Beam-Deflection Tube

9-PIN MINIATURE TYPE

GENERAL DATA

Electrical:

Heater Characteristics and Ratings *(Design-Maximum Values)*:		
Voltage (AC or DC)	6.3 ± 0.6	volts
Current at heater volts = 6.3	0.300	amp
Direct Interelectrode Capacitances:[a]		
Grid No.1 to all other electrodes except both plates	7.5	μμf
Grid No.1 to deflecting electrode No.1	0.04 max.	μμf
Grid No.1 to deflecting electrode No.2	0.07 max.	μμf
Plate No.1 to all other electrodes	5.0	μμf
Plate No.2 to all other electrodes	5.0	μμf
Plate No.1 to plate No.2	0.4	μμf
Deflecting electrode No.1 to all other electrodes	4.8	μμf
Deflecting electrode No.2 to all other electrodes	4.8	μμf
Deflecting electrode No.1 to deflecting electrode No.2	0.38	μμf

Characteristics, Class A_1 Amplifier:

With both plates connected together and with both deflecting electrodes connected to cathode at socket

Plate-No.1 Supply Voltage	250	volts
Plate-No.2 Supply Voltage	250	volts
Grid-No.3 Voltage	250	volts
Cathode Resistor	220	ohms
Total Plate Current	14	ma
Grid-No.3 Current	1.5	ma
Transconductance	4400	μmhos
Grid-No.1 Voltage (Approx.) for total plate μa = 10	-13	volts

Mechanical:

Operating Position	Any
Type of Cathode	Coated Unipotential
Maximum Overall Length	2-5/8"
Maximum Seated Length	2-3/8"
Length, Base Seat to Bulb Top (Excluding tip)	2" ± 3/32"
Diameter	0.750" to 0.875"
Dimensional Outline	See *General Section*
Bulb	T6-1/2
Base	Small-Button Noval 9-Pin (JEDEC No.E9-1)

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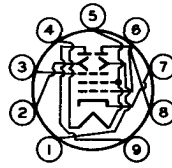
Basing Designation for BOTTOM VIEW. 9DP

Pin 1 – Deflecting Electrode No.2
Pin 2 – Deflecting Electrode No.1
Pin 3 – Grid No.3
Pin 4 – Heater



Pin 5[b] – Heater, Internal Shield, Grid No.2
Pin 6 – Grid No.1
Pin 7 – Cathode
Pin 8 – Plate No.2
Pin 9 – Plate No.1

COLOR-TV DEMODULATOR

Maximum Ratings, ***Design-Maximum Values:***

PLATE VOLTAGE (Each plate). . . .	330 max.	volts
PEAK DEFLECTING-ELECTRODE VOLTAGE (Each electrode):		
Negative value.	165 max.	volts
Positive value.	165 max.	volts
GRID-No.3 (ACCELERATING-GRID) VOLTAGE	330 max.	volts
GRID-No.2 (FOCUSING-GRID) VOLTAGE	*Connect to cathode at socket*	
GRID-No.1 (CONTROL-GRID) VOLTAGE:		
Positive-bias value	0 max.	volts
GRID-No.3 INPUT	1 max.	watt
CATHODE CURRENT	33 max.	ma
PLATE DISSIPATION (Each plate). .	3 max.	watts

Typical Operation:

Plate Supply Voltage (Each plate)	250	volts
Grid-No.3 Voltage	250	volts
Grid No.2	*Connected to cathode at socket*	
Cathode Resistor.	220	ohms
Maximum Deflecting-Electrode Switching Voltage[c].	20	volts
Deflecting-Electrode Voltage for minimum deflecting-electrode switching voltage[c]. .	-14	volts
Voltage Difference Between Deflecting Electrodes for plate-No.1 current and plate-No.2 current to be equal. . . .	0	volts
Maximum Plate-No.1 Current for deflecting-electrode-No.1 volts = -15, and deflecting-electrode-No.2 volts = +15. . .	0.7	ma
Maximum Plate-No.2 Current for deflecting-electrode-No.1 volts = +15, and deflecting-electrode-No.2 volts = -15. . .	0.7	ma

Maximum Deflecting-Electrode-No.1 Current for deflecting-electrode-No.1 volts = +25, and deflecting-electrode-No.2 volts = -25	0.1	ma
Maximum Deflecting-Electrode-No.2 Current for deflecting-electrode-No.1 volts = -25, and deflecting-electrode-No.2 volts = +25	0.1	ma

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:		
For fixed-bias operation. . . .	0.1 max.	megohm
For cathode-bias operation. . .	0.25 max.	megohm

[a] Without external shield.

[b] Pin 5 should be connected directly to cathode at socket.

[c] The Deflecting-Electrode Switching Voltage is the total voltage change on either deflecting electrode with an equal and opposite voltage change on the other deflecting electrode required to switch the plate current from one plate to the other plate.

OPERATING CONSIDERATIONS

This type should be located in equipment so that it is not subjected to stray magnetic fields which may affect the intrinsic operating plate-current balance.

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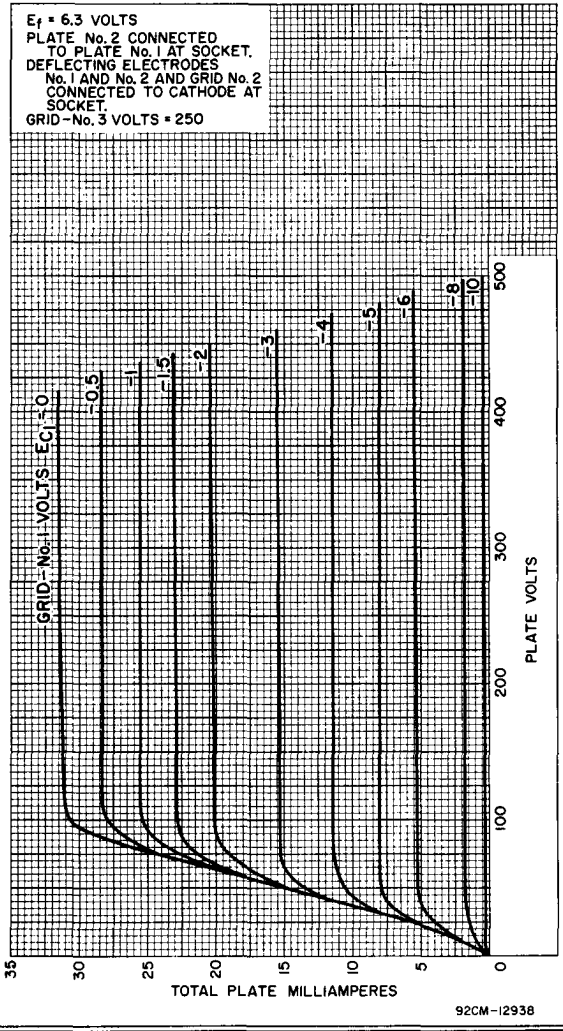
Average Plate Characteristics



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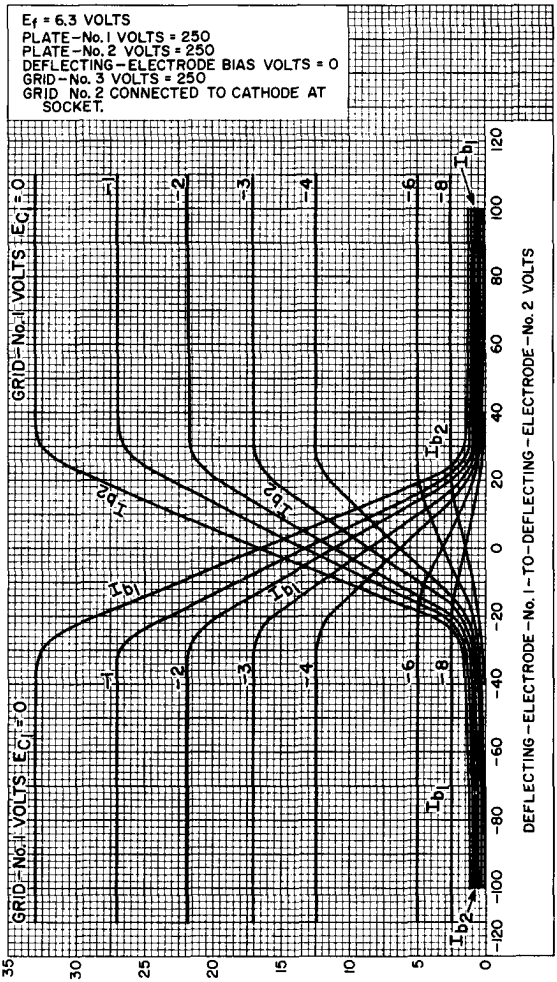
Average Characteristics



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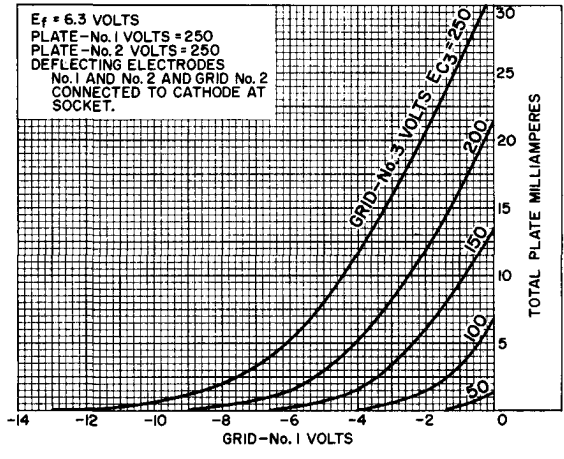
Average Characteristics



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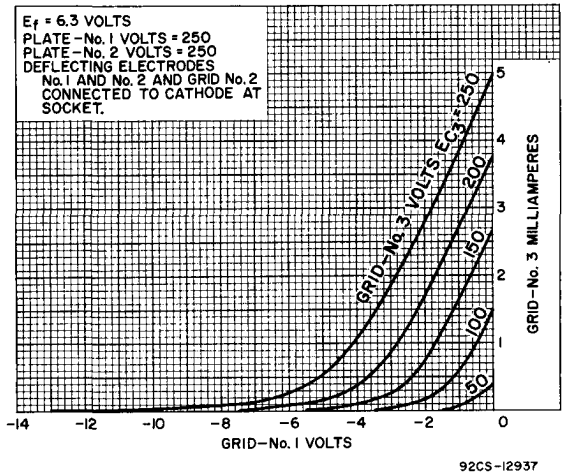

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