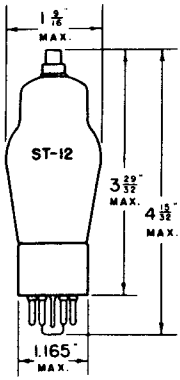
TUNG-SOL



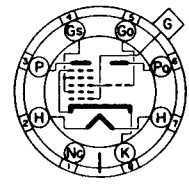
TRIODE HEPTODE CONVERTER

UNIPOTENTIAL CATHODE

HEATER
6.3 VOLTS 0.3 AMPERE
AC OR DC

GLASS BULB

SMALL 8 PIN OCTAL BASE.



G-8H

THE TUNG-SOL 6J8G IS A CONVERTER TUBE DESIGNED FOR STABLE OPERATION OVER AN EXTENDED FREQUENCY RANGE. IT CONSISTS OF A HEPTODE MIXER AND A TRIODE OSCILLATOR, HAVING A COMMON CATHODE. THE INJECTOR GRID OF THE HEPTODE IS INTERNALLY CONNECTED TO THE TRIODE GRID.

OPERATING CONDITIONS AND CHARACTERISTICS

HEPTODE PLATE VOLTAGE	100	250 MAX.	VOLTS
HEPTODE CONTROL GRID VOLTAGE	-3	-3	VOLTS
HEPTODE SCREEN VOLTAGE	100 MAX.	100 MAX.	VOLTS
HEPTODE PLATE CURRENT	1.4	1.3	MA.
HEPTODE SCREEN CURRENT	3.0	2.9	MA.
TRIODE PLATE VOLTAGE	100	250 MAX. R	VOLTS
TRIODE PLATE CURRENT	3	5	MA.
TRIODE GRID RESISTOR	50 000	50 000	OHMS
TRIODE GRID CURRENT	0.3	0.4	MA.
HEPTODE PLATE RESISTANCE	0.9	4.0	MEGOHMS
CONVERSION CONDUCTANCE	250	290	μMHOS
HEPTODE CONTROL GRID VOLTAGE FOR 2 μMHOS CONVERSION CONDUCTANCE	-20	-20	VOLTS

R APPLIED THROUGH 20 000 OHMS DROPPING RESISTOR.

STATIC CHARACTERISTICS OF TRIODE SECTION

PLATE VOLTAGE	100	VOLTS
GRID VOLTAGE	0	VOLTS
PLATE CURRENT	7	MA.
PLATE RESISTANCE	10 600	OHMS
TRANSCONDUCTANCE	1600 APPROX.	μMHOS
AMPLIFICATION FACTOR	17 APPROX.	

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DIRECT INTERELECTRODE CAPACITANCES[5]

CONTROL GRID (G) AND HEPTODE PLATE (P)	0.01 MAX.	μμf
CONTROL GRID (G) AND TRIODE PLATE (P_o)	0.16	μμf
CONTROL GRID (G) AND TRIODE GRID (G_o)	0.14	μμf
CONTROL GRID (G) AND ALL OTHER ELECTRODES	4.4	μμf
TRIODE GRID (G_o) AND TRIODE PLATE (P_o)	2.2	μμf
TRIODE GRID (G_o) AND ALL OTHER ELECTRODES	12.0	μμf
TRIODE PLATE (P_o) AND ALL OTHER ELECTRODES	5.5	μμf
HEPTODE PLATE (P) AND ALL OTHER ELECTRODES	9.0	μμf

[5] WITH STANDARD TUBE SHIELD (NOT CLOSE FITTING)

NOTE: VARIATION OF THE OSCILLATOR FREQUENCY, CAUSED BY AVC VOLTAGE AND REGULATION OF THE POWER SUPPLY, IS LESS IN THE 6J8G THAN IN THE PENTAGRID CONVERTER. THIS IMPROVEMENT IN FREQUENCY STABILITY IS DUE TO THE USE OF A SEPARATE TRIODE UNIT. THE HIGH INPUT IMPEDANCE RESULTING FROM THE LOW SIGNAL GRID TO PLATE CAPACITANCE AND THE HIGH PLATE RESISTANCE, MAINTAINS THE Q OF ASSOCIATED HIGH GAIN CIRCUITS. THE COUPLING EFFECTS WITHIN THE TUBE BETWEEN THE OSCILLATOR AND SIGNAL CIRCUITS ARE SMALL.

THE OSCILLATOR GRID CURRENT SHOULD EXCEED 150 MICROAMPERES THROUGH A 50 000 OHM GRID RESISTOR, AND THE PLATE LOAD IMPEDANCE SHOULD EXCEED 0.2 MEGOHM TO OBTAIN CONVERSION GAIN COMPARABLE TO THAT OF PENTAGRID CONVERTERS. THE HIGH PLATE LOAD IMPEDANCE MAY BE OBTAINED MORE ECONOMICALLY BY USING HIGHER L-C RATIOS THAN BY HIGHER Q COILS, AS A LOWER VALUE OF TUNING CAPACITY MAY BE USED THAN IS PERMISSIBLE WITH PENTAGRID CONVERTERS. OSCILLATOR CIRCUITS THAT REDUCE THE VOLTAGE ON THE TRIODE PLATE TO LESS THAN 100 VOLTS SHOULD BE AVOIDED.

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