6BK4C/6EL4A

Sharp Cutoff Beam Pentode

Construction .................. Octal T-12
Base .......................... B8-71 or B8-118
Top Cap ...................... Small C1-1 or C1-34
Basing .......................... 8MW
Outline .......................... 12-36
Maximum Diameter .......... 1.720 In.
Maximum Seated Height ....... 4.438 In.
Maximum Overall Height ...... 5.000 In.

Color Television Type

SHUNT VOLTAGE REGULATOR
ELECTRICAL DATA
HEATER OPERATION
Heater Voltage ........................................ 6.3 Volts
Heater Current ........................................ 200 Ma
Maximum Heater-Cathode Voltage
Heater Negative with Respect to Cathode .............. 450 Volts
Heater Positive with Respect to Cathode ............... Not Recommended

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)
Grid to Plate .......................................... 1.0 Pf
Input ................................................... 2.6 Pf
Output (Max.) .......................................... 1.0 Pf

RATINGS (Design Maximum Rating System)
Voltage Control Service
DC Plate Voltage (Abs. Max.) .......................... 27,000 Volts
Unregulated DC Supply Voltage (Abs. Max.) ........... 60,000 Volts
Grid Voltage
DC (Max.) ............................................. ~135 Volts
Peak (Max.)(1) ........................................ ~440 Volts
DC Plate Current (Abs. Max.) .......................... 1.6 Ma
Plate Dissipation (Max.) ............................... 40 Watts
Grid Circuit Resistance (Abs. Max.)(2) ................. 3 Megohms

CHARACTERISTICS AND TYPICAL OPERATION
Shunt Voltage Regulator
Unregulated Supply
DC Voltage ........................................... 36,000 Volts
Equivalent Resistance ................................ 11 Megohms
Voltage Divider Values
R1 (5 Watts) ......................................... 220 Megohms
R2 (2 Watts) ......................................... 1 Megohm
R3 (1/2 Watt) ......................................... 0.82 Megohm
Reference Voltage Supply
DC Value ............................................. 200 Volts
Equivalent Resistance ................................ 1000 Ohms
Effective Grid-Plate Transconductance .................. 200 µmhos

DC Plate Current
For Load Current of 0 Ma ................................ 1000 µA
For Load Current of 1 Ma ................................ 45 µA

Regulated DC Output Voltage
For Load Current of 0 Ma ................................ 25,000 Volts
For Load Current of 1 Ma ................................ 24,500 Volts
Amplification Factor .................................. 2000

X-RADIATION CHARACTERISTIC
Maximum X-Radiation(2) .............................. 1.5 mR/h

NOTES:
(1) Peak value for maximum of 20 seconds during equipment warm-up.
(2) With flyback transformer high voltage supply.
(3) Statistical value controlled on a lot sampling basis

X-RADIATION WARNING: The high voltages associated with this tube type result in the production of X-radiation which may constitute a health hazard on prolonged exposure at close range unless the tube is adequately shielded. Precautions must be exercised during the servicing of equipment to assure that all shielding components are replaced to their intended positions before the equipment is operated.

SHUNT REGULATOR CIRCUIT