



# T E C H N I C A L D A T A

## Electronic Tubes

from JEDEC release #3406, Sept. 4, 1961

### 8082

### TRIODE

The 8082 is a high- $\mu$  triode of ceramic-and-metal planar construction primarily intended for use as an oscillator in the ultra-high-frequency range.

#### GENERAL

#### Electrical

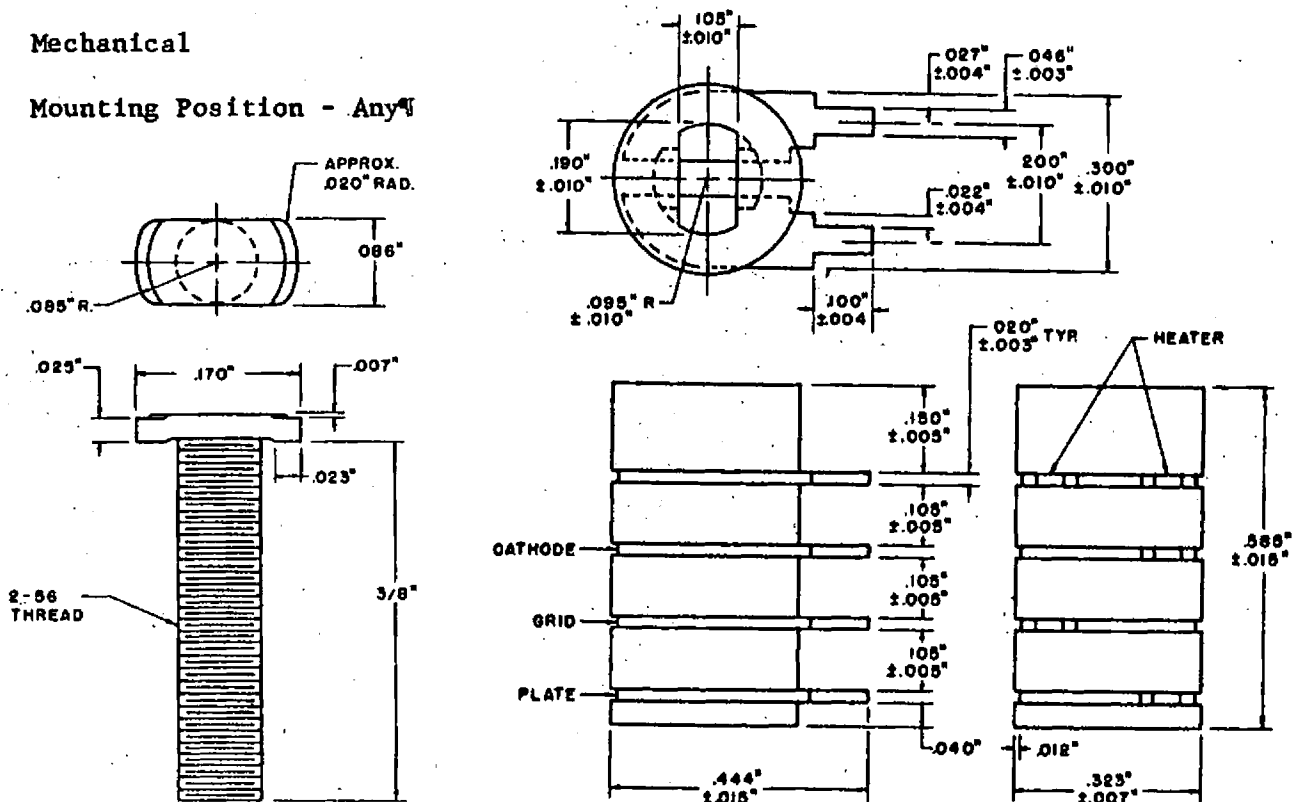
Cathode - Coated Unipotential

#### Heater Characteristics and Ratings

Heater Voltage, AC or DC+	6.3±0.3	Volts
Heater Current‡	0.24	Amperes
<b>Direct Interelectrode Capacitances§</b>		
Grid to Plate: (g to p)	1.3	pf
Grid to Heater and Cathode: g to (h + k)	1.8	pf
Plate to Heater and Cathode: p to (h + k)	0.032	pf
Heater to Cathode: (h to k)	1.5	pf

#### Mechanical

Mounting Position - Any¶



ETR-2186

MAXIMUM RATINGS

## Absolute-Maximum Values

Plate Voltage	250	Volts
Positive DC Grid Voltage	0	Volts
Negative Grid Voltage	50	Volts
Peak Negative Grid Voltage	50	Volts
Plate Dissipation	1.0	Watt
DC Grid Current	2.2	Milliamperes
DC Cathode Current	11	Milliamperes
Peak Cathode Current	40	Milliamperes
Heater-Cathode Voltage		
Heater Positive with Respect to Cathode	50	Volts
Heater Negative with Respect to Cathode	50	Volts
Grid-Circuit Resistance	10000	Ohms
Envelope Temperature at Hottest Point	250	C

Absolute-Maximum ratings are limiting values of operating and environmental conditions applicable to any electron tube of a specified type as defined by its published data and should not be exceeded under the worst probable conditions.

The tube manufacturer chooses these values to provide acceptable serviceability of the tube, making no allowance for equipment variations, environmental variations, and the effects of changes in operating conditions due to variations in the characteristics of the tube under consideration and of all other electron devices in the equipment.

The equipment manufacturer should design so that initially and throughout life no absolute-maximum value for the intended service is exceeded with any tube under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variation, signal variation, environmental conditions, and variations in the characteristics of the tube under consideration and of all other electron devices in the equipment.

CHARACTERISTICS AND TYPICAL OPERATION

## Average Characteristics

Plate Voltage	100	150	Volts
Grid Voltage	0	---	Volts
Cathode-Bias Resistor	---	82	Ohms
Amplification Factor	---	90	
Transconductance	11500	10500	Micromhos
Plate Current	9.0	7.5	Milliamperes

## UHF Oscillator Service

Plate Voltage	150	Volts
Grid Resistor	7000	Ohms
Plate Current	4.0	Milliamperes
Frequency	450	Megacycles
Grid Current	0.5	Milliamperes
Power Output, approximate	100	Milliwatts

- + The equipment designer should design the equipment so that heater voltage is centered at the specified bogey value, with heater supply variations restricted to maintain heater voltage within the specified tolerance.
- # Heater current of a bogey tube at  $E_f = 6.3$  volts.
- § Without external shield.
- ¶ One method of mounting the 8082 is to use a stainless-steel "T" bolt (see drawing) to attach the mounting base of the tube to a chassis or circuit board. The "T" bolt should be inserted in the slot in the base of the tube, turned 90 degrees, and attached to the chassis or circuit board with a 2-56 nut and lock washer. Torque used to tighten the nut should not exceed 3 inch-pounds.
- # Operation below the rated maximum envelope temperature is recommended for applications requiring the longest possible tube life.

8/18/61 (E)

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