12B4-A
LOW-MU TRIODE
9-PIN MINIATURE TYPE
Intended for use in equipment having series heater-string arrangement

GENERAL DATA

Electrical:
Heater, for Unipotential Cathode:
  Heater arrangement: Series Parallel
  Voltage: 12.6 6.3 ac or dc volts
  Current: 0.300 0.600 amp
  Warm-up time (Average): 11 sec

For definition of heater warm-up time and method of determining it, see sheet HEATER WARM-UP TIME MEASUREMENT at front of this Section.

Direct Interelectrode Capacitances (Approx.):
  Grid to plate: 4.8 \( \mu F \)
  Grid to cathode and heater: 5 \( \mu F \)
  Plate to cathode and heater: 1.5 \( \mu F \)

Characteristics, Class A Amplifier:
  Plate Voltage: 150 volts
  Grid Voltage: -17.5 volts
  Amplification Factor: 6.5
  Plate Resistance (Approx.): 1030 ohms
  Transconductance: 6300 \( \mu \text{hos} \)
  Plate Current: 34 ma
  Grid Voltage (Approx.) for plate current of 200 \( \mu \text{amp} \): -32 volts
  Plate Current for grid voltage of -23 volts: 9.6 ma

Mechanical:
  Mounting Position: Any
  Maximum Overall Length: 2-5/8"
  Maximum Seated Length: 2-3/8"
  Length, Base Seat to Bulb Top (Excluding tip): 2" ± 3/32"
  Maximum Diameter: 7/8"
  Bulb: T-6-1/2
  Base: Small-Button Noval 9-Pin (JETEC No. E9-1)

Basis Designation for BOTTOM VIEW: 9AG

Pin 1 - Cathode
Pin 2 - Grid
Pin 3 - Heater
Pin 4 - Heater
Pin 5 - Heater
Pin 6 - No Connection
Pin 7 - Grid
Pin 8 - No Connection
Pin 9 - Plate

\( \odot \) With external shield JETEC No. 315 connected to cathode.

MAY 1, 1955

TENTATIVE DATA

RADIO CORPORATION OF AMERICA, MARRION, NEW JERSEY
AMPLITR-FU TRINOIDE

AMPLIFIER - Class A1

Maximum Ratings, Design-Center Values:
PLATE VOLTAGE: 550 max. volts
GRID VOLTAGE:
  Negative bias value: 50 max. volts
PLATE DISSIPATION: 5.5 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-Circuit Resistance:
  For fixed-bias operation: 0.47 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: 550 max. volts
PEAK POSITIVE-PULSE PLATE VOLTAGE:
  (Absolute maximum)#: 1000 max. volts
PEAK NEGATIVE-PULSE GRID VOLTAGE: 250 max. volts
CATHODE CURRENT:
  Peak: 105 max. ma
  Average: 30 max. ma
PLATE DISSIPATION: 5.5 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-Circuit Resistance:
  For cathode-bias operation: 2.2 max. megohms

▲ 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.

MAY 1, 1955
TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY
TENTATIVE DATA