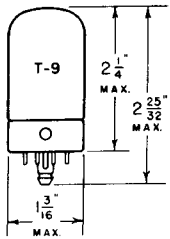
TUNG-SOL

TRIODE HEXODE CONVERTER



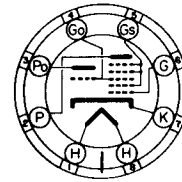
UNIPOTENTIAL CATHODE

HEATER

6.3 VOLTS 0.3 AMPERE

AC OR DC

GLASS BULB



8AR

BOTTOM VIEW

LOCKING-IN 8 PIN BASE

THE TUNG-SOL 7J7 IS DESIGNED FOR SERVICE AS AN OSCILLATOR AND MIXER IN SUPERHETERODYNE CIRCUITS. IT CONSISTS OF A HEXODE MIXER AND A TRIODE OSCILLATOR WITH A COMMON CATHODE. THE INJECTOR GRID OF THE HEXODE IS INTERNALLY CONNECTED TO THE TRIODE GRID. ITS RATINGS AND ELECTRICAL CHARACTERISTICS ARE SIMILAR TO THOSE OF THE 6J8G

RATINGS

HEATER VOLTAGE — NOMINAL	7.0	VOLTS
HEATER CURRENT — NOMINAL	0.32	AMPERE
MAXIMUM HEXODE PLATE VOLTAGE (P)	300	VOLTS
MAXIMUM HEXODE SCREEN VOLTAGE (G_S)	100	VOLTS
MAXIMUM HEXODE SCREEN SUPPLY VOLTAGE	300	VOLTS
MAXIMUM TRIODE PLATE VOLTAGE (P_O)	150	VOLTS
MAXIMUM TRIODE PLATE SUPPLY VOLTAGE	300	VOLTS
MAXIMUM HEXODE PLATE DISSIPATION (P)	0.5	WATT
MAXIMUM HEXODE SCREEN DISSIPATION (G_S)	0.3	WATT
MAXIMUM TRIODE PLATE DISSIPATION (P_O)	1.25	WATTS
MAXIMUM TOTAL CATHODE CURRENT	14	MA.
MINIMUM EXTERNAL SIGNAL GRID BIAS VOLTAGE (G)	0	VOLT

DIRECT INTERELECTRODE CAPACITANCES[S]

HEXODE GRID (G) TO HEXODE PLATE (P)	0.01 MAX.	μμf
HEXODE GRID (G) TO TRIODE PLATE (P_O)	0.1 MAX.	μμf
HEXODE GRID (G) TO TRIODE GRID AND HEXODE GRID (G_O)	0.2 MAX.	μμf
TRIODE GRID (G_O) TO TRIODE PLATE (P_O)	1.0	μμf
SIGNAL INPUT: HEXODE GRID (G) TO ALL OTHER ELECTRODES	5.5	μμf
OSC. INPUT: TRIODE GRID AND HEXODE GRID (G_O) TO ALL OTHER ELECTRODES EXCEPT TRIODE PLATE (P_O)	8.5	μμf
OSC. OUTPUT: TRIODE PLATE (P_O) TO ALL OTHER ELECTRODES EXCEPT TRIODE GRID AND HEXODE GRID (G_O)	2.0	μμf
MIXER OUTPUT: HEXODE PLATE (P) TO ALL OTHER ELECTRODES	7.5	μμf

[S] WITH EXTERNAL SHIELD CONNECTED TO CATHODE

PLATE 858-1

SEPT. 23 1940

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TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CONVERTER SERVICE

HEXODE PLATE (P) VOLTAGE	100	250	VOLTS
HEXODE SCREEN (G_S) VOLTAGE	100	100	VOLTS
TRIODE PLATE (P_O) VOLTAGE	100	–	VOLTS
TRIODE PLATE (P_O) SUPPLY VOLTAGE	–	250[A]	VOLTS
HEXODE CONTROL GRID (G) VOLTAGE	–3	–3	VOLTS
HEXODE PLATE CURRENT	1.1	1.3	MA.
HEXODE SCREEN CURRENT	3.1	2.9	MA.
TRIODE PLATE CURRENT	3.7	5.4	MA.
TRIODE GRID (G_O) CURRENT	0.3	0.4	MA.
TOTAL CATHODE CURRENT	8.2	10.0	MA.
TRIODE GRID (G_O) RESISTOR	50000	50000	OHMS
HEXODE PLATE RESISTANCE	0.3	1.5	MEGOHMS
CONVERSION TRANSCONDUCTANCE	260	300	µMHOS
CONTROL GRID VOLTAGE	–20	–20	VOLTS

FOR CONVERSION TRANSCONDUCTANCE = 2 µMHOS

[A] THIS VALUE OF TRIODE PLATE SUPPLY VOLTAGE APPLIED THROUGH A 20 000 OHM DROPPING RESISTOR.

STATIC CHARACTERISTICS OF TRIODE SECTION ONLY

PLATE VOLTAGE	150	VOLTS
GRID VOLTAGE	–3	VOLTS
PLATE CURRENT	7.5	MA.
PLATE RESISTANCE	10400	OHMS
TRANSCONDUCTANCE	1350	µMHOS
AMPLIFICATION FACTOR	14	

FOR "INTERPRETATION OF RATINGS" REFER TO FRONT OF BOOK.

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