



6SN7-GTA

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MEDIUM-MU TWIN TRIODE

GENERAL DATA

Electrical:

Heater, for Unipotential Cathodes:

Voltage 6.3 ac or dc volts

Current 0.6 amp

Direct Interelectrode Capacitances (With no external shield):

	Unit No.1	Unit No.2	
Grid to plate	4	3.8	μf
Grid to cathode and heater . .	2.2	2.6	μf
Plate to cathode and heater . .	0.7	0.7	μf

Characteristics, Class A₁ Amplifier (Each Unit):

Plate Voltage	90	250	volts
Grid Voltage	0	-8	volts
Amplification Factor	20	20	volts
Plate Resistance (Approx.) . . .	6700	7700	ohms
Transconductance	3000	2600	μmhos
Plate Current	10	9	ma
Plate Current for grid voltage of -12.5 volts	-	1.3	ma
Grid Voltage (Approx.) for plate current of 10 μamp	-7	-18	volts

Mechanical:

Mounting Position Any

Maximum Overall Length 3-5/16"

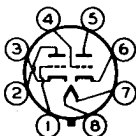
Maximum Seated Length 2-3/4"

Maximum Diameter 1-9/32"

Bulb T-9

Base Short Intermediate-Shell Octal 8-Pin
with External Barriers (JETEC No. 88-58)

Basing Designation for BOTTOM VIEW 8BD

Pin 1 - Grid of
Unit No.2Pin 2 - Plate of
Unit No.2Pin 3 - Cathode of
Unit No.2Pin 4 - Grid of
Unit No.1Pin 5 - Plate of
Unit No.1Pin 6 - Cathode of
Unit No.1

Pin 7 - Heater

Pin 8 - Heater

AMPLIFIER - Class A₁

Values are for Each Unit

Maximum Ratings, Design-Center Values:

PLATE VOLTAGE	450 max.	volts
CATHODE CURRENT	20 max.	ma

JUNE 14, 1954

TUBE DIVISION

TENTATIVE DATA 1

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY



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PLATE DISSIPATION:

Either plate	5	max.	watts
Both plates (Both units operating) . . .	7.5	max.	watts

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode	200	max.	volts
Heater positive with respect to cathode	200 [▲]	max.	volts

Maximum Circuit Values:

Grid-Circuit Resistance:

For fixed-bias operation	1	max.	megohm
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Typical Operation as Resistance-Coupled Amplifier:

See RESISTANCE-COUPLED AMPLIFIER CHART No. 29
at front of this Section

HORIZONTAL DEFLECTION OSCILLATOR

Values are for Each Unit

Maximum Ratings, Design-Center Values:

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

DC PLATE VOLTAGE	450	max.	volts
PEAK NEGATIVE-PULSE GRID VOLTAGE [▲]	600	max.	volts

CATHODE CURRENT:

Peak	300	max.	ma
Average	20	max.	ma

PLATE DISSIPATION:

Either plate	5	max.	watts
Both plates (Both units operating) . . .	7.5	max.	watts

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode	200	max.	volts
Heater positive with respect to cathode	200 [▲]	max.	volts

Maximum Circuit Values:

Grid-Circuit Resistance:

For fixed-bias, grid-resistor bias, or cathode-bias operation	2.2	max.	megohms
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VERTICAL DEFLECTION OSCILLATOR

Values are for Each Unit

Maximum Ratings, Design-Center Values:

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

DC PLATE VOLTAGE	450	max.	volts
PEAK NEGATIVE-PULSE GRID VOLTAGE [▲]	400	max.	volts

CATHODE CURRENT:

Peak	70	max.	ma
Average	20	max.	ma

[▲], [□], [●], [#]: See next page.



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PLATE DISSIPATION:

Either plate	5 max.	watts
Both plates (Both units operating) . . .	7.5 max.	watts

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode	200 max.	volts
Heater positive with respect to cathode	200 [▲] max.	volts

Maximum Circuit Values:

Grid-Circuit Resistance:

For fixed-bias, grid-resistor bias, or cathode-bias operation	2.2 max.	megohms
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VERTICAL DEFLECTION AMPLIFIER

Values are for Each Unit

Maximum Ratings, Design-Center Values Except as Noted:

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

DC PLATE VOLTAGE	450 max.	volts
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PEAK POSITIVE-PULSE PLATE VOLTAGE[#]:

(Absolute Maximum) . . .	1500 [■] max.	volts
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PEAK NEGATIVE-PULSE GRID VOLTAGE	250 max.	volts
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CATHODE CURRENT:

Peak	70 max.	ma
Average	20 max.	ma

PLATE DISSIPATION:

Either plate	5 max.	watts
Both plates (Both units operating) . . .	7.5 max.	watts

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode	200 max.	volts
Heater positive with respect to cathode	200 [▲] max.	volts

Maximum Circuit Values:

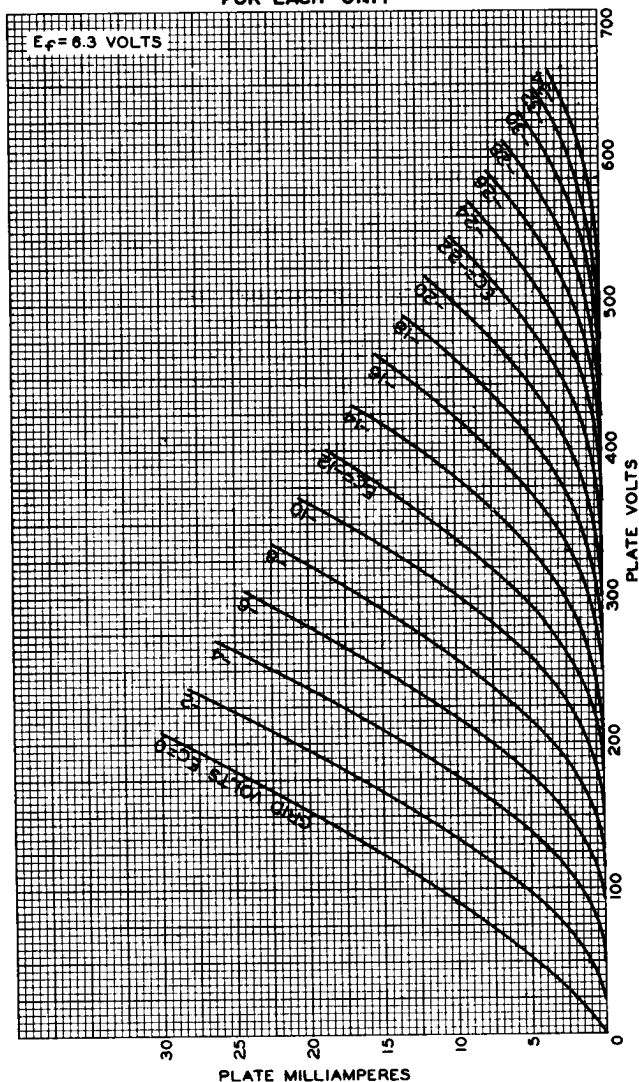
Grid-Circuit Resistance:

For cathode-bias operation	2.2 max.	megohms
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[▲] The dc component must not exceed 100 volts.[□] As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations", Federal Communications Commission.[⬆] This rating is applicable where the duration of the voltage pulse does 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.^{*} This rating is applicable where the duration of the voltage pulse does not exceed 15 per cent of one vertical scanning cycle. In a 525-line, 30-frame system, 15 per cent of one vertical scanning cycle is 2.5 milliseconds.[■] Under no circumstances should this absolute value be exceeded.



AVERAGE PLATE CHARACTERISTICS FOR EACH UNIT



92CM-8322

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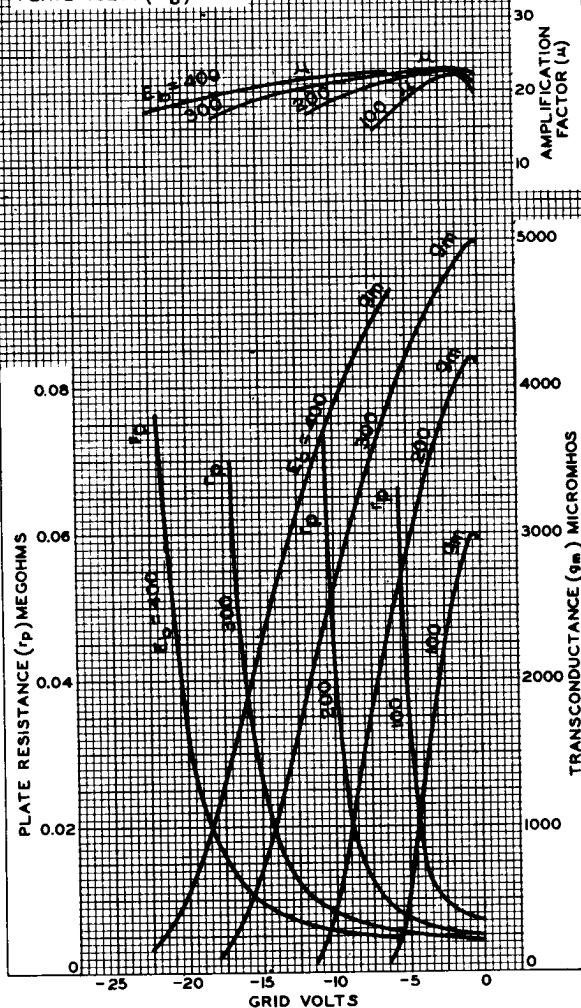


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AVERAGE CHARACTERISTICS
FOR EACH UNIT

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$E_f = 6.3$ VOLTS
PLATE VOLTS (E_b) = 250



OCT. 14, 1953

TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-8122