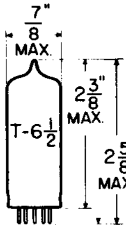
TUNG-SOL

TRIODE PENTODE

MINIATURE TYPE



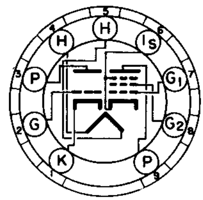
GLASS BULB

COATED UNIPOTENTIAL CATHODE

HEATER

8.0 VOLTS 0.6 AMP.

ANY MOUNTING POSITION



BOTTOM VIEW
MINIATURE BUTTON
9 PIN BASE

9DX

THE 8GN8 IS A HIGH MU TRIODE AND A SHARP CUTOFF PENTODE IN THE 9 PIN MINIATURE CONSTRUCTION. THE TRIODE SECTION IS DESIGNED FOR USE AS A VOLTAGE AMPLIFIER OR SYNC-SEPARATOR. THE PENTODE SECTION IS DESIGNED FOR VIDEO AMPLIFIER SERVICE FEATURING A CONTROLLED PLATE KNEE CHARACTERISTIC. EXCEPT FOR HEATER RATINGS AND HEATER WARM-UP TIME, THE 8GN8 IS IDENTICAL TO THE 6GN8.

DIRECT INTERELECTRODE CAPACITANCES

WITHOUT EXTERNAL SHIELD

TRIODE SECTION		
GRID TO PLATE	4.4	$\mu\mu f$
INPUT: G TO (H+K)	2.4	$\mu\mu f$
OUTPUT: P TO (H+K)	0.36	$\mu\mu f$
PENTODE SECTION		
GRID #1 TO PLATE (MAX.)	0.1	$\mu\mu f$
INPUT: G1 TO (H+K+G2+G3+I.S.)	11	$\mu\mu f$
OUTPUT: P TO (H+K+G2+G3+I.S.)	4.2	$\mu\mu f$
COUPLING		
TRIODE GRID TO PENTODE PLATE (MAX.)	.018	$\mu\mu f$
PENTODE GRID #1 TO TRIODE PLATE (MAX.)	.005	$\mu\mu f$
PENTODE PLATE TO TRIODE PLATE (MAX.)	0.17	$\mu\mu f$

RATINGS

INTERPRETED ACCORDING TO DESIGN MAXIMUM SYSTEM[A]

	TRIODE SECTION	PENTODE SECTION	
HEATER VOLTAGE	8.0	8.0	VOLTS
MAXIMUM PLATE VOLTAGE	330	330	VOLTS
MAXIMUM GRID #2 SUPPLY VOLTAGE		330	VOLTS

CONTINUED ON FOLLOWING PAGE

TUNG-SOL ELECTRIC INC., ELECTRON TUBE DIVISION, BLOOMFIELD, NEW JERSEY, U.S.A. FEBRUARY 1, 1960 PLATE #5773

TUNG-SOL

CONTINUED FROM PRECEDING PAGE

RATINGS - CONT'D.

INTERPRETED ACCORDING TO DESIGN MAXIMUM SYSTEM[A]

	TRIODE SECTION		PENTODE SECTION	
HEATER VOLTAGE		8.0		VOLTS
MAXIMUM GRID #2 VOLTAGE		SEE RATING CHART		
MAXIMUM POSITIVE GRID #1 VOLTAGE	0		0	VOLTS
MAXIMUM PLATE DISSIPATION	1.0		5.0	WATTS
MAXIMUM GRID #2 DISSIPATION			1.1	WATTS
MAXIMUM GRID #1 CIRCUIT RESISTANCE:				
FIXED BIAS	0.5		0.25	MEGOHM
CATHODE BIAS	1.0		1.0	MEGOHM
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*		11.0		SECONDS

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

	TRIODE SECTION		PENTODE SECTION	
HEATER VOLTAGE		8.0		VOLTS
HEATER CURRENT		0.6		AMP.
PLATE VOLTAGE	250		200	VOLTS
GRID #2 VOLTAGE			150	VOLTS
GRID #1 VOLTAGE	−2			VOLTS
CATHODE BIAS RESISTOR			100	OHMS
PLATE CURRENT	2		25	MA.
GRID #2 CURRENT			5.5	MA.
TRANSCONDUCTANCE	2700		11500	μMHOS
AMPLIFICATION FACTOR	100			
PLATE RESISTANCE	37000		60000	OHMS
Ec1 FOR Ib = 100 μA (APPROX.)			−10	VOLTS
Ec1 FOR Ib = 20 μA (APPROX.)	−5			VOLTS

INSTANTANEOUS PLATE KNEE CHARACTERISTICS
PENTODE SECTION

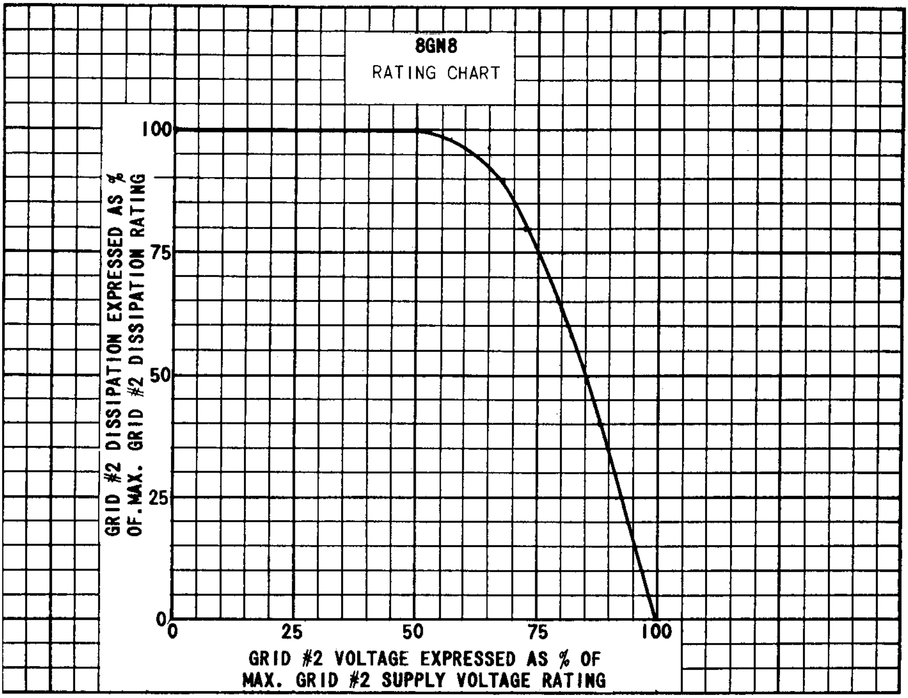
Eb = 60 VOLTS, Ec2 = 150 VOLTS AND Ec1 = 0 VOLTS
Ib = 55 MA AND Ic2 = 18 MA.

* HEATER WARM-UP TIME IS DEFINED AS THE TIME REQUIRED FOR THE VOLTAGE ACROSS THE HEATER TO REACH 80% OF ITS RATED VALUE AFTER APPLYING FOUR (4) TIMES RATED HEATER VOLTAGE TO A CIRCUIT CONSISTING OF THE TUBE HEATER IN SERIES WITH A RESISTANCE EQUAL TO THREE (3) TIMES RATED HEATER VOLTAGE DIVIDED BY RATED HEATER CURRENT.

A. DESIGN-MAXIMUM RATINGS ARE LIMITING VALUES OF OPERATING AND ENVIRONMENTAL CONDITIONS APPLICABLE TO BOGEY ELECTRON DEVICE OF A SPECIFIED TYPE AS DEFINED BY ITS PUBLISHED DATA, AND SHOULD NOT BE EXCEEDED UNDER THE WORST PROBABLE CONDITIONS.

THE DEVICE MANUFACTURER CHOOSES THESE VALUES TO PROVIDD ACCEPTABLE SERVICEABILITY OF THE DEVICE, TAKING RESPONSIBILITY FOR THE EFFECTS OF CHANGES IN OPERATING CONDITIONS DUE TO VARIATIONS IN DEVICE CHARACTERISTICS.

THE EQUIPMENT MANUFACTURER SHOULD DESIGN SO THAT INITIALLY AND THROUGHOUT LIFE NO DESIGN-MAXIMUM VALUE FOR THE INTENDED SERVICE IS EXCEEDED WITH A BOGEY DEVICE UNDER THE WORST PROBABLE OPERATING CONDITIONS WITH RESPECT TO SUPPLY-VOLTAGE VARIATION, EQUIPMENT COMPONENT VARIATION, EQUIPMENT CONTROL ADJUSTMENT, LOAD VARIATION, SIGNAL VARIATION, AND ENVIRONMENTAL CONDITIONS.


8GN8
RATING CHART
GRID #2 DISSIPATION EXPRESSED AS %
OF. MAX. GRID #2 DISSIPATION RATING
100
75
50
25
0
0
25
50
75
100
GRID #2 VOLTAGE EXPRESSED AS % OF
MAX. GRID #2 SUPPLY VOLTAGE RATING