



6080

6080

LOW-MU TWIN POWER TRIODE

GENERAL DATA

Heater, for Unipotential Cathodes:

Voltage	6.3 $\pm$ 10%	ac or dc volts
Current	2.5	amp

Direct Interelectrode Capacitances (Approx.):

(Each Unit, without external shield)

Grid to Plate	8	$\mu\mu\text{f}$
Input	6	$\mu\mu\text{f}$
Output	2.2	$\mu\mu\text{f}$

Heater to Cathode:

Triode Unit No.1	6.5	$\mu\mu\text{f}$
Triode Unit No.2	6	$\mu\mu\text{f}$
Grid of Unit No.1 to Grid of Unit No.2	0.5	$\mu\mu\text{f}$
Plate of Unit No.1 to Plate of Unit No.2	2	$\mu\mu\text{f}$

Characteristics, Amplifier Class A₁ (Each Unit):

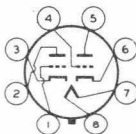
Plate-Supply Voltage	135	volts
Cathode-Bias Resistor	250	ohms
Amplification Factor	2	
Plate Resistance	280	ohms
Transconductance	7000	μmhos
Plate Current	125	ma

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 with Sleeve and External Barriers (JETEC No.88-98)

Basing Designation for BOTTOM VIEW 8BD

Pin 1-Grid of
Unit No.2
Pin 2-Plate of
Unit No.2
Pin 3-Cathode of
Unit No.2
Pin 4-Grid of
Unit No.1



Pin 5-Plate of
Unit No.1
Pin 6-Cathode of
Unit No.1
Pin 7-Heater
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

AUG. 1, 1953

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

DATA 1



6080

LOW-MU TWIN POWER TRIODE

BULB TEMPERATURE[⊕] 200 max. °C

Maximum Circuit Values:

Grid-Circuit Resistance:

For cathode-bias operation 1.0 max. megohm
 For fixed-bias operation[⊖] 0.1 max. megohm
 For combined fixed and
 cathode-bias operation[★] 0.1 max. megohm

BOOSTER SCANNING SERVICE

Values are for Each Unit

Maximum Ratings, Absolute Values:

For operation in a 525-line, 30-frame system[▲]

PEAK NEGATIVE-PULSE PLATE VOLTAGE[●] 3000 max. volts
 PEAK NEGATIVE-PULSE GRID VOLTAGE 2300 max. volts
 DC 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
 BULB TEMPERATURE[⊕] 200 max. °C

Maximum Circuit Values (For maximum rated conditions):

Grid-Circuit Resistance:

For cathode-bias operation 1.0 max. megohm
 For fixed-bias operation not recommended

CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN

	Note	Min.	Max.	
Heater Current	1	2.26	2.74	amp
Amplification Factor (Each Unit)	1,2	1.4	2.6	
Plate Current (Each Unit).	1,2	100	150	ma
Transconductance (Each Unit)	1,2	5800	8200	μmhos
Reverse Grid Current (Units in Parallel)	1,3	-	4	μamp

Note 1: With 6.3 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.

★, ▲, ●, ⊕: See next page.

→ Indicates a change

AUG. 1, 1953

TUBE DEPARTMENT

DATA 1

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY



6080

6080

LOW-MU TWIN POWER TRIODE

- ★ 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.
- ▲ As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations", Federal Communications Commission.
- The duration of the voltage pulse must not exceed 15 per cent of one horizontal scanning cycle. In a 525-line, 30-frame system, 15 per cent of one horizontal scanning cycle is 10 microseconds.
- Operation of this tube is not recommended with a damper pulse between heater and cathode.

SPECIAL RATINGS & PERFORMANCE DATA**Shock Rating:**

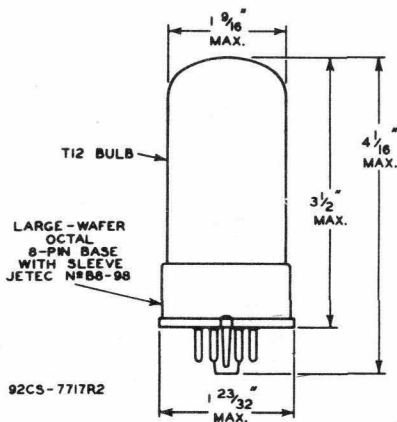
Impact Acceleration 450 max. g
 Tubes are held rigid in four different positions in a Navy Type, High Impact (flyweight) Shock Machine and are subjected to 450 g impact acceleration.

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 6.3 volts, plate voltage 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.



← Indicates a change

AUG. 1, 1953

TUBE DEPARTMENT

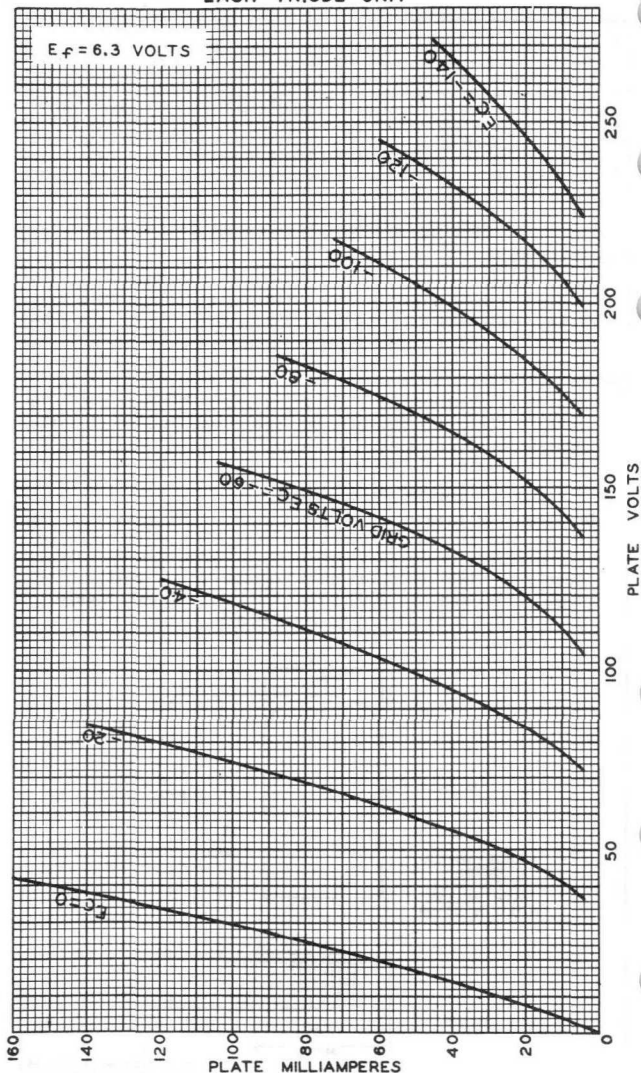
DATA 2

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

6080



6080

AVERAGE PLATE CHARACTERISTICS
EACH TRIODE UNIT

OCT. 19, 1951

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-7695