

TUNG-SOL

TRIODE PENTODE
MINIATURE TYPE

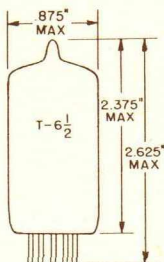
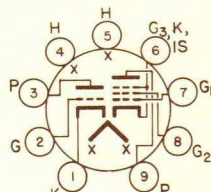
COATED UNIPOTENTIAL CATHODE

HEATER

6.3 VOLTS 600 MA.

AC OR DC

ANY MOUNTING POSITION

GLASS BULB
MINIATURE BUTTON
9 PIN BASE E9-1
OUTLINE DRAWING
JEDEC 6-3BOTTOM VIEW
BASING DIAGRAM
JEDEC 9DX

THE 6BA8A IS A MINIATURE MEDIUM-MU TRIODE AND SHARP CUTOFF PENTODE WHICH HAS A CONTROLLED PLATE KNEE CHARACTERISTIC. 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 SHIELD ^A	WITHOUT SHIELD	
TRIODE			
GRID TO PLATE: (G TO P)	2.2	2.2	pf
INPUT: G TO (H + K)	2.7	2.5	pf
OUTPUT: P TO (H + K)	1.9	0.4	pf
PENTODE			
GRID TO PLATE: (G ₁ TO P)	→ 0.05	→ 0.06	pf
INPUT: G TO (H+K+G ₂ +G ₃ +I.S.)	10.0	10.0	pf
OUTPUT: P TO (H+K+G ₂ +G ₃ +I.S.)	4.5	3.6	pf
COUPLING			
PENTODE GRID #1 TO TRIODE PLATE	0.003	0.006	pf
PENTODE PLATE TO TRIODE GRID	0.006	0.016	pf
PENTODE PLATE TO TRIODE PLATE	0.050	0.200	pf

RATINGS

INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

	TRIODE	PENTODE	
MAXIMUM HEATER-CATHODE VOLTAGE:			
HEATER POSITIVE WITH RESPECT TO CATHODE			
DC AND PEAK		200	VOLTS
DC		100	VOLTS
HEATER NEGATIVE WITH RESPECT TO CATHODE			
DC AND PEAK		200	VOLTS
MAXIMUM PLATE VOLTAGE	300	300	VOLTS
MAXIMUM GRID #2 SUPPLY VOLTAGE	---	300	VOLTS
MAXIMUM GRID #2 VOLTAGE	SEE RATING CHART		
MAXIMUM PLATE DISSIPATION	2.0	3.25	WATTS
MAXIMUM GRID #2 DISSIPATION	---	1.0	WATT
MAXIMUM NEGATIVE GRID #1 VOLTAGE	---	50	VOLTS
MAXIMUM POSITIVE GRID #1 VOLTAGE	---	0	VOLTS
MAXIMUM GRID #1 CIRCUIT RESISTANCE:			
FIXED BIAS	0.5	0.25	MEGOHM
SELF BIAS	1.0	1.0	MEGOHM
HEATER WARM-UP TIME (APPROX.) ^B		11.0	SECONDS

^A SHIELD #315 TIED TO CATHODE BASE PIN OF SECTION UNDER TEST.^B 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.

CONTINUED ON FOLLOWING PAGE

→ INDICATES A CHANGE.

TUNG-SOL

CONTINUED FROM PRECEDING PAGE

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CLASS A₁ AMPLIFIER

	TRIODE	PENTODE	
PLATE VOLTAGE	200	200	VOLTS
GRID #2 VOLTAGE	---	150	VOLTS
GRID #1 VOLTAGE	-8	0	VOLTS
CATHODE BIAS RESISTOR	---	180	OHMS
AMPLIFICATION FACTOR	18	---	
PLATE RESISTANCE (APPROX.)	6 700	400 000	OHMS
TRANSCONDUCTANCE	2 700	9 000	μMHOS
PLATE CURRENT	8.0	13	MA.
GRID #2 CURRENT	---	3.5	MA.
GRID #1 VOLTAGE FOR $I_b = 40 \mu A$. (APPROX.)	-16	-10	VOLTS
ZERO BIAS: WITH $E_b = 65V$., AND $E_{c2} = 150 V$., (INSTANTANEOUS VALUES)			
PLATE CURRENT		42	MA.
GRID #2 CURRENT		12.5	MA.

