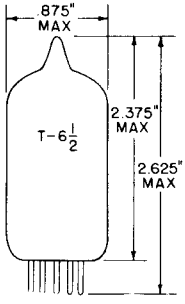
TUNG-SOL

TRIODE PENTODE

MINIATURE TYPE



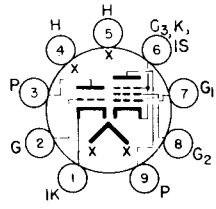
GLASS BULB
MINIATURE BUTTON
9 PIN BASE E9-1
OUTLINE DRAWING
JEDEC 6-3

COATED UNIPOTENTIAL CATHODE

FOR

VIDEO AMPLIFIER SERVICE

ANY MOUNTING POSITION



BOTTOM VIEW
BASING DIAGRAM
JEDEC 9DX

THE 10GN8 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 10GN8 IS IDENTICAL TO THE 6GN8 AND THE 8GN8.

DIRECT INTERELECTRODE CAPACITANCES

WITHOUT EXTERNAL SHIELD

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

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HEATER CHARACTERISTICS AND RATINGS

DESIGN MAXIMUM VALUES -- SEE EIA STANDARD RS-239

AVERAGE CHARACTERISTICS	10.5	VOLTS	450	MA.
HEATER WARM-UP TIME [A]			11	SECONDS
HEATER SUPPLY LIMITS:				
CURRENT OPERATION (AC OR DC)			450 ± 25	MA.
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

MAXIMUM RATINGS

DESIGN MAXIMUM VALUES - SEE EIA STANDARD RS-239

	TRIODE SECTION	PENTODE SECTION	
PLATE VOLTAGE	330	330	VOLTS
GRID #2 SUPPLY VOLTAGE		330	VOLTS
GRID #2 VOLTAGE	SEE RATING CHART		
POSITIVE GRID #1 VOLTAGE	0	0	VOLTS
PLATE DISSIPATION	1.0	5.0	WATTS
GRID #2 DISSIPATION		1.1	WATTS
GRID #1 CIRCUIT RESISTANCE:			
FIXED BIAS	0.5	0.25	MEGOHM
CATHODE BIAS	1.0	1.0	MEGOHM

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

	TRIODE SECTION	PENTODE SECTION	
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
E_{c1} FOR I_b = 100 μA (APPROX.)		−10	VOLTS
E_{c1} FOR I_b = 20 μA (APPROX.)	−5		VOLTS

INSTANTANEOUS PLATE KNEE CHARACTERISTICS

PENTODE SECTION

E_b = 60 VOLTS, E_{c2} = 150 VOLTS AND E_{c1} = 0 VOLTS
I_b = 55 MA AND I_{c2} = 18 MA.

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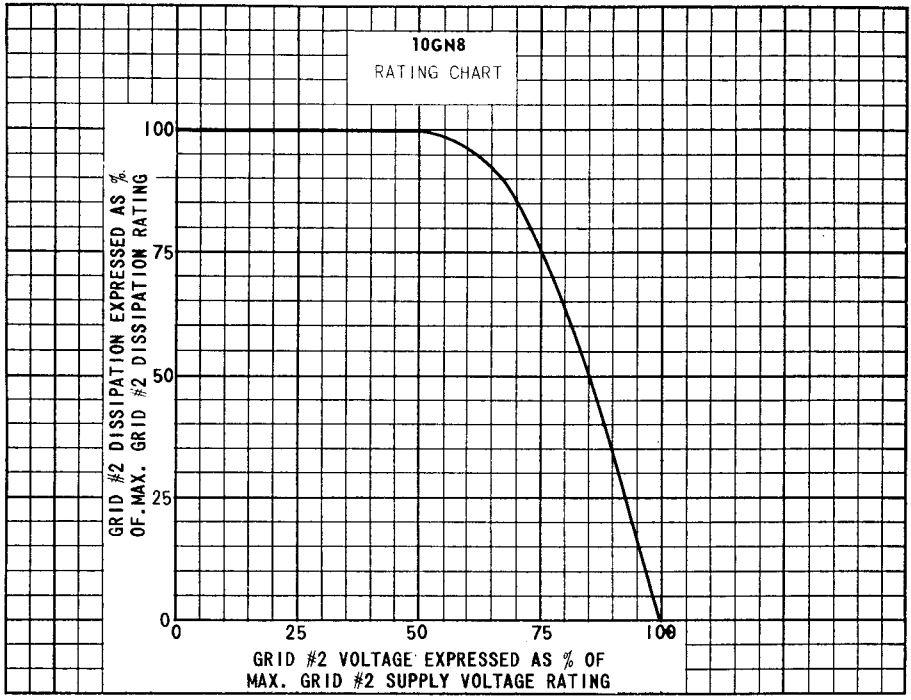
* HEATER WARM-UP TIME IS DEFINED AS THE TIME REQUIRED FOR THE VOLTAGE ACROSS THE HEATER TO REACH 80% OF ITS RATED VALUE AFTER APPLYING FOUR (4) TIMES RATED HEATER VOLTAGE TO A CIRCUIT CONSISTING OF THE TUBE HEATER IN SERIES WITH A RESISTANCE EQUAL TO THREE (3) TIMES RATED HEATER VOLTAGE DIVIDED BY RATED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



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