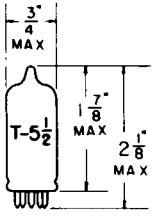
TUNG-SOL

TRIODE

MINIATURE TYPE



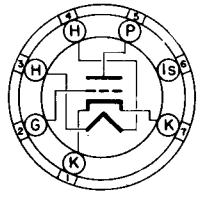
GLASS BULB
S-2

COATED UNIPOTENTIAL CATHODE

HEATER

2.8[A] VOLTS 0.45[B] AMP.

ANY MOUNTING POSITION



BOTTOM VIEW

MINIATURE BUTTON
7 PIN BASE
7FP

THE 3FQ5 IS A SEMI-REMOTE CUTOFF TRIODE IN THE 7 PIN MINIATURE CONSTRUCTION. IT IS DESIGNED FOR USE AS A VHF AND RF AMPLIFIER AT A B+ OF 135 VOLTS. EXCEPT FOR HEATER RATINGS AND HEATER WARM-UP TIME, THE 3FQ5 IS IDENTICAL TO THE 2FQ5 AND THE 6FQ5.

DIRECT INTERELECTRODE CAPACITANCES
WITH EXTERNAL SHIELD

GRID TO PLATE	0.4	μμf
INPUT: G TO (H+K+I.S.+E.S.)	4.8	μμf
OUTPUT: P TO (H+K+I.S.+E.S.)	4.0	μμf
HEATER TO CATHODE	2.8	μμf

RATINGS
INTERPRETED ACCORDING TO DESIGN MAXIMUM SYSTEM

HEATER VOLTAGE[D]	2.8[A]	VOLTS
MAXIMUM PLATE VOLTAGE	200	VOLTS
MAXIMUM PLATE DISSIPATION	2.5	WATTS
MAXIMUM DC CATHODE CURRENT	22	MA.
MAXIMUM NEGATIVE GRID VOLTAGE	50	VOLTS
MAXIMUM GRID CIRCUIT RESISTANCE (SELF BIAS)	1.0	MEGOHMS
MAXIMUM HEATER-CATHODE VOLTAGE:		
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 (APPROX.)*	11.0	SECONDS

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS
CLASS A_1 AMPLIFIER

HEATER VOLTAGE[D]	2.8[A]	VOLTS
HEATER CURRENT[D]	0.45±.03	AMP.
PLATE VOLTAGE	135	VOLTS
GRID VOLTAGE	-1.2	VOLTS
PLATE CURRENT	11.5	MA.
TRANSCONDUCTANCE	11 000	μMHOS
AMPLIFICATION FACTOR	60	
PLATE RESISTANCE (APPROX.)	5 500	OHMS
Ec FOR Ib = 100 μA (APPROX.)	-5	VOLTS

CONTINUED ON FOLLOWING PAGE

TUNG-SOL

CONTINUED FROM PRECEDING PAGE

NOTES

[A] THE BOGEY VALUE OF VOLTAGE/CURRENT PRECEDING THIS NOTE IS OBTAINED WHEN OPERATING THE HEATER WITH THE SPECIFIED VALUE OF CURRENT/VOLTAGE.

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

[C] 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.

[D] HEATER VOLTAGE SUPPLY VARIATIONS SHALL BE RESTRICTED TO MAINTAIN HEATER VOLTAGE/CURRENT WITHIN THE SPECIFIED TOLERANCE.

*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.