TUNG-SOL

TRIODE

MINIATURE TYPE

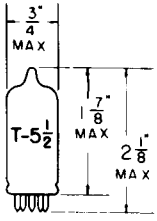
COATED UNIPOTENTIAL CATHODE

HEATER

3.0 VOLTS 0.45±6% AMP.

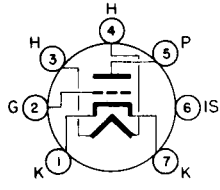
AC OR DC

ANY MOUNTING POSITION



GLASS BULB

SMALL BUTTON MINIATURE
7 PIN BASE E7-1
OUTLINE DRAWING
JEDEC 5-2



BOTTOM VIEW

BASING DIAGRAM
JEDEC 7FP

THE 3FH5 IS A NEUTRODE TRIODE TUNER IN THE 7 PIN MINIATURE CONSTRUCTION. IT IS DESIGNED FOR USE IN GROUNDED CATHODE RF AMPLIFIERS, WITH THE NEUTRODE CONSTRUCTION PROVIDING A LOWER GRID TO PLATE CAPACITANCE WITH CONSEQUENT EASE OF NEUTRALIZATION. THE CONVENTIONAL GRID RESULTS IN LOW INPUT CAPACITANCE. EXCEPT FOR HEATER RATINGS AND HEATER WARM-UP TIME, THE 3FH5 IS IDENTICAL TO THE 2FH5 AND 6FH5.

DIRECT INTERELECTRODE CAPACITANCES

	WITH[A] SHIELD	WITHOUT SHIELD	
GRID TO PLATE: G TO P (MAX.) (BOGEY)	→ 0.52	→ 0.52	pf
INPUT: G TO (H+K+I.S.)	3.2	3.2	pf
OUTPUT: P TO (H+K+I.S.)	4.0	3.2	pf

[A] WITH EXTERNAL SHIELD #316 CONNECTED TO PIN #1.

RATINGS

INTERPRETED ACCORDING TO DESIGN MAXIMUM SYSTEM

HEATER VOLTAGE	3.0	VOLTS
MAXIMUM PLATE VOLTAGE	150	VOLTS
MAXIMUM GRID VOLTAGE (POSITIVE)	0	VOLT
MAXIMUM PLATE DISSIPATION	2.2	WATTS
MAXIMUM DC CATHODE CURRENT	22	MA.
MAXIMUM GRID CIRCUIT RESISTANCE	1.0	MEGOHM
→ MAXIMUM DC HEATER-CATHODE VOLTAGE (TOTAL DC AND PEAK)		
HEATER NEGATIVE WITH RESPECT TO CATHODE	100	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE	100	VOLTS
HEATER WARM-UP TIME (APPROX.)*	11.0	SECONDS

→ INDICATES A CHANGE.

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TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CLASS A AMPLI FIER

HEATER VOLTAGE	3.0	VOLTS
HEATER CURRENT	0.45±6%	AMP.
PLATE VOLTAGE	135	VOLTS
GRID VOLTAGE	-1.0	VOLT
PLATE RESISTANCE (APPROX.)	5600	OHMS
TRANSCONDUCTANCE	9000	μMHOS
AMPLIFICATION FACTOR	50	
PLATE CURRENT	11	MA.
GRID VOLTAGE (APPROX.) FOR 100 μA PLATE CURRENT	-5.5	VOLTS

* HEATER WARM-UP TIME IS DEFINED AS THE TIME REQUIRED FOR THE VOLTAGE ACROSS THE HEATER TO REACH 80% OF ITS RATED VALUE AFTER APPLYING FOUR TIMES THE RATED HEATER VOLTAGE TO A CIRCUIT CONSISTING OF THE TUBE HEATER IN SERIES WITH A RESISTANCE EQUAL TO THREE TIMES THE RATED HEATER VOLTAGE DIVIDED BY THE RATED HEATER CURRENT.

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.