Beam Power Tube

DUODECAR TYPE

GENERAL DATA

Electrical:

Heater Characteristics and Ratings:
- Voltage (AC or DC) .......... 6.3 ± 0.6 volts
- Current at heater volts = 6.3 .... 1.200 amp
- Peak heater-cathode voltage:
  - Heater negative with respect to cathode .......... 200 max. volts
  - Heater positive with respect to cathode .......... 200 max. volts
- Direct Interelectrode Capacitances (Approx.):
  - Grid No. 1 to plate .......... 0.34 pf
  - Grid No. 1 to cathode & grid No. 3,
    grid No. 2, and heater .......... 16.0 pf
  - Plate to cathode & grid No. 3,
    grid No. 2, and heater .......... 7.0 pf

Characteristics, Class A Amplifier:
- Plate Voltage .......... 60 150 250 5000 volts
- Grid-No. 2 Voltage .......... 150 150 150 150 volts
- Grid-No. 1 Voltage .......... 0 -22.5 -22.5 - volts
- Mu-Factor, Grid No. 2 to
  - Grid No. 1 .......... 4.4
- Plate Resistance (Approx.) .......... 18000 ohms
- Transconductance .......... 7300 μmhos
- Plate Current .......... 345° 65 ma
- Grid-No. 2 Current .......... 27° 1.8 ma
- Grid-No. 1 Voltage (Approx.)
  - for plate ma.= 1 .......... -42 -100 volts

Mechanical:

Operating Position: Any
Type of Cathode Coated Unipotential
Maximum Overall Length: 2.875"
Seated Length: 2.250" to 2.500"
Diameter: 1.437" to 1.563"
Bulb: T12
Base: Large-Button Duodecar 12-Pin (JEDEC No.E12-74)
Basing Designation for BOTTOM VIEW: 12BJ

Pin 1-Heater
Pin 2-Grid No. 2
Pin 3-Grid No. 1
Pin 4-Cathode,
  Grid No. 3
Pin 5-Do Not Use
Pin 6-Do Not Use
Pin 7-Plate
Pin 8-Do Not Use
Pin 9-Do Not Use
Pin 10-Cathode,
  Grid No. 3
Pin 11-Grid No. 1
Pin 12-Heater

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Electron Tube Division
Harrison, N. J.

DATA 4-63
HORIZONTAL-DEFLECTION AMPLIFIER

Maximum Ratings, Design-Maximum Values:

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

- DC PLATE-SUPPLY VOLTAGE .......... 770 max. volts
- PEAK POSITIVE-PULSE PLATE VOLTAGEf .......... 6500 max. volts
- PEAK NEGATIVE-PULSE PLATE VOLTAGE .......... 1500 max. volts
- DC GRID-No.2 (SCREEN-GRID) VOLTAGE .......... 220 max. volts
- DC GRID-No.1 (CONTROL-GRID) VOLTAGE .......... -55 max. volts
- PEAK NEGATIVE-PULSE GRID-No.1 VOLTAGE .......... 330 max. volts

**CATHODE CURRENT:**
- Peak ................. 550 max. ma
- Average ............... 175 max. ma
- GRID-No.2 INPUT ............ 3.5 max. watts
- PLATE DISSIPATION .......... 17.5 max. watts
- BULB TEMPERATURE (at hottest point on bulb surface) ............... 220 max. °C

Maximum Circuit Values:

**Grid-No.1 Circuit Resistance:**
- For grid resistor-bias operation .......... 1 max. megohm

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* The dc component must not exceed 100 volts.
* 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.
* Socket terminals 5, 6, 8, and 9 should not be used as tie points.
* As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.
* 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.
* An adequate bias resistor or other means is required to protect the tube in the absence of excitation.

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**All Dimensions in Inches**

- 1.563
- 1.437

**DIA.**

- 2.875 MAX.
- 2.500
- 2.250

**92CS-12019**

**TI2 BULB**

**BASE JEDEC No. E12-74**

* APPLIES TO MINIMUM DIAMETER EXCEPT IN THE AREA OF THE SEAL.

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