

Beam Power Tube

NOVAR TYPE

SEPARATE GRID-NO.3 BASE-PIN TERMINAL FOR "SNIVETS" CONTROL^a

For Horizontal-Deflection-Amplifier Service
in Low-B+ Black-and-White TV Receivers

Electrical:

Heater Characteristics and Ratings:

Voltage (AC or DC)	6.3 ± 0.6	volts
Current at heater volts = 6.3	1.600	amp
Peak heater-cathode voltage:		
Heater negative with respect to cathode	200 max.	volts
Heater positive with respect to cathode	200 ^b max.	volts

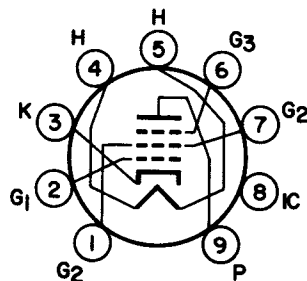
Direct Interelectrode Capacitances (Approx.)^c

Grid No.1 to plate	0.7	pf
Input: G1 to (K,G3,G2,H)	22.0	pf
Output: P to (K,G3,G2,H)	9.0	pf

Mechanical:

Operating Position	Any
Type of Cathode	Coated Unipotential
Maximum Overall Length	3.130"
Seated Length	2.500" to 2.750"
Diameter	1.438" to 1.562"
Dimensional Outline	See General Section
Bulb	T12
Base	Large-Button Novar 9-Pin with Exhaust Tip (JEDEC No.E9-88)
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 ^d	Pentode Connection	
Plate Voltage	125	50 130	volts
Grid No.3	Connected to	cathode at	socket
Grid-No.2 Voltage	-	125	125 volts
Grid-No.1 Voltage	-20	0	-20 volts
Amplification Factor	4.1	-	-
Plate Resistance (Approx.)	-	-	12000 ohms
Transconductance	-	-	10000 μ mhos
Plate Current	-	525 ^e	80 ma
Grid-No.2 Current	-	32 ^e	2.5 ma
Grid-No.1 Voltage (Approx.) for plate ma = 1	-	-	-40 volts



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HORIZONTAL-DEFLECTION AMPLIFIER

Maximum Ratings, Design-Maximum Values:

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

DC Plate Supply Voltage.	770 max.	volts
Peak-Positive-Pulse Plate Voltage ^g . . .	6500 max.	volts
Peak Negative-Pulse Plate Voltage. . . .	1500 max.	volts
DC Grid-No.3 (Suppressor-Grid) Voltage ^a .	75 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	950 max.	ma
Average.	275 max.	ma
Grid-No.2 Input.	3.5 max.	watts
Plate Dissipation ^h	17 max.	watts
Bulb Temperature (At hottest point on bulb surface)	220 max.	°C

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:

For grid-No.1-resistor-bias

operation. 2.2 max. megohms

^a 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.

^b The dc component must not exceed 100 volts.

^c Without external shield.

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

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

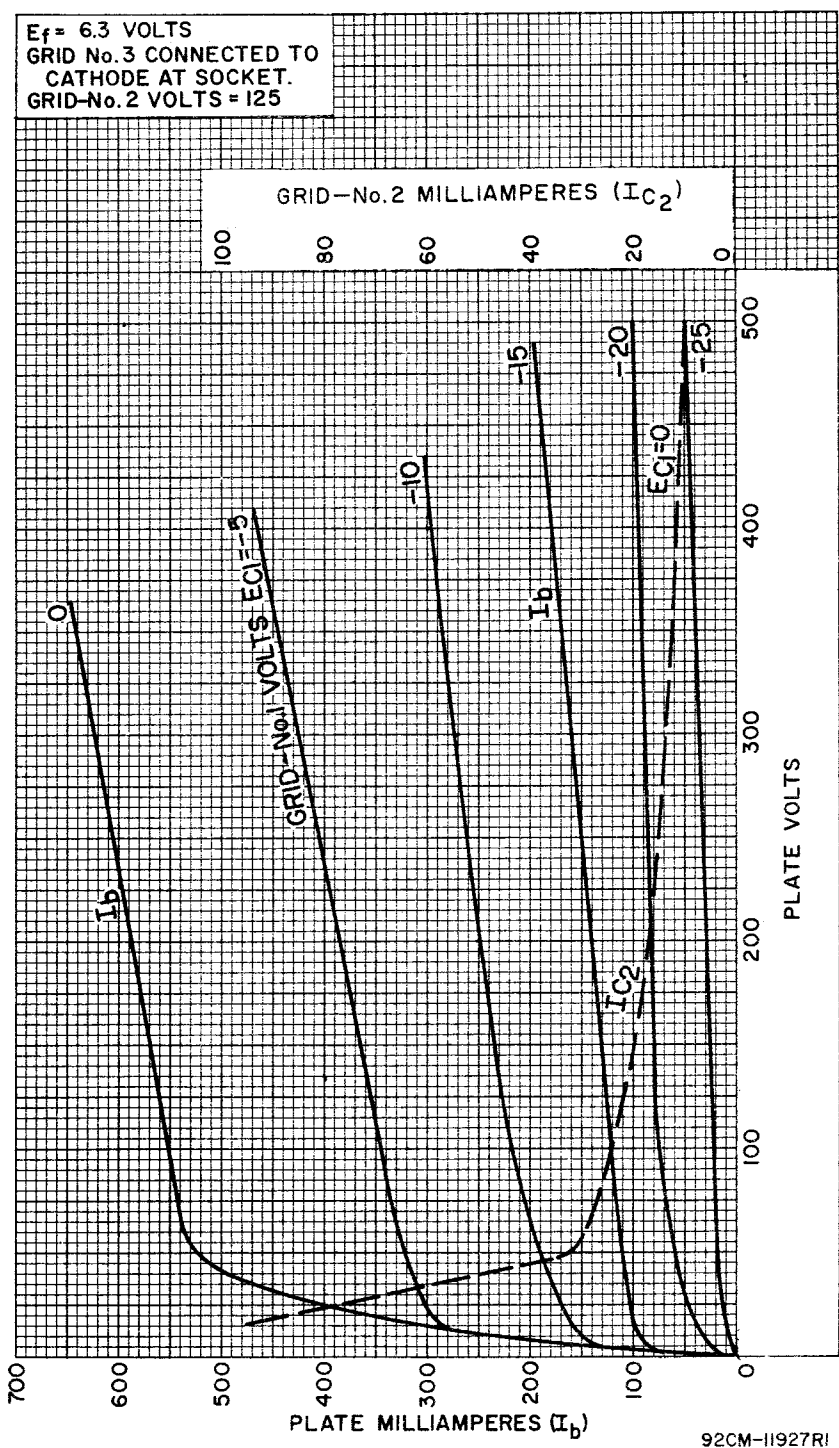
^f As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.

^g 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.

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



AVERAGE CHARACTERISTICS

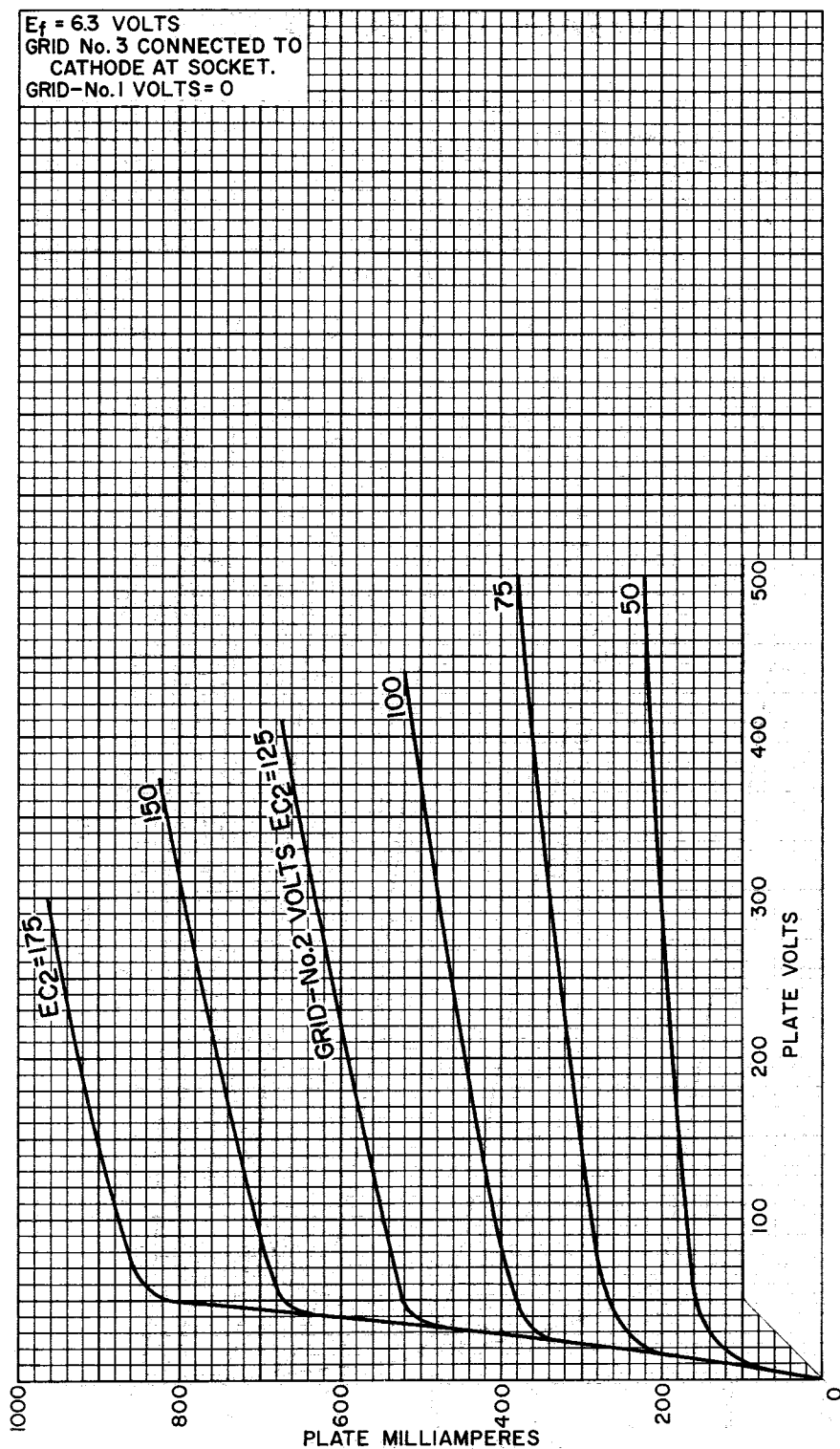


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AVERAGE PLATE CHARACTERISTICS



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