



6EM5

BEAM POWER TUBE

9-PIN MINIATURE TYPE

For vertical-deflection-amplifier service in 110° systems

6EM5

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage 6.3 ac or dc volts
Current 0.8 amp

Direct Interelectrode Capacitances:°

Grid No.1 to plate 0.7 max. μf
Grid No.1 to cathode & grid No.3,
grid No.2, and heater. 10 μf
Plate to cathode & grid No.3,
grid No.2, and heater. 5.1 μf

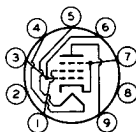
Characteristics, Class A1 Amplifier:

Plate Voltage 60 250 volts
Grid-No.2 (Screen-Grid) Voltage 250 250 volts
Grid-No.1 (Control-Grid) Voltage 0 -18 volts
Mu Factor, Grid No.1 to Grid No.2. - 8.7
Transconductance - 5100 μmhos
Plate Current 180* 35 ma
Grid-No.2 Current 30* 3 ma
Grid-No.1 Voltage (Approx.) for
plate ma. = 1. - -37 volts

Mechanical:

Operating Position Any
Maximum Overall Length 3-1/16"
Maximum Seated Length 2-13/16"
Length, Base Seat to Bulb Top (Excluding tip) 2-7/16" ± 3/32"
Diameter 0.750" to 0.850"
Dimensional Outline. See General Section
Bulb T6-1/2
Base Small-Button Noval 9-Pin (JETEC No.E9-1)
Basing Designation for BOTTOM VIEW 9HN

Pin 1-Grid No.2
Pin 2-No Connec-
tion
Pin 3-Grid No.1
Pin 4-Heater
Pin 5-Heater
Pin 6-Grid No.1



Pin 7-Cathode,
Grid No.3
Pin 8-Internal
Connection-
Do Not Use
Pin 9-Plate

VERTICAL-DEFLECTION AMPLIFIER

Maximum Ratings, Design-Center Values Except as Noted:

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

DC PLATE VOLTAGE 315 max. volts
PEAK POSITIVE-PULSE PLATE VOLTAGE
(Absolute maximum)*. 2200■ max. volts

°, *, □, #, ■: See next page.

6EM5



6EM5

BEAM POWER TUBE

DC GRID-No.2 (SCREEN-GRID) VOLTAGE.	285 max.	volts
PEAK NEGATIVE-PULSE GRID-No.1 (CONTROL-GRID) VOLTAGE.	250 max.	volts
PEAK CATHODE CURRENT.	210 max.	ma
DC CATHODE CURRENT.	60 max.	ma
GRID-No.2 INPUT	1.5 max.	watts
PLATE DISSIPATION	10 max.	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode.	200 max.	volts
Heater positive with respect to cathode.	200 [▲] max.	volts
BULB TEMPERATURE (At hottest point on bulb surface).	250 max.	°C

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:

For fixed-bias operation.	2.2 max.	megohms
For cathode-bias operation.	2.2 max.	megohms

○ Without external shield.

* 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.

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

This rating is applicable when 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.

▲ The dc component must not exceed 100 volts.



6EM5

6EM5

AVERAGE CHARACTERISTICS

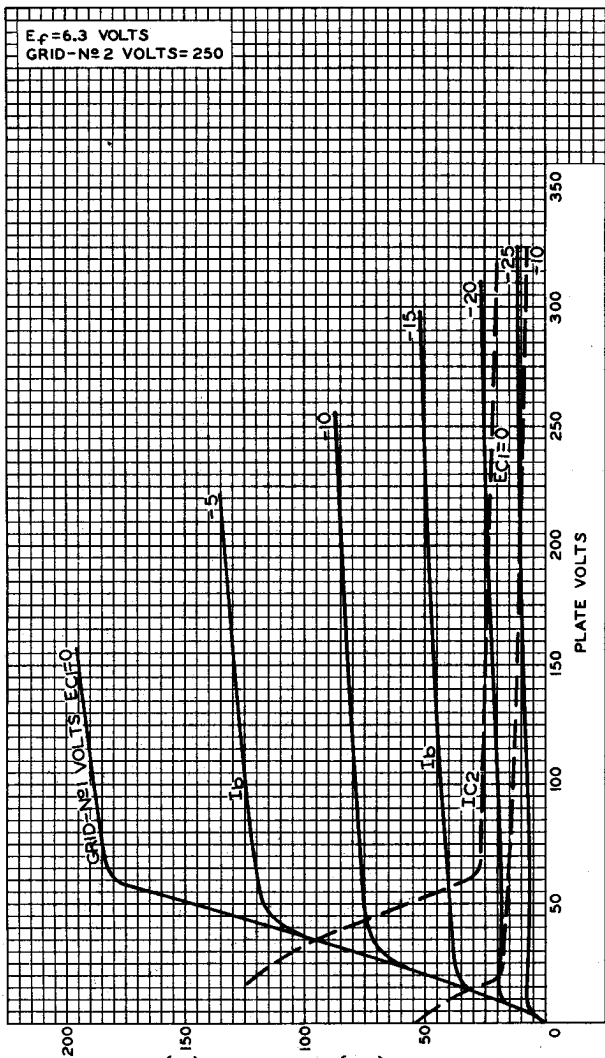


PLATE (I_b) OR GRID-№ 2 (I_{c2}) MILLIAMPERES

ELECTRON TUBE DIVISION

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-9797

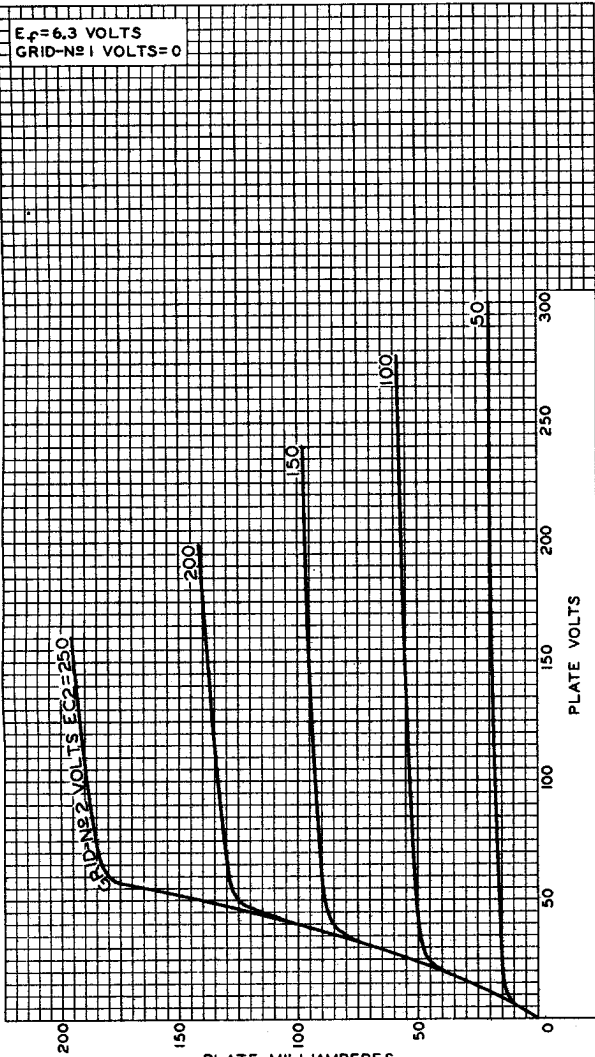
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6EM5

AVERAGE PLATE CHARACTERISTICS

$E_f = 6.3$ VOLTS
GRID-N^o1 VOLTS = 0



200

150

100

50

0

PLATE MILLIAMPERES

ELECTRON TUBE DIVISION

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

PLATE VOLTS

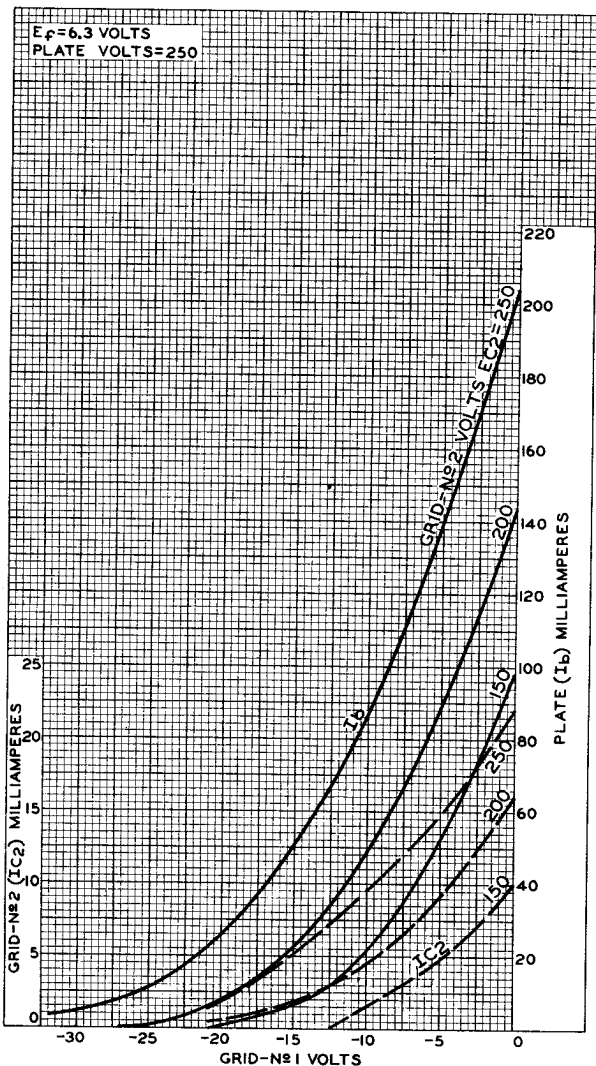
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6EM5

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AVERAGE CHARACTERISTICS



Beam Power Tube

9-PIN MINIATURE TYPE

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage (AC or DC)	6.3	volts
Current	0.8	amp

Direct Interelectrode Capacitances:^a

Grid No.1 to plate	0.7 max.	μf
Grid No.1 to cathode & grid No.3, grid No.2, and heater	10	μf
Plate to cathode & grid No.3, grid No.2, and heater	5.1	μf

Characteristics, Class A₁ Amplifier:

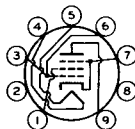
Plate Voltage	60	250	volts
Grid-No.2 Voltage	250	250	volts
Grid-No.1 Voltage	0	-18	volts
Mu Factor, Grid No.1 to Grid No.2	-	8.7	
Plate Resistance (Approx.)	-	0.05	megohm
Transconductance	-	5100	μmhos
Plate Current	180 ^b	40	ma
Grid-No.2 Current	30 ^b	3	ma
Grid-No.1 Voltage (Approx.) for plate ma. = 0.2	-	-37	volts

Mechanical:

Operating Position	Any
Maximum Overall Length	3-1/16"
Maximum Sealed Length	2-13/16"
Length, Base Seat to Bulb Top (Excluding tip)	2-7/16" \pm 3/32"
Diameter	0.750" to 0.850"
Dimensional Outline	See <i>General Section</i>
Bulb	T6-1/2
Base	Small-Button Noval 9-Pin (JEDEC No. E9-1)

Basing Designation for BOTTOM VIEW 9HN

- Pin 1 - Grid No.2
- Pin 2 - No Connection
- Pin 3 - Grid No.1
- Pin 4 - Heater
- Pin 5 - Heater
- Pin 6 - Grid No.1



- Pin 7 - Cathode, Grid No.3
- Pin 8 - Internal Connection—Do Not Use
- Pin 9 - Plate

VERTICAL-DEFLECTION AMPLIFIER

Maximum Ratings, Design-Center Values Except as Noted:

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

DC PLATE VOLTAGE	315 max.	volts
PEAK POSITIVE-PULSE PLATE VOLTAGE (Absolute maximum) ^d	2200 ^e max.	volts

← Indicates a change.



6EM5

DC GRID-No.2 (SCREEN-GRID) VOLTAGE.	285	max.	volts			
PEAK NEGATIVE-PULSE GRID-No.1 (CONTROL-GRID) VOLTAGE.	250	max.	volts			
CATHODE CURRENT:						
Peak.	210	max.	ma			
Average	60	max.	ma			
GRID-No.2 INPUT	1.5	max.	watts			
PLATE DISSIPATION	10	max.	watts			
PEAK HEATER-CATHODE VOLTAGE:						
Heater negative with respect to cathode.	200	max.	volts			
Heater positive with respect to cathode.	200 ^f	max.	volts			
BULB TEMPERATURE (At hottest point on bulb surface).				250	max.	°C

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:

For fixed-bias operation.	2.2	max.	megohms
For cathode-bias operation.	2.2	max.	megohms

^a Without external shield.

^b 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.

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

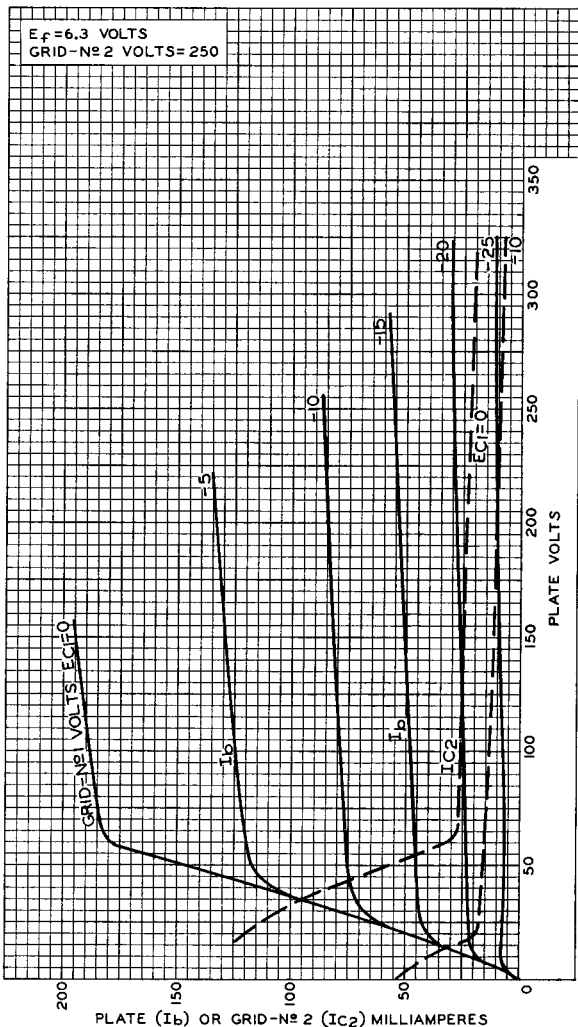
^d This rating is applicable when the duration of the voltage pulse does not exceed 15 per cent of one vertical scanning cycle. In a 525-line, 30-frame system, 15 per cent of one vertical scanning cycle is 2.5 milliseconds.

^e Under no circumstances should this absolute-maximum value be exceeded.

^f The dc component must not exceed 100 volts.



AVERAGE CHARACTERISTICS

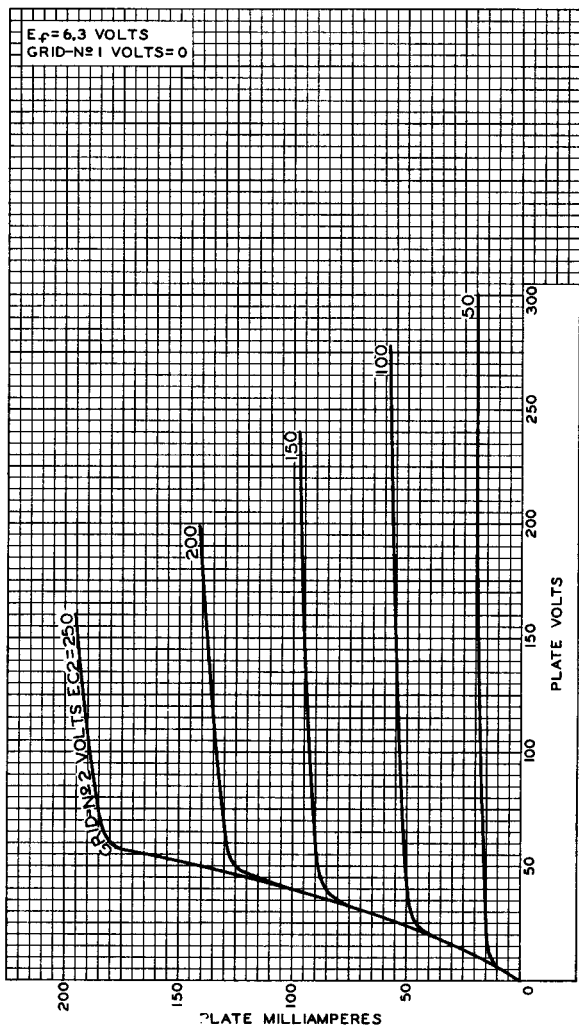


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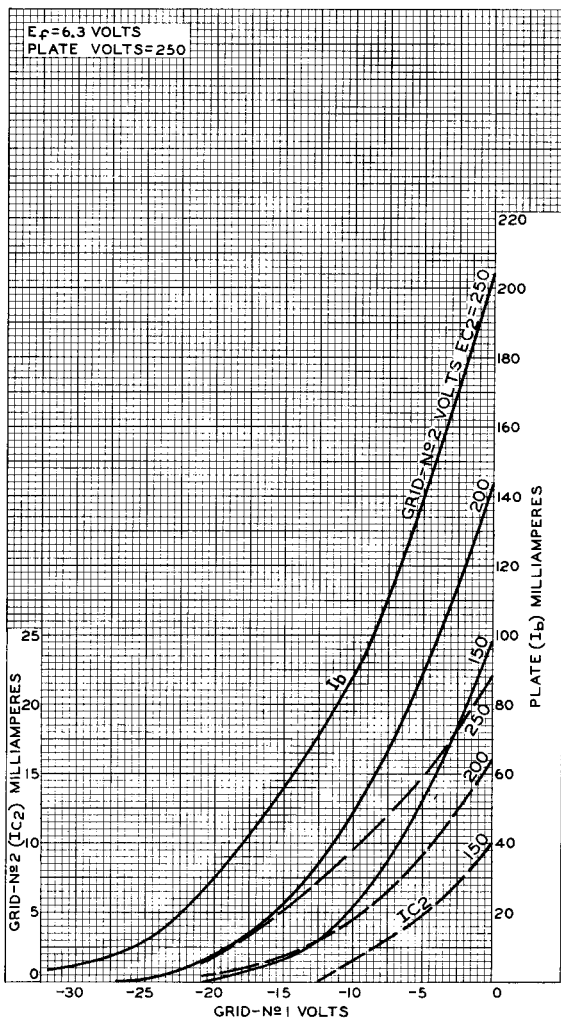
AVERAGE PLATE CHARACTERISTICS



92CM-9672



AVERAGE CHARACTERISTICS



92CM-9673R1

