

Beam Power Tube

NOVAR TYPE

*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	V
Current at 6.3 V.	1.600	A
Maximum heater-cathode voltage:		
Heater negative with respect to cathode:		
Peak	200	V
Heater positive with respect to cathode:		
Peak	200	V
DC component	100	V

Direct Interelectrode Capacitances (Approx.)^a

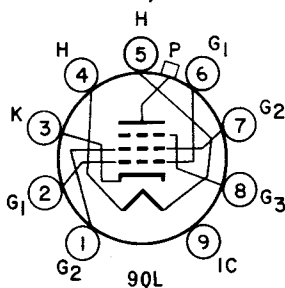
Grid No.1 to plate	1.2	pF
Input: G1 to (K, G3, G2, H)	22.0	pF
Output: P to (K, G3, G2, H)	9.0	pF

MECHANICAL

Operating Position	Any
Type of Cathode	Coated Unipotential
Maximum Overall Length	3.550 in
Seated Length	2.910 to 3.170 in
Diameter	1.438 to 1.562 in
Dimensional Outline	See General Section
Bulb	T12
Cap	Skirted Miniature (JEDEC No.C1-2 or C1-3)
Base	Large-Button Novar 9-Pin with Exhaust Tip (JEDEC No.E9-88)

TERMINAL DIAGRAM (Bottom View)

- Pin 1—Grid No.2
Pin 2—Grid No.1
Pin 3—Cathode
Pin 4—Heater
Pin 5—Heater
Pin 6—Grid No.1
Pin 7—Grid No.2
Pin 8—Grid No.3
Pin 9—Do Not Use
Cap—Plate



CHARACTERISTICS

Peak Positive-Pulse Plate Voltage ^b	6500	-	-	V
Plate Voltage	-	50	130	V
Grid No.3	Connected to cathode at socket			
Grid-No.2 Voltage	125	125	125	V
Grid-No.1 Voltage	-	0	-20	V
Plate Resistance (Approx.)	-	-	12000	Ω



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Transconductance.	-	-	10000	μ mho
Plate Current	-	525 ^c	80	mA
Grid-No.2 Current		32 ^c	2.5	mA
Grid-No.1 Voltage (Approx.)	-125	-	-40	V

For plate mA = 1

Triode Amplification Factor (Triode connection: grid No.2 connected to plate at socket. Plate volts = grid-No.2 volts = 125; grid-No.1 volts = -20)	-	-	4.1	
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HORIZONTAL-DEFLECTION AMPLIFIER

Maximum Ratings, Design-Maximum Values

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

DC Plate Supply Voltage	770	V
Peak Positive-Pulse Plate Voltage ^d	6500	V
Peak Negative-Pulse Plate Voltage	1500	V
DC Grid-No.3 Voltage ^e	100	V
DC Grid-No.2 (Screen-Grid) Voltage.	220	V
Peak Negative-Pulse Grid-No.1 (Control-Grid) Voltage	330	V
Cathode Current		
Peak.	950	mA
Average	275	mA
Grid-No.2 Input	3.5	W
Plate Dissipation ^f	17	W
Bulb Temperature.	240	°C

At hottest point on bulb surface

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance

For grid-resistor-bias operation ^f	0.47	M Ω
For plate-pulsed operation.	10	M Ω
(Horizontal-deflection circuits only)		

^a Without external shield.

^b Under conditions shown in footnote^d.

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

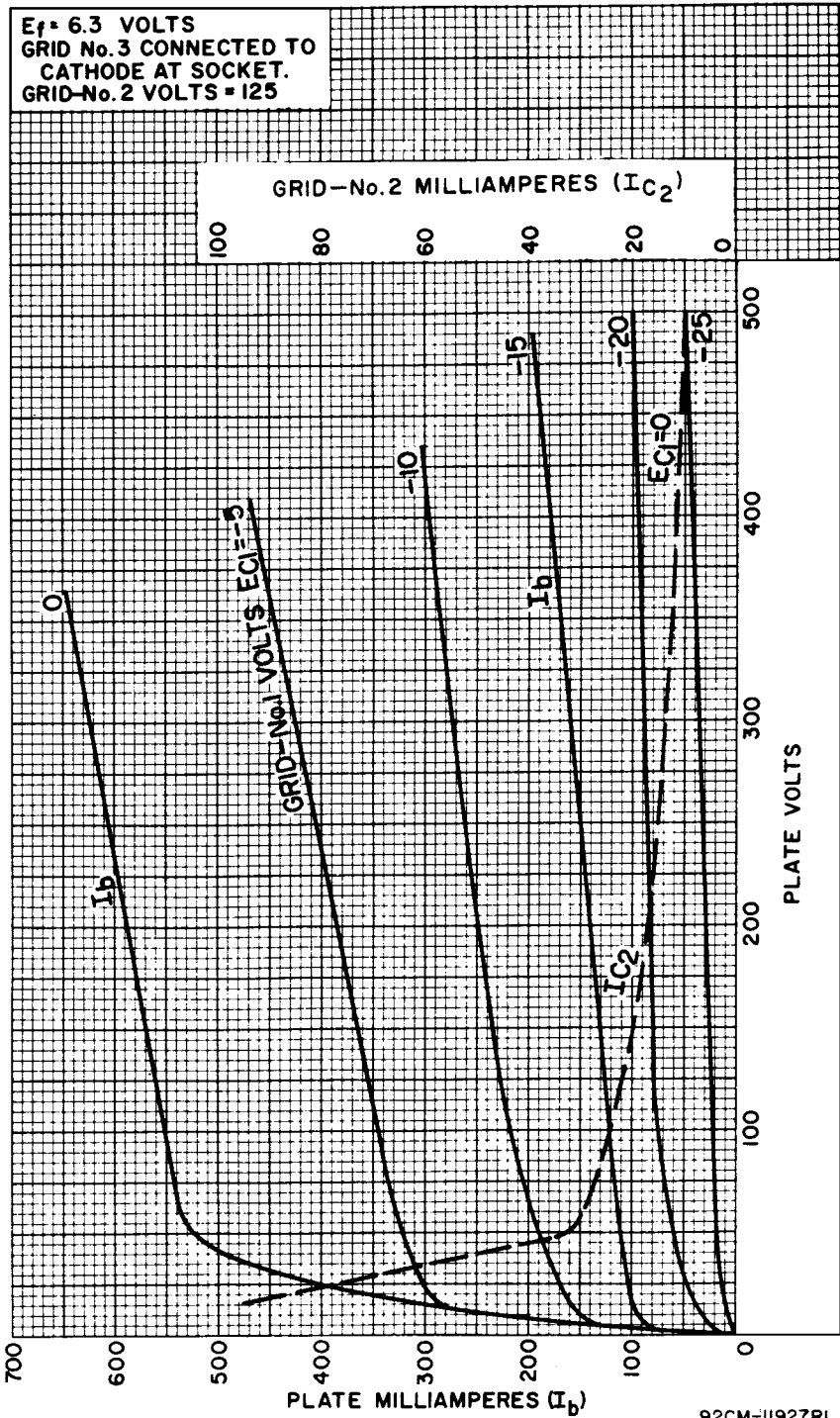
^d This rating is applicable where the duration of the voltage pulse does not exceed 15 percent of one horizontal scanning cycle. In a 525-line, 30-frame system, 15 per cent of one horizontal scanning cycle is 10 microseconds.

^e In horizontal-deflection-amplifier service, a positive voltage may be applied to grid No.3 to reduce interference from "snivets" which may occur in both vhf and uhf television receivers. A typical value for this voltage is 50 volts.

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



Average Characteristics

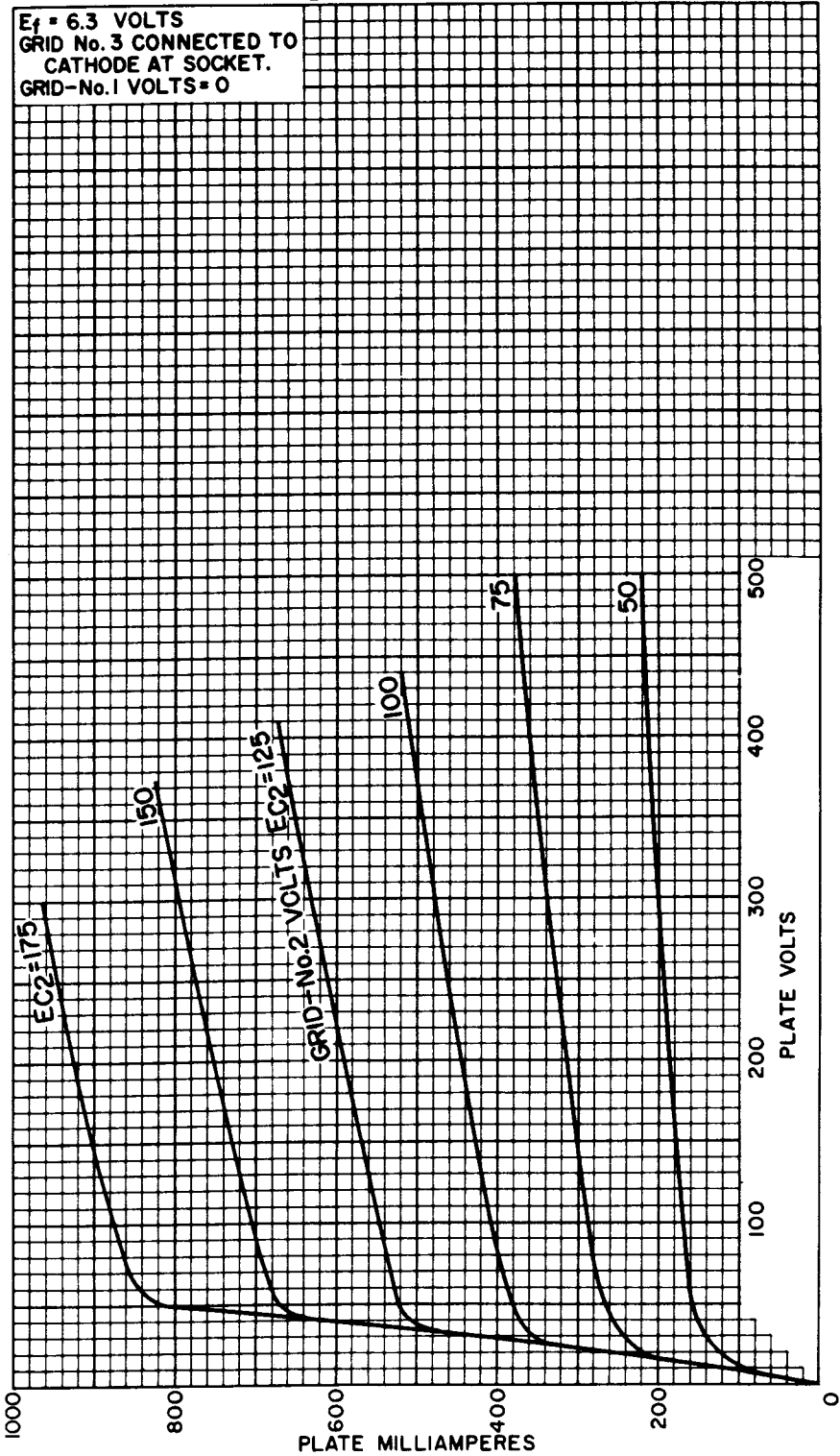


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Average Characteristics



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