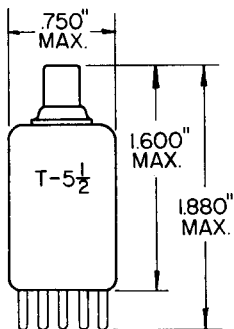


## TUNG-SOL

## ELECTROMETER TRODE

## MINIATURE TYPE



## GLASS BULB

7 PIN MINIATURE  
OUTLINE DRAWING  
JEDEC E7-1

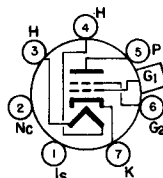
COATED UNIPOTENTIAL CATHODE

HEATER

2.5 VOLTS .200 AMPS.

AC OR DC

ANY MOUNTING POSITION



## BOTTOM VIEW

BASING DIAGRAM  
JEDEC 7G

THE 7851 IS A SCREEN GRID TRODE ELECTROMETER TUBE. ITS HIGH TRIODE MU, WHICH DISTINGUISHES IT FROM CONVENTIONAL ELECTROMETER TUBES, MAKES IT PARTICULARLY USEFUL AS AN EXTREMELY HIGH GAIN CURRENT AMPLIFIER IN APPLICATIONS WHEREIN THE INPUT SIGNAL IS IN THE ORDER OF MICRO-MICRO-AMPERES. CAREFUL SHIELDING FROM LIGHT AS WELL AS ELECTROMAGNETIC FIELDS MUST BE OBSERVED, AS WITH ALL ELECTROMETER TUBES.

## DIRECT INTERELECTRIC CAPACITANCES

(APPROX.)

WITHOUT EXTERNAL SHIELD

GRID TO PLATE: G <sub>1</sub> TO P	0.19	pf
INPUT: G <sub>1</sub> TO (H+K+G <sub>2</sub> ,S)	2.6	pf
OUTPUT: P TO (H+K+G <sub>2</sub> ,S)	1.8	pf

## RATINGS

INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM<sup>A</sup>

HEATER VOLTAGE	2.5	VOLTS
MAXIMUM PLATE VOLTAGE	12	VOLTS
MAXIMUM GRID #2 VOLTAGE	12	VOLTS
MAXIMUM NEGATIVE GRID #1 VOLTAGE	-12	VOLTS
MAXIMUM POSITIVE GRID #1 VOLTAGE	0	VOLTS
MAXIMUM GRID #1 CURRENT - (SEE BELOW)		
MAXIMUM HEATER-CATHODE VOLTAGE	±16	VOLTS

## TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

PLATE SUPPLY VOLTAGE	11.0	VOLTS
GRID #2 VOLTAGE	11.0	VOLTS
GRID #1 VOLTAGE APPLIED	-2.2	VOLTS
PLATE CURRENT	16	μAMPS
TRANSCONDUCTANCE	40	μMHOS
PLATE RESISTANCE - APPROX.	1.7	MEGOMHS
TRIODE AMPLIFICATION FACTOR	5	
GRID CURRENT - MAXIMUM	10 x 10 <sup>-13</sup>	AMPS.

<sup>A</sup> REFER TO EIA STANDARD RS-239.

WITH HIGH INPUT IMPEDANCES, CHARACTERISTICS VARY GREATLY WITH HEATER VOLTAGE; THE DEGREE OF STABILITY OBTAINED DEPENDS LARGELY UPON THE DEGREE OF REGULATION OF HEATER VOLTAGE OR CURRENT.

