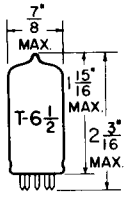
TUNG-SOL

TRIODE-PENTODE

MINIATURE TYPE



GLASS BULB

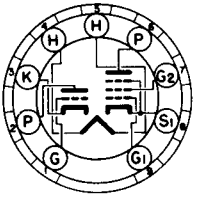
COATED UNIPOTENTIAL CATHODE

HEATER

4.7 VOLTS 0.60 AMP.

AC OR DC

ANY MOUNTING POSITION



BOTTOM VIEW

MINIATURE BUTTON
9 PIN BASE
9FA

THE 5FV8 IS A TRIODE-PENTODE USING THE 9 PIN MINIATURE CONSTRUCTION. IT IS DESIGNED PRIMARILY FOR SERVICE IN TELEVISION RECEIVERS WITH THE TRIODE SERVING AS A VERTICAL DEFLECTION OSCILLATOR, AND THE PENTODE SERVING AS A GENERAL PURPOSE OR *IF* AMPLIFIER. DESIGN OF THE TUBE IS SUCH THAT HIGH VALUES OF INTERELEMENT LEAKAGE RESISTANCE ARE MAINTAINED THROUGHOUT LIFE. EXCEPT FOR HEATER RATINGS, THE 5FV8 IS IDENTICAL TO THE 6FV8.

DIRECT INTERELECTRODE CAPACITANCES

	WITH[A] SHIELD	WITHOUT SHIELD	
TRIODE SECTION:			
GRID TO PLATE	1.8	1.8	μμf
INPUT: G TO (H+TK+I.S.)	2.8	2.8	μμf
OUTPUT: P TO (H+TK+I.S.)	2.0	1.5	μμf
PENTODE SECTION:			
GRID #1 TO PLATE (MAX.)	.010	.020	μμf
INPUT: G1 TO (H+PK+G2+G3+I.S.)	5.0	5.0	μμf
OUTPUT: P TO (H+PK+G2+G3+I.S.)	3.0	2.0	μμf
PENTODE PLATE TO TRIODE PLATE((MAX.)	0.03	0.15	μμf

RATINGS

INTERPRETED ACCORDING TO DESIGN MAXIMUM SYSTEM

	TRIODE[B] SECTION VER-DEF OSC.	PENTODE SECTION CLASS A AMPLIFIER	
HEATER VOLTAGE	4.7	4.7	VOLTS
MAXIMUM PLATE VOLTAGE	330	330	VOLTS
MAXIMUM GRID #2 SUPPLY VOLTAGE		330	VOLTS
MAXIMUM GRID #2 VOLTAGE	SEE RATING CHART		
MAXIMUM POSITIVE GRID #1 VOLTAGE		0	VOLTS
MAXIMUM PEAK NEGATIVE PULSE GRID VOLTAGE	250		VOLTS
MAXIMUM AVERAGE CATHODE CURRENT	20		MA.
MAXIMUM PEAK CATHODE CURRENT	70		MA.
MAXIMUM PLATE DISSIPATION	2.0	2.3	WATTS
MAXIMUM GRID #2 DISSIPATION		0.55	WATT
MAXIMUM HEATER-CATHODE VOLTAGE:			
HEATER NEGATIVE WITH RESPECT TO CATHODE			
TOTAL DC AND PEAK	200	200	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE			
DC	100	100	VOLTS
TOTAL DC AND PEAK	200	200	VOLTS
MAXIMUM GRID #1 CIRCUIT RESISTANCE			
FIXED BIAS		0.25	MEGOHM
SELF BIAS	3.0[C]	1.0	MEGOHMS
HEATER WARM-UP TIME (APPROX.)*	11.0		SECONDS

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CONTINUED FROM PRECEDING PAGE

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

	TRIODE SECTION	PENTODE SECTION	
HEATER VOLTAGE	4.7	4.7	VOLTS
HEATER CURRENT	0.60	0.60	AMP.
PLATE VOLTAGE	125	125	VOLTS
GRID #2 VOLTAGE		125	VOLTS
GRID #1 VOLTAGE	-1.0	-1.0	VOLTS
TRANSCONDUCTANCE	8 000	6 500	μMHOS
PLATE CURRENT	14.0	12.0	MA.
GRID #2 CURRENT		4.0	MA.
PLATE RESISTANCE (APPROX.)	5 000	200,000	OHMS
AMPLIFICATION FACTOR	40		
GRID #1 VOLTAGE (APPROX.) FOR I_b = 20 μA.	-9	-9	VOLTS

[A] SHIELD #315 TIED TO PIN #4.

[B] FOR OPERATION IN A 525-LINE, 30-FRAME SYSTEM AS DESCRIBED IN "STANDARDS OF GOOD ENGINEERING PRACTICE FOR TELEVISION BROADCAST STATIONS: FEDERAL COMMUNICATIONS COMMISSION", THE DUTY CYCLE OF THE VOLTAGE PULSE MUST NOT EXCEED 15% OF ONE SCANNING CYCLE.

[C] IN STAGES OPERATING WITH GRID LEAK BIAS, AN ADEQUATE CATHODE BIAS RESISTOR OR OTHER SUITABLE MEANS IS REQUIRED TO PROTECT THE TUBE IN THE ABSENCE OF EXCITATION.

[*] 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.

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 THD 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.