.35	1.42	μf
BLOCKING CONDENSER	0.012	0.012	0.0125	μf
PEAK VOLTAGE OUTPUT ^B	17	34	56	VOLTS
VOLTAGE GAIN (AT 5.0 VOLTS RMS)	13	14	14	

^AVOLTAGE AT PLATE EQUALS PLATE-SUPPLY VOLTAGE MINUS VOLTAGE DROP IN LOAD RESISTANCE AND CATHODE RESISTOR.

^BVOLTAGE ACROSS GRID RESISTOR AT GRID CURRENT POINT.

SIMILAR TYPE REFERENCE: Except for heater ratings, same ratings and characteristics per unit as 6F8G, 6J5, 6J5G, 6J5GT. Except for heater ratings, same ratings and characteristics as 6SN7GT. Same ratings and characteristics per unit as 12J5GT. Same ratings and characteristics as 12SX7GT and 1633.

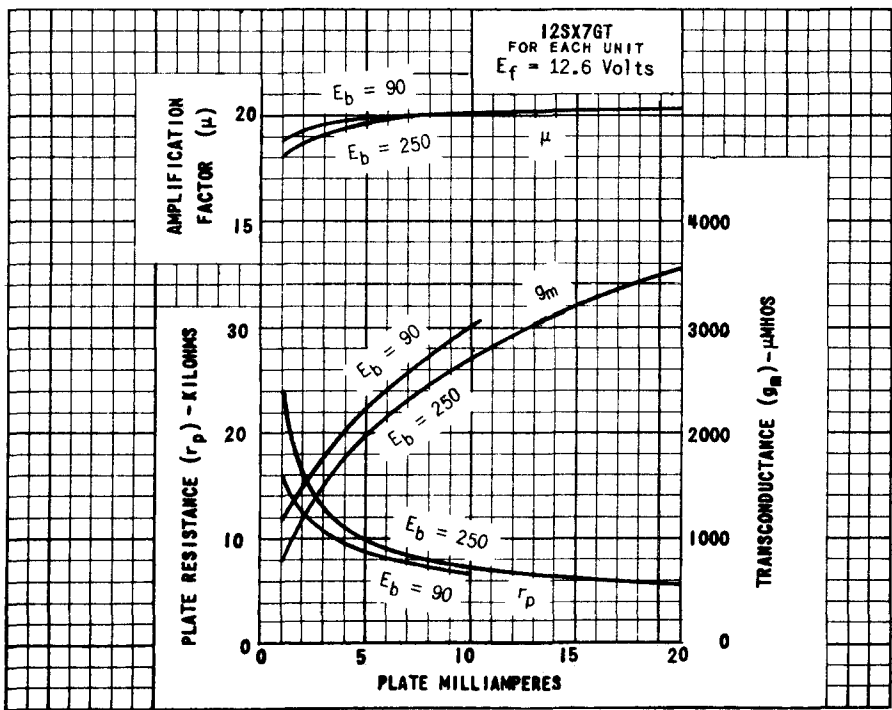
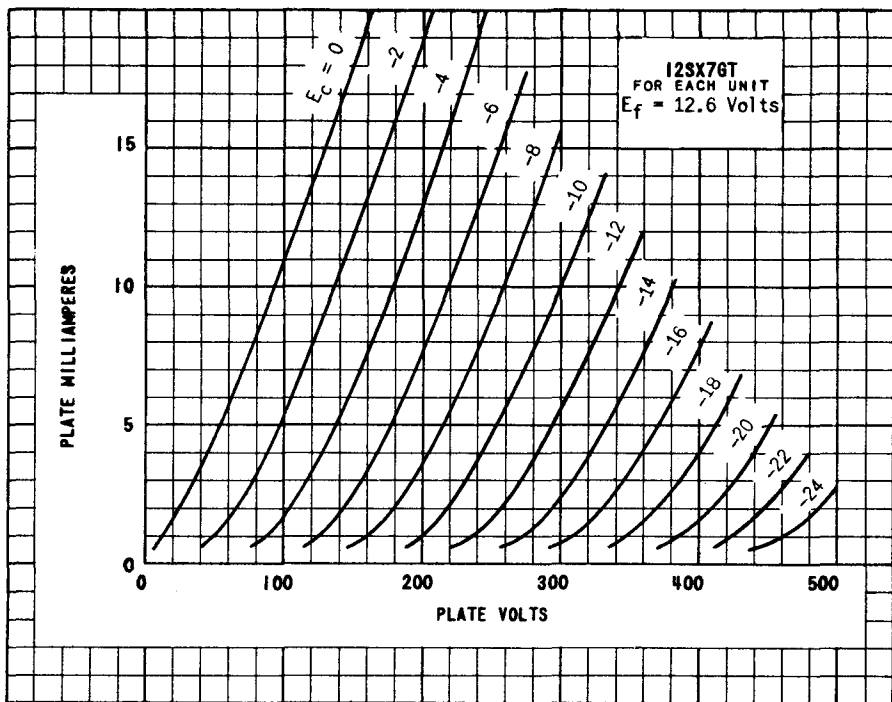
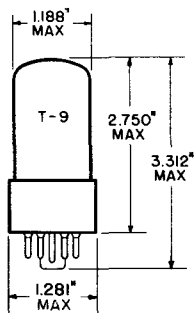


PLATE
1756
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TUNG-SOL

TWIN TRIODE



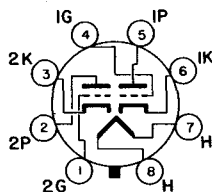
GLASS BULB
SHORT INTERMEDIATE SHELL
8 PIN OCTAL B8-58
OUTLINE DRAWING
JEDEC 9-41

COATED UNIPOTENTIAL CATHODE*

FOR USE AS AN
AUDIO AMPLIFIER, OSCILLATOR,
CONVERTER OR MULTI-VIBRATOR

LOW B VOLTAGE RATING

ANY MOUNTING POSITION



BOTTOM VIEW

BASING DIAGRAM
JEDEC 8BD

THE 12SX7GT COMBINES TWO MEDIUM-MU TRIODES IN ONE ENVELOPE WHOSE SECTIONS ARE ELECTRICALLY INDEPENDENT EXCEPT FOR THE COMMON HEATER. IT IS DESIGNED FOR USE IN EQUIPMENT WHERE OPERATING VOLTAGES ARE OBTAINED FROM A 12 CELL STORAGE BATTERY. THE 12SX7GT IS RATED IN COMPLIANCE WITH MILITARY STANDARDS.

DIRECT INTERELECTRODE CAPACITANCES WITHOUT EXTERNAL SHIELD

	TRIODE #1	TRIODE #2	
GRID TO PLATE: G TO P	3.6	3.6	pf
INPUT: G TO (H+K)	3.0	2.8	pf
OUTPUT: P TO (H+K)	0.8	1.2	pf

HEATER CHARACTERISTICS AND RATINGS

ABSOLUTE MAXIMUM VALUES - SEE EIA STANDARD RS-239

AVERAGE CHARACTERISTICS	12.6 VOLTS	300	MA.
HEATER SUPPLY LIMITS:			
VOLTAGE OPERATION		12.6±1.3	VOLTS
MAXIMUM PEAK HEATER-CATHODE VOLTAGE:			
HEATER NEGATIVE WITH RESPECT TO CATHODE		100	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE		100	VOLTS

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TUNG-SOL

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MAXIMUM RATINGS

ABSOLUTE MAXIMUM VALUES - SEE EIA STANDARD RS-239

PLATE VOLTAGE	330	VOLTS
GRID VOLTAGE:		
NEGATIVE BIAS VOLTAGE	50	VOLTS
POSITIVE BIAS VOLTAGE	0	VOLTS
CATHODE CURRENT	20	MA.
PLATE DISSIPATION	2.75	WATTS
GRID CIRCUIT RESISTANCE	1.0	MEGOHM
ALTITUDE	10,000	FT.

TYPICAL OPERATING CHARACTERISTICS

RESISTANCE COUPLED AMPLIFIER - EACH TRIODE

PLATE SUPPLY-VOLTAGE ^A	90	180	300	VOLTS
LOAD RESISTANCE	0.1	0.1	0.1	MEGOHM
GRID RESISTOR	0.25	0.25	0.25	MEGOHM
CATHODE RESISTOR	3,940	2,830	2,440	OHMS
CATHODE BY-PASS CONDENSER	1.29	1.35	1.42	μ f
BLOCKING CONDENSER	0.012	0.012	0.0125	μ f
PEAK VOLTAGE OUTPUT ^B	17	34	56	VOLTS
VOLTAGE GAIN (AT 5.0 VOLTS VOLTS RMS)	13	14	14	

^A

VOLTAGE AT PLATE EQUALS PLATE-SUPPLY VOLTAGE MINUS VOLTAGE DROP IN LOAD RESISTANCE AND CATHODE RESISTOR.

^B

VOLTAGE ACROSS GRID RESISTOR AT GRID CURRENT POINT.