TUNG-SOL

DOUBLE DIODE TRIODE

MINIATURE TYPE

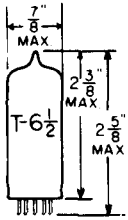
COATED UNIPOTENTIAL CATHODE

HEATER

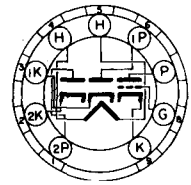
6.3 VOLTS 0.6±6% AMP.

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: $_1$DK TO (H+TK+$_2$DK+TP+$_1$DP+TG+$_2$DP)	4.8	μμf
#2 CATHODE TO ALL: $_2$DK TO (H+TK+$_1$DK+TP+$_1$DP+$_2$DP+TG)	4.8	μμf
#1 PLATE TO #2 PLATE (MAX.)	.060	μμf
#1 PLATE TO #1 CATHODE + HEATER: $_1$DP TO ($_1$DK+H)	1.9	μμf
#2 PLATE TO #2 CATHODE + HEATER: $_2$DP TO ($_2$DK+H)	1.9	μμf
#1 CATHODE TO #1 PLATE+HEATER: $_1$DK TO ($_1$DP+H)	4.6	μμf
#2 CATHODE TO #2 PLATE+HEATER: $_2$DK TO ($_2$DP+H)	4.6	μμf
#1 PLATE TO ALL: $_1$DP TO (H+TK+$_1$DK+$_2$DK+TP+$_2$DP+TG)	3.0	μμf
#2 PLATE TO ALL: $_2$DP TO (H+TK+$_1$DK+$_2$DK+TP+$_1$DP+TG)	3.0	μμf

CONTINUED ON FOLLOWING PAGE

PRINTED IN U.S.A.

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 A_1 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

[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.

[C] 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 OPERATING RESISTANCE

[D] IN 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.