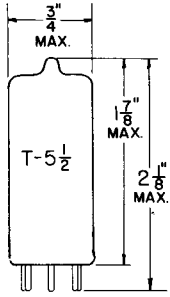
TUNG-SOL

PENTODE

MINIATURE TYPE



GLASS BULB

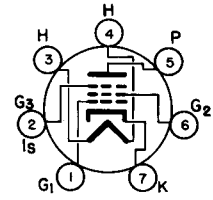
MINIATURE BUTTON
7 PIN BASE E7-1
OUTLINE DRAWING
JEDEC

COATED UNIPOTENTIAL CATHODE

HEATER NOMINAL

18 VOLTS[B] 0.10 AMP.

SERIES OPERATION
AC OR DC
ANY MOUNTING POSITION



BOTTOM VIEW

BASING DIAGRAM
JEDEC 7BK

THE 18GD6A IS A SHARP-CUTOFF PENTODE IN THE 7 PIN MINIATURE CONSTRUCTION. IT FEATURES A 100 MILLIAMPERE HEATER AND IS DESIGNED FOR RF AND IF APPLICATIONS IN AC/DC TYPE RADIO RECEIVERS OR OTHER ELECTRONIC EQUIPMENT.

DIRECT INTERELECTRODE CAPACITANCES[A]

GRID #1 TO PLATE (MAX.)	.0035	pf
INPUT: G1 TO (H+K+G2+G3+I.S.)	6.0	pf
OUTPUT: P TO (H+K+G2+G3+I.S.)	5.0	pf

RATINGS

INTERPRETED ACCORDING TO DESIGN MAXIMUM SYSTEM
SEE EIA STANDARD RS-239

HEATER CURRENT[C]	0.100±0.006	AMPS.
MAXIMUM PLATE VOLTAGE	150	VOLTS
MAXIMUM GRID #2 SUPPLY VOLTAGE	150	VOLTS
MAXIMUM GRID #2 VOLTAGE	SEE RATING CHART	
MAXIMUM PLATE DISSIPATION	2.5	WATTS
MAXIMUM GRID #2 DISSIPATION	0.6	WATTS
MAXIMUM HEATER-CATHODE VOLTAGE	100	VOLTS
HEATER NEGATIVE WITH RESPECT TO CATHODE		
TOTAL DC AND PEAK	100	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE		
TOTAL DC AND PEAK	100	VOLTS
HEATER WARM-UP TIME*	20	SECONDS

DESIGN-MAXIMUM RATINGS ARE LIMITING VALUES OF OPERATING AND ENVIRONMENTAL CONDITIONS APPLICABLE TO A 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 PROVIDE 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.

CONTINUED FROM PRECEDING PAGE

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

PLATE VOLTAGE		100	VOLTS
GRID #3 VOLTAGE	CONNECTED TO CATHODE AT SOCKET		
GRID #2 VOLTAGE		100	VOLTS
CATHODE BIAS RESISTOR		150	OHMS
PLATE CURRENT		5	MA.
GRID #2 CURRENT		2.0	MA.
TRANSCONDUCTANCE		4300	μMHOS
PLATE RESISTANCE (APPROX.)		0.5	MEGOHM
E_{c1} FOR I_b = 10 μA (APPROX.)		-4.7	VOLTS

[A] EXTERNAL SHIELD #316 CONNECTED TO PIN 7 (CATHODE).

[B] FOR SERIES OPERATION OF HEATERS, EQUIPMENT SHOULD BE DESIGNED THAT AT NORMAL SUPPLY VOLTAGE BOGEY TUBES WILL OPERATE AT THIS VALUE OF HEATER CURRENT.

[C] HEATER VOLTAGE SUPPLY VARIATIONS SHALL BE RESTRICTED TO MAINTAIN HEATER CURRENT WITHIN THE SPECIFIED VALUES.

*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.

SIMILAR TYPE REFERENCE: *Except for heater warm-up time, the 18GD6A is identical to the 18GD6.*