I2DB5
BEAM POWER TUBE
9-PIN MINIATURE TYPE

Intended for use in equipment having series heater-string arrangement

GENERAL DATA

Electrical:
Heater, for Unipotential Cathode:
- Voltage (AC or DC) .................. 12.6 volts
- Current .................. 0.6 ± 6% amp
- Warm-up time (Average) ................. 11 sec
Direct Interelectrode Capacitances
(Approx.): 0
- Grid No.1 to plate .................. 0.2 μf
- Grid No.1 to cathode & grid No.3,
  grid No.2, and heater ................ 13 μf
- Plate to cathode & grid No.3,
  grid No.2, and heater ................ 8 μf

Mechanical:
- Operating Position .................. Any
- Maximum Overall Length ................. 2-3/4"
- Maximum Seated Length ................ 2-1/2"
- Length, Base Seat to Bulb Top (Excluding tip) 2-1/8" ± 3/32"
- Diameter .................. 0.750" to 0.875"
- Bulb .................. T6-1/2
- Base .................. Small-Button Noval 9-Pin (JEDEC No.E9-1)
- Basing Designation for BOTTOM VIEW ................. 9GR

AMPLIFIER — Class A1

Maximum Ratings, Design-Center Values:
- PLATE VOLTAGE .................. 300 max. volts
- GRID-No.2 (SCREEN-GRID) VOLTAGE ................ 150 max. volts
- GRID-No.2 INPUT ................ 1.25 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

Typical Operation and Characteristics:
- Plate Supply Voltage ................ 110 200 volts
- Grid-No.2 Supply Voltage ................. 110 125 volts
- Grid-No.1 (Control-grid) Voltage .......... -7.5 – volts
- Cathode Resistor .................. – 180 ohms
BEAM POWER TUBE

Peak AF Grid-No.1 Voltage ...... 7.5 8.5 volts
Zero-Signal Plate Current ...... 49 46 ma
Max.-Signal Plate Current ...... 50 47 ma
Zero-Signal Grid-No.2 Current ...... 4 2.2 ma
Max.-Signal Grid-No.2 Current ...... 10 8.5 ma
Plate Resistance (Approx.) ...... 13000 28000 ohms
Transconductance .............. 8000 8000 μmhos
Load Resistance ...... 2000 4000 ohms
Total Harmonic Distortion ...... 10 10%
Max.-Signal Power Output ...... 2.1 3.8 watts

Maximum Circuit Values:
Grid-No.1-Circuit Resistance:
  For fixed-bias operation ...... 0.1 max. megohm
  For cathode-bias operation ...... 2.2 max. megohms

VERTICAL-DEFLECTION AMPLIFIER

Maximum Ratings, Design-Center Values Except as Noted:
  For operation in a 525-line, 30-frame system

DC PLATE VOLTAGE .............. 300 max. volts
PEAK POSITIVE-PULSE PLATE VOLTAGE
  (Absolute maximum)* ............ 2000 max. volts
DC GRID-No.2 (SCREEN-GRID) VOLTAGE ...... 150 max. volts
PEAK NEGATIVE-PULSE GRID-No.1
  (CONTROL-GRID) VOLTAGE ...... 250 max. volts
CATHODE CURRENT:
  Peak .................. 200 max. ma
  Average .............. 55 max. ma
GRID-No.2 INPUT .............. 1.25 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

Maximum Circuit Values:
Grid-No.1-Circuit Resistance:
  For fixed-bias operation ...... 0.1 max. megohms
  For cathode-bias operation ...... 2.2 max. megohms

* Without external shield.
* The dc component must not exceed 100 volts.
* 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 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.

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ELECTRON TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY
* Measured from base seat to bulb-top line as determined by ring gauge of 7/16" inside diameter.
** Applies in zone starting 0.375" from seat.
Beam Power Tube

9-PIN MINIATURE TYPE
With Heater Having Controlled Warm-Up Time

The 12DB5 is the same as the 6DB5 except for the following items:

Heater, for Unipotential Cathode:
- Voltage (AC or DC) . . . . . . . . . . . 12.6 volts
- Current . . . . . . . . . . . . . . . . . 0.6 ± 6% amp
- Warm-up time (Average) . . . . . . . 11 sec