

Beam Power Tube

NOVAR TYPE

For TV Horizontal-Deflection Amplifier Applications

Electrical:

Heater Ratings and Characteristics:

Voltage (AC or DC) 6.3 ± 0.6 volts

Current at heater volts = 6.3 1.200 amp

Peak heater-cathode voltage:

Heater negative with respect to cathode 200 max. volts

Heater positive with respect to cathode 200^a max. voltsDirect Interelectrode Capacitances (Approx.):^b

Grid No.1 to plate 0.26 pf

Input: G1 to (K,G3,G2,H) 15.0 pf

Output: P to (K,G3,G2,H) 6.5 pf

Mechanical:

Operating Position Any

Type of Cathode Coated Unipotential

Maximum Overall Length 3.180"

Maximum Seated Length 2.800"

Diameter 1.438" to 1.562"

Bulb T12

Base Large-Button Novar 9-Pin (JEDEC No.E9-76)

Basing Designation for BOTTOM VIEW 9QU

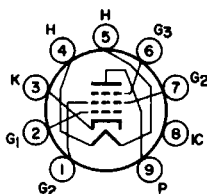
Pin 1—Grid No.2

Pin 2—Grid No.1

Pin 3—Cathode

Pin 4—Heater

Pin 5—Heater



Pin 6—Grid No.3

Pin 7—Grid No.2

Pin 8—Do Not Use

Pin 9—Plate

Characteristics, Class A₁ Amplifier:Triode
Connection^c

Plate Voltage 150 60 250 volts

Grid No.3 — Connected to Cathode
at socket

Grid-No.2 Voltage 150 150 150 volts

Grid-No.1 Voltage -22.5 0 -22.5 volts

Amplification Factor 4.4 — —

Plate Resistance (Approx.) — — 15000 ohms

Transconductance — — 7100 μ mhosPlate Current — 390^d 70 maGrid-No.2 Current — 32^d 2.1 maGrid-No.1 Voltage (Approx.)
for plate ma = 1 — — -42 volts

HORIZONTAL-DEFLECTION AMPLIFIER

Maximum Ratings, Design-Maximum Values:

For operation in a 525-line, 30-frame system^e

DC Plate Supply Voltage.	770 max.	volts
Peak Positive-Pulse Plate Voltage ^f	6500 max.	volts
Peak Negative-Pulse Plate Voltage.	1500 max.	volts
DC Grid-No.3 (Suppressor-Grid) Voltage ^g . .	70 max.	volts
DC Grid-No.2 (Screen-Grid) Voltage	220 max.	volts
DC Grid-No.1 (Control-Grid) Voltage:		
Negative-bias value.	55 max.	volts
Peak Negative-Pulse Grid-No.1 Voltage. . .	330 max.	volts
Cathode Current:		
Peak	550 max.	ma
Average.	175 max.	ma
Grid-No.2 Input.	3.5 max.	watts
Plate Dissipation ^h	17.5 max.	watts
Bulb Temperature (At hottest point on bulb surface)	240 max.	°C

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:

For grid-resistor-bias operation 1 max. megohm

^a The dc component must not exceed 100 volts.

^b Without external shield.

^c With grid No.2 connected to plate at socket.

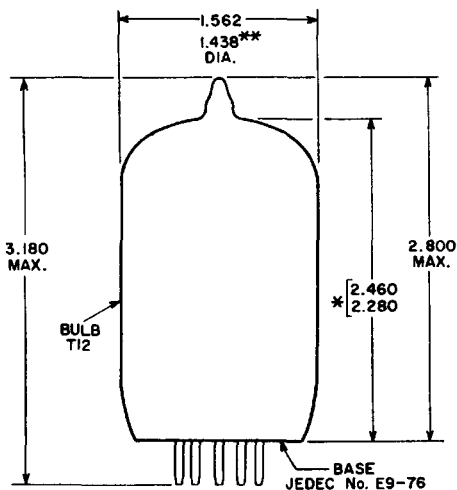
^d This value can be measured by a method involving a recurrent wave form such that the maximum ratings of the tube will not be exceeded.

^e As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations", Federal Communications Commission.

^f 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.

^g A positive voltage may be applied to grid No.3 to reduce interference from "snivets" which may occur in television receivers. A typical value for this voltage is 30 volts.

^h An adequate bias resistor or other means is required to protect the tube in the absence of excitation.



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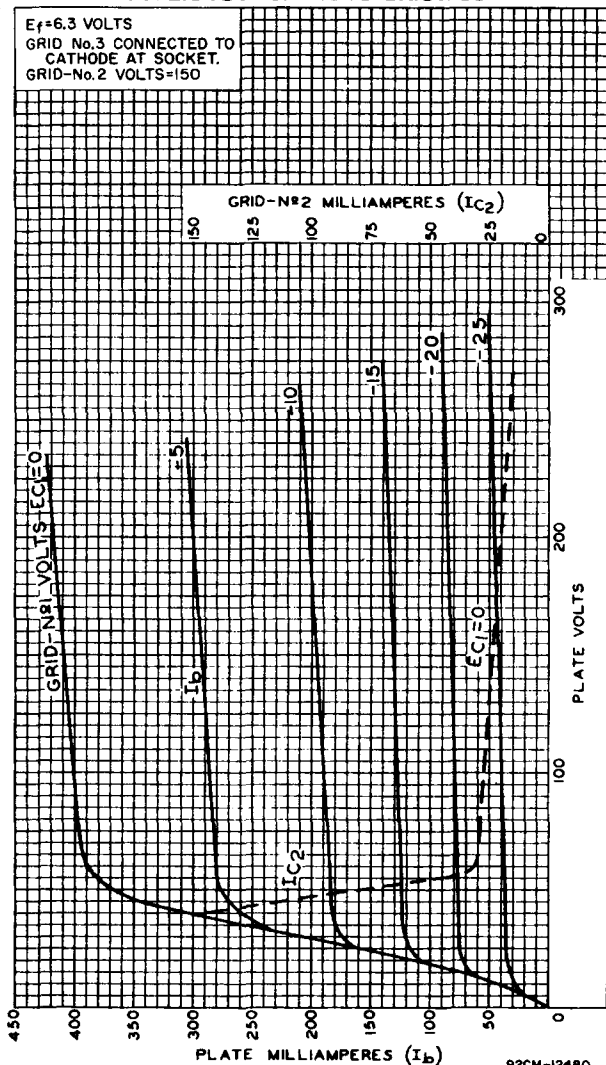
- * Measured from base seat to bulb-top line as determined by a ring gauge of 0.600" inside diameter.
- ** The minimum applies in the zone starting 0.375" from the base seat.

AVERAGE CHARACTERISTICS

$E_f = 6.3$ VOLTS

GRID No.3 CONNECTED TO CATHODE AT SOCKET.

GRID-No.2 VOLTS=150



92CM-12480