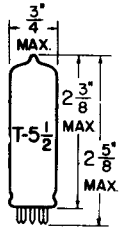
TUNG-SOL

RECTIFIER

MINIATURE TYPE



GLASS BULB

MINIATURE BUTTON
7 PIN BASE E7-1

OUTLINE DRAWING
JEDEC 5-3

COATED UNIPOTENTIAL CATHODE

HEATER

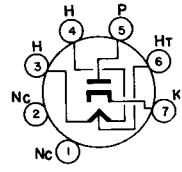
36 VOLTS[A] 32 VOLTS[B,C]

0.10 AMP.

ANY MOUNTING POSITION

[A] PINS 3 AND 4

[B] PINS 3 AND 6



BOTTOM VIEW

BASING DIAGRAM
JEDEC 5BQ

THE 36AM3B IS A HALF-WAVE RECTIFIER IN THE 7 PIN MINIATURE CONSTRUCTION. FEATURES OF THE TUBE ARE A 100 MA. HEATER WITH 20 SECOND WARM-UP TIME. IT HAS A HEATER TAP SECTION (PINS 4 & 6) THAT MAY BE USED AS A LIMITING RESISTANCE IN THE RECTIFIER PLATE CIRCUIT OR AS A PANEL LAMP SHUNT.

RATINGS

INTERPRETED ACCORDING TO DESIGN MAXIMUM SYSTEM

HEATER VOLTAGE (PINS 3 & 4)	36	VOLTS
HEATER VOLTAGE (PINS 3 & 6)	32	VOLTS
HEATER CURRENT (PINS 3 & 6)[D]	.100±.006	AMP.
MAXIMUM INVERSE VOLTAGE	365	VOLTS
MAXIMUM STEADY STATE PEAK PLATE CURRENT	580	MA.
MAXIMUM VOLTAGE (RMS) OF PANEL LAMP SECTION WHEN PANEL LAMP FAILS	10	VOLTS
MAXIMUM DC OUTPUT CURRENT		
WITHOUT PANEL LAMP PER CIRCUIT 1	82	MA.
WITH PANLE LAMP PER CIRCUIT 2 AND NO SHUNTING RESISTOR	68	MA.
WITH PANEL LAMP PER CIRCUIT 2 AND SHUNTING RESISTOR	82	MA.
MAXIMUM HEATER-CATHODE VOLTAGE:		
HEATER NEGATIVE WITH RESPECT TO CATHODE TOTAL DC AND PEAK	350	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE		
DC	100	VOLTS
TOTAL DC AND PEAK	200	VOLTS
HEATER WARM-UP TIME (PINS 3 & 4)[E]	20	SECONDS

AVERAGE CHARACTERISTICS

TUBE VOLTAGE DROP WITH PLATE CURRENT = 150 MA.	16	VOLTS

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TYPICAL OPERATION

HALF-WAVE RECTIFIER – CAPACITOR INPUT TO FILTER[F]

WITH PANEL LAMP CM8-54 - CIRCUIT 2

HEATER TAP VOLTAGE (PINS 4 & 6)	3.7	4.0	4.0	4.0	4.0	VOLTS
AC PLATE SUPPLY VOLTAGE, RMS	120	120	120	120	120	VOLTS
EFFECTIVE PLATE SUPPLY RESISTANCE (APPROX.)	20	20	20	20	20	OHMS
PANEL LAMP SHUNTING RESISTOR	0	470	200	130	100	OHMS
DC OUTPUT CURRENT	50	60	65	70	75	MA.
DC OUTPUT VOLTAGE AT FILTER INPUT	129	125	124	122	120	VOLTS

TAP SECTION AS LIMITING RESISTANCE[F]

WITHOUT PANEL LAMP - CIRCUIT 1

AC PLATE SUPPLY VOLTAGE	120	120	VOLTS
EFFECTIVE PLATE SUPPLY RESISTANCE	(NOTE G)	(NOTE G)	
FILTER INPUT CAPACITOR	40	40	μf
DC OUTPUT CURRENT	60	75	MA
DC OUTPUT VOLTAGE AT FILTER INPUT	122	113	VOLTS

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

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

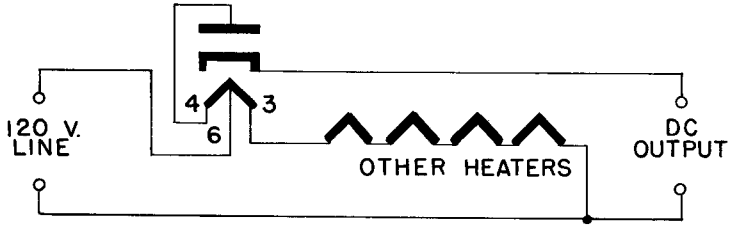
[E] HEATER WARM-UP TIME IS DEFINED AS THE TIME REQUIRED FOR THE VOLTAGE ACROSS THE HEATFR TO REACH 80% OF ITS RATED VOLTAGE AFTER APPLYING 4 TIMES RATED HEATER VOLTAGE TO A CIRCUIT CONSISTING OF THE TUBE HEATER IN SERIES WITH A RESISTANCE OF VALUE 3 TIMES THE NOMINAL HEATER OPERATING RESISTANCE.

[F] IN A SERIES STRING ENTERTAINMENT EQUIPMENT COMPLEMENT WITH 100 MILLIAMPERE HEATER CURRENT TUBES DESIGNED FOR A NOMINAL 120 VOLT AC LINE.

[G] IN THIS MODE OF OPERATION, WITH THE HEATER TAP SECTION BETWEEN PINS 4 AND 6 IN SERIES WITH THE RECTIFIER PLATE CIRCUIT, THE RESISTANCE OF THE TAP SECTION IS APPROXIMATELY 45 OHMS.

TUNG-SOL

CIRCUIT 1



CIRCUIT 2