Beam Power Tube

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:				
Voltage (AC or DC)		6.3 ± 10%		volts
Current at 6.3 volts		2.25		amp
Direct Interelectrode Capacitances (Approx.):[a]				
Grid No.1 to plate		1.1		μμf
Grid No.1 to cathode & grid No.3, grid No.2, and heater		22		μμf
Plate to cathode & grid No.3, grid No.2, and heater		8.5		μμf

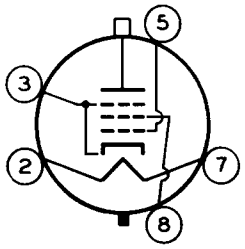
Characteristics, Class A_1 Amplifier:

Plate Voltage	60	60	175	volts
Grid-No.2 Voltage	125	150	175	volts
Grid-No.1 Voltage	0	0	-30	volts
Triode Amplification Factor	–	–	4.2	
Plate Resistance (Approx.)	–	–	8500	ohms
Transconductance	–	–	7700	μmhos
Plate Current	360[b]	460[b]	67	ma
Grid-No.2 Current	30[b]	45[b]	3.3	ma
Grid-No.1 Voltage (Approx.) for plate ma. = 1	–	–	-50	volts
Grid-No.1 Voltage (Approx.) for peak positive-pulse plate volts = 5000 and plate ma. = 1	-88	-94	-101	volts

Mechanical:

Operating Position . . . . . Vertical, base down or up, or Horizontal with pins 2 and 7 in vertical plane
Maximum Overall Length . . . . . 5"
Seated Length . . . . . 4-1/4" ± 3/16"
Diameter . . . . . 1.438" to 1.562"
Bulb T12
Cap . . . . . Small (JEDEC No.C1-1)
Base . . . . . Short Medium-Shell Octal 5-Pin with External Barriers, Style B, Arrangement 2 (JEDEC Group 1, No.B5-123)
Basing Designation for BOTTOM VIEW 5BT

Pin 2 – Heater
Pin 3 – Cathode, Grid No.3
Pin 5 – Grid No.1



Pin 7 – Heater
Pin 8 – Grid No.2
Cap – Plate

HORIZONTAL-DEFLECTION AMPLIFIER

Maximum Ratings, *Design-Maximum Values:*

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

DC PLATE VOLTAGE	770	max.	volts
PEAK POSITIVE-PULSE PLATE VOLTAGE[d]	7000	max.	volts
PEAK NEGATIVE-PULSE PLATE VOLTAGE	1500	max.	volts
DC GRID-No.2 (SCREEN-GRID) VOLTAGE	195	max.	volts
PEAK NEGATIVE-PULSE GRID-No.1 VOLTAGE	220	max.	volts
CATHODE CURRENT:			
Peak	770	max.	ma
Average	220	max.	ma
GRID-No.2 INPUT	3.5	max.	watts
PLATE DISSIPATION[e]	22	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)	225	max.	°C

Maximum Circuit Values:

Grid-No.1-Circuit Resistance	0.47	max.	megohm

[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 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.

[e] An adequate bias resistor or other means is required to protect the tube in the absence of excitation.

[f] The dc component must not exceed 100 volts.