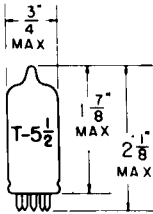


**TUNG-SOL**

**TETRODE**

MINIATURE TYPE



GLASS BULB

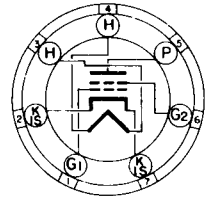
COATED UNIPOTENTIAL CATHODE

HEATER

2.9 VOLTS 0.45±6% AMP.

AC OR DC

ANY MOUNTING POSITION



**BOTTOM VIEW**

SMALL BUTTON MINIATURE  
7 PIN BASE

7EW

THE 3EA5 IS A SHARP CUTOFF TETRODE IN THE 7 PIN MINIATURE CONSTRUCTION. IT IS DESIGNED FOR HIGH PLATE VOLTAGE OPERATION AS AN RF AMPLIFIER IN VHF TUNERS OF TELEVISION RECEIVERS. 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. EXCEPT FOR HEATER RATINGS AND WARM-UP TIME, THE 2EA5 IS IDENTICAL TO THE 2EA5 AND 6EA5.

**DIRECT INTERELECTRODE CAPACITANCES**

	WITH SHIELD <sup>A</sup>	WITHOUT SHIELD	
GRID TO PLATE (G1 TO P) (MAX.)	0.05	0.06	μμf
INPUT: G1 TO (H+K+G2+I.S.)	4.5	3.8	μμf
OUTPUT: P TO (H+K+G2+I.S.)	3.0	2.3	μμf

**RATINGS**

INTERPRETED ACCORDING TO DESIGN MAXIMUM SYSTEM<sup>B</sup>

HEATER VOLTAGE	2.9	2.9	2.9	VOLTS
MAXIMUM PLATE VOLTAGE	250	250	250	VOLTS
MAXIMUM GRID #2 VOLTAGE	150	150	150	VOLTS
MAXIMUM PLATE DISSIPATION	3.25	3.25	3.25	WATTS
MAXIMUM GRID #2 DISSIPATION	0.5	0.5	0.5	WATTS
MAXIMUM CATHODE CURRENT (DC)	20	20	20	MA.
MAXIMUM HEATER-CATHODE VOLTAGE:				
HEATER NEGATIVE WITH RESPECT TO CATHODE				
TOTAL DC AND PEAK	200	200	200	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE				
DC	100	100	100	VOLTS
TOTAL DC AND PEAK	200	200	200	VOLTS
HEATER WARM-UP TIME (APPROX.)*	11.0	11.0	11.0	SECONDS

<sup>A</sup> WITH EXTERNAL SHIELD #316 CONNECTED TO PIN 2.

CONTINUED ON FOLLOWING PAGE

PHOTO M. V. A.

## TUNG-SOL

CONTINUED FROM PRECEDING PAGE

## TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

HEATER VOLTAGE	2.9	2.9	2.9	VOLTS
HEATER CURRENT	0.45±6%	0.45±6%	0.45±6%	AMPS.
PLATE VOLTAGE	250	250	250	VOLTS
GRID #2 VOLTAGE	140	140	140	VOLTS
GRID #1 VOLTAGE	-1.0	-1.0	-1.0	VOLTS
PLATE RESISTANCE (APPROX.)	0.15	0.15	0.15	MEGOHM
TRANSCONDUCTANCE	8000	8000	8000	μMHO
PLATE CURRENT	10	10	10	MA.
GRID #2 CURRENT	0.95	0.95	0.95	MA.
GRID #1 VOLTAGE FOR GM LESS THAN 100 μMHO	-6	-6	-6	VOLTS

B

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.

\*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.