

TUNG-SOL

DOUBLE DIODE TRIODE

MINIATURE TYPE

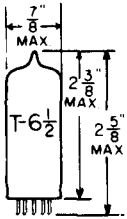
COATED UNIPOTENTIAL CATHODE

HEATER

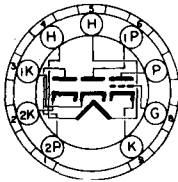
6.3 VOLTS $0.6 \pm 6\%$ AMP.

AC OR DC

ANY MOUNTING POSITION



GLASS BULB



BOTTOM VIEW

MINIATURE BUTTON
9 PIN BASE

9ER

THE 6BJ8 IS A MEDIUM-MU TRIODE AND A DOUBLE DIODE IN ONE ENVELOPE USING THE 9 PIN MINIATURE CONSTRUCTION. EACH SECTION HAS ITS OWN CATHODE. IT IS DESIGNED FOR USE AS A PHASE SPLITTER, PHASE COMPARATOR AND HORIZONTAL DEFLECTION OSCILLATOR IN 600 MA. SERIES HEATER OPERATED 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.

DIRECT INTERELECTRODE CAPACITANCES

WITH NO EXTERNAL SHIELD

TRIODE SECTION

GRID TO PLATE: G TO P	2.6	μμf
INPUT: G TO (H+TK)	2.8	μμf
OUTPUT: P TO (H+TK)	0.31	μμf

DIODE SECTION

#1 PLATE TO TRIODE GRID (MAX.)	.070	μμf
#2 PLATE TO TRIODE GRID (MAX.)	.11	μμf
#1 CATHODE TO ALL: 1DK TO (H+TK+2DK+TP+1DP+TG+2DP)	4.8	μμf
#2 CATHODE TO ALL: 2DK TO (H+TK+1DK+TP+1DP+2DP+TG)	4.8	μμf
#1 PLATE TO #2 PLATE (MAX.)	.060	μμf
#1 PLATE TO #1 CATHODE + HEATER: 1DP TO (1DK+H)	1.9	μμf
#2 PLATE TO #2 CATHODE + HEATER: 2DP TO (2DK+H)	1.9	μμf
#1 CATHODE TO #1 PLATE+HEATER: 1DK TO (1DP+H)	4.6	μμf
#2 CATHODE TO #2 PLATE+HEATER: 2DK TO (2DP+H)	4.6	μμf
#1 PLATE TO ALL: 1DP TO (H+TK+1DK+2DK+TP+2DP+TG)	3.0	μμf
#2 PLATE TO ALL: 2DP TO (H+TK+1DK+2DK+TP+1DP+TG)	3.0	μμf

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TUNG-SOL

CONTINUED FROM PRECEDING PAGE

RATINGS

INTERPRETED ACCORDING TO DESIGN MAXIMUM SYSTEM

EACH SECTION

	CLASS A ₁ AMPLIFIER	VERTICAL ^B DEFLECTION AMPLIFIER	
HEATER VOLTAGE		6.3	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
HEATER WARM-UP TIME (APPROX.) ^C	11.0		SECONDS
TRIODE SECTION			
MAXIMUM PLATE VOLTAGE	330	330	VOLTS
MAXIMUM POSITIVE DC GRID VOLTAGE	0	---	VOLTS
MAXIMUM POSITIVE PULSE PLATE VOLTAGE (ABSOLUTE MAXIMUM)	---	1 200	VOLTS.
MAXIMUM PLATE DISSIPATION ^D	4.0	4.0	WATTS
MAXIMUM PEAK NEGATIVE PULSE GRID VOLTAGE	---	275	VOLTS
MAXIMUM AVERAGE CATHODE CURRENT	22	22	MA.
MAXIMUM PEAK CATHODE CURRENT	---	77	MA.
MAXIMUM GRID CIRCUIT RESISTANCE: SELF BIAS	---	2.2	MEGOHMS
DIODE SECTION			
MAXIMUM PEAK PLATE CURRENT (EACH PLATE)		54	MA.
MAXIMUM DC CURRENT (EACH PLATE)		9	MA.

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CLASS A₁ AMPLIFIER

HEATER VOLTAGE		6.3 ←	VOLTS
HEATER CURRENT		0.6±6% ←	AMP.
TRIODE SECTION			
PLATE VOLTAGE	90	250	VOLTS
GRID VOLTAGE	0	-9	VOLTS
PLATE RESISTANCE (APPROX.)	4 700	7 150	OHMS
TRANSCONDUCTANCE	4 700	2 800	μMHOS
AMPLIFICATION FACTOR	22	20	
PLATE CURRENT	13.5	8.0	MA.
PLATE CURRENT AT E _c = -12.5 VOLTS (DC)	---	1.7	MA.
GRID VOLTAGE (APPROX.) FOR I _b = 10 μAMP.	-7	-18	VOLTS
DIODE SECTION			
AVERAGE CURRENT (EACH PLATE) AT 10 VOLTS (DC)		50	MA.
VOLTAGE DROP (EACH SECTION) AT I _b = 9 MA. (DC)		2.6	VOLTS

^BFOR 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.

^CHEATER 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.

^DIN 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.

→ INDICATES A CHANGE.