



12B4-A

12B4-A LOW-MU TRIODE

9-PIN MINIATURE TYPE

*Intended for use in equipment having
series heater-string arrangement*

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

	Series	Parallel	
Voltage.	12.6	6.3	ac or dc volts
Current.	0.300	0.600	amp
Warm-up time (Average)	-	11	sec

For definition of heater warm-up time and method of determining it, see sheet HEATER WARM-UP TIME MEASUREMENT at front of this Section.

Direct Interelectrode Capacitances (Approx.):^o

Grid to plate.	4.8	μf
Grid to cathode and heater	5	μf
Plate to cathode and heater.	1.5	μf

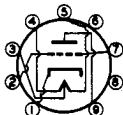
Characteristics, Class A₁ Amplifier:

Plate Voltage.	150	volts
Grid Voltage	-17.5	volts
Amplification Factor	6.5	
Plate Resistance (Approx.)	1030	ohms
Transconductance	6300	μmhos
Plate Current.	34	ma
Grid Voltage (Approx.) for plate current of 200 μamp	-32	volts
Plate Current for grid voltage of -23 volts	9.6	ma

Mechanical:

Mounting Position.	Any
Maximum Overall Length	2-5/8"
Maximum Seated Length.	2-3/8"
Length, Base Seat to Bulb Top (Excluding tip).	2" \pm 3/32"
Maximum Diameter	7/8"
Bulb	T-6-1/2
Base	Small-Button Noval 9-Pin (JETEC No. E9-1)
Basing Designation for BOTTOM VIEW	9AG

- Pin 1 - Cathode
- Pin 2 - Grid
- Pin 3 - Heater
Mid-Tap
- Pin 4 - Heater
- Pin 5 - Heater



- Pin 6 - No Connection
- Pin 7 - Grid
- Pin 8 - No Connection
- Pin 9 - Plate

^o With external shield JETEC No. 315 connected to cathode.

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AMPLIFIER - Class A₁

Maximum Ratings, Design-Center Values:

PLATE VOLTAGE.	550 max.	volts
GRID VOLTAGE:		
Negative bias value.	50 max.	volts
PLATE DISSIPATION.	5.5 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	0.47 max.	megohm
For cathode-bias operation	2.2 max.	megohms

VERTICAL DEFLECTION AMPLIFIER

Maximum Ratings, Design-Center Values Except as Noted:

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

DC PLATE VOLTAGE	550 max.	volts
PEAK POSITIVE-PULSE PLATE VOLTAGE (Absolute maximum) [#]	1000 [■] max.	volts
PEAK NEGATIVE-PULSE GRID VOLTAGE . . .	250 max.	volts
CATHODE CURRENT:		
Peak	105 max.	ma
Average	30 max.	ma
PLATE DISSIPATION.	5.5 max.	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode . .	200 max.	volts
Heater negative 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 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.

MAY 1, 1955

TUBE DIVISION

TENTATIVE DATA

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY