



6082

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# LOW-MU TWIN POWER TRIODE

## GENERAL DATA

Heater, for Unipotential Cathodes:

|                   |            |          |       |
|-------------------|------------|----------|-------|
| Voltage . . . . . | 26.5 ± 10% | ac or dc | volts |
| Current . . . . . | 0.6        |          | amp   |

Direct Interelectrode Capacitances (Approx.):

(Each Unit, without external shield)

|                         |     |    |
|-------------------------|-----|----|
| Grid to Plate . . . . . | 8   | μf |
| Input . . . . .         | 6   | μf |
| Output . . . . .        | 2.2 | μf |

Heater to Cathode:

|  |     |    |
|--|-----|----|
| Triode Unit No.1 . . . . .                         | 13  | μf |
| Triode Unit No.2 . . . . .                         | 13  | μf |
| Grid of Unit No.1 to Grid of Unit No.2 . . . . .   | 0.5 | μf |
| Plate of Unit No.1 to Plate of Unit No.2 . . . . . | 2   | μf |

Characteristics, Amplifier Class A<sub>1</sub> (Each Unit):

|                                 |      |       |
|---------------------------------|------|-------|
| Plate-Supply Voltage . . . . .  | 135  | volts |
| Cathode-Bias Resistor . . . . . | 250  | ohms  |
| Amplification Factor . . . . .  | 2    |       |
| Plate Resistance . . . . .      | 280  | ohms  |
| Transconductance . . . . .      | 7000 | μmhos |
| Plate Current . . . . .         | 125  | ma    |

## Mechanical:

|                                  |  |
|----------------------------------|--|
| Mounting Position . . . . .      | Any  |
| Maximum Overall Length . . . . . | 4-1/16" ←  |
| Maximum Seated Length . . . . .  | 3-1/2" ←   |
| Maximum Diameter . . . . .       | 1-23/32" ←   |
| Bulb . . . . .                   | T-12   |
| Base . . . . .                   | Large-Wafer Octal 8-Pin w/th Sleeve and External Barriers (JETEC No.88-98) ← |

Basing Designation for BOTTOM VIEW . . . . . 8BD

|                            |  |                            |
|----------------------------|--|----------------------------|
| Pin 1-Grid of Unit No.2    |  | Pin 5-Plate Unit No.1      |
| Pin 2-Plate of Unit No.2   |  | Pin 6-Cathode of Unit No.1 |
| Pin 3-Cathode of Unit No.2 |  | Pin 7-Heater               |
| Pin 4-Grid of Unit No.1    |  | Pin 8-Heater               |

## DC AMPLIFIER

Values are for Each Unit

Maximum Ratings, Absolute Values:

|   |          |       |
|---|----------|-------|
| PLATE VOLTAGE . . . . .                           | 250 max. | volts |
| PLATE CURRENT . . . . .                           | 125 max. | ma    |
| PLATE DISSIPATION . . . . .                       | 13 max.  | watts |
| PEAK HEATER-CATHODE VOLTAGE:                      |          |       |
| Heater negative with respect to cathode . . . . . | 300 max. | volts |
| Heater positive with respect to cathode . . . . . | 300 max. | volts |

← Indicates a change

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## LOW-MU TWIN POWER TRIODE

BULB TEMPERATURE<sup>⊙</sup> . . . . . 200 max. °C

### Maximum Circuit Values:

Grid-Circuit Resistance:

For cathode-bias operation . . . . . 1.0 max. megohm

For fixed-bias operation<sup>⊠</sup> . . . . . 0.1 max. megohm

For combined fixed- and cathode-bias operation<sup>★</sup> . . . . . 0.1 max. megohm

### CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN

|  | Note | Min. | Max. |       |
|--|------|------|------|-------|
| Heater Current . . . . .                         | 1    | 0.55 | 0.65 | amp   |
| Amplification Factor<br>(Each Unit) . . . . .    | 1,2  | 1.4  | 2.6  |       |
| Plate Current (Each Unit) . . . . .              | 1,2  | 100  | 150  | ma    |
| Transconductance<br>(Each Unit) . . . . .        | 1,2  | 5800 | 8200 | μmhos |
| Reverse Grid Current<br>(Units in Parallel). 1,3 |      | -    | 4    | μamp  |

Note 1: With 26.5 volts ac or dc on heater.

Note 2: With plate-supply voltage of 135 volts, and cathode-bias resistor of 250 ohms in each cathode (both triode units operating).

Note 3: With plate-supply voltage of 135 volts, grid resistor of 1 megohm in each grid and cathode-bias resistor of 250 ohms in each cathode (both triode units operating).

⊙ At hottest point on bulb surface.

⊠ When fixed bias is used, the plate circuit should contain a protective resistance to provide a minimum drop of 15 volts dc at the normal operating conditions.

★ When combined fixed- and cathode-bias is used, the cathode-bias portion should have a minimum value of 7.5 volts dc at the normal operating conditions.

### SPECIAL RATINGS & PERFORMANCE DATA

#### Shock Rating:

Impact Acceleration . . . . . 450 max. g  
Tubes are held rigid in four different positions in a Navy Type, High Impact (flyweight) Shock Machine and are subjected to 450 g impact acceleration.

#### Fatigue Rating:

Vibrational Acceleration . . . . . 2.5 max. g  
Tubes are rigidly mounted and subjected in each of three positions to 2.5 g vibrational acceleration at 25 cycles per second for 32 hours.

#### Low-Frequency Vibration Performance:

RMS Output Voltage . . . . . 200 max. mv  
Under the following conditions and with units connected in parallel: Heater voltage of 26.5 volts, plate voltage

→ Indicates a change

AUG. 1, 1953

TUBE DEPARTMENT  
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

DATA 1



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## LOW-MU TWIN POWER TRIODE

supply of 135 volts, dc grid voltage of  $-7$  volts, plate load resistance of 2000 ohms, and vibrational acceleration of 2.5 g at 25 cycles per second.

Outline Drawing and  
Average Plate Characteristics Curve  
for the 6082 are the same as  
shown for Type 6080