



5654

SHARP-CUTOFF PENTODE

MINIATURE TYPE

**5654
PREMIUM TYPE**

Intended for RF and IF Broad-Band Applications where dependable performance under shock and vibration are paramount. The 5654 is a "premium" version of the 6AX5.

GENERAL DATA**Electrical:**

Heater, Pure Tungsten, for Unipotential Cathode:

Voltage $6.3 \pm 10\%$ ac or dc volts

Current 0.175 amp

Direct Interelectrode Capacitances:[▲]Grid No.1 to Plate . . 0.020 max. μmf Input 4.0 μmf Output 2.85 μmf **Mechanical:**

Mounting Position Any

Maximum Overall Length 1-3/4"

Maximum Seated Length 1-1/2"

Length from Base Seat to Bulb Top
(Excluding tip) 1-1/8" $\pm 3/32$ "

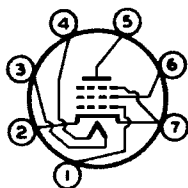
Maximum Diameter 3/4"

Bulb T-5-1/2"

Base Small-Button Miniature 7-Pin (JETEC No.E7-1)

BOTTOM VIEW

Pin 1-Grid No.1
Pin 2-Cathode,
Grid No.3,
Int. Shield
Pin 3-Heater
Pin 4-Heater



Pin 5-Plate
Pin 6-Grid No.2
Pin 7-Cathode,
Grid No.3,
Int. Shield

AMPLIFIER - Class A₁**Maximum Ratings, Absolute Values:**

PLATE VOLTAGE 200 max. volts

GRID-No.2 (SCREEN) VOLTAGE 155 max. volts

PLATE DISSIPATION 1.85 max. watts

GRID-No.2 INPUT 0.55 max. watt

CATHODE CURRENT 20 max. ma

PEAK HEATER-CATHODE VOLTAGE:

Heater positive with respect to cathode . . 100 max. volts

Heater negative with respect to cathode . . 100 max. volts

Typical Operation and Characteristics:

Plate Voltage 120 180 volts

Grid-No.2 Voltage 120 120 volts

[▲] According to RTMA Standard ET-109A with external shield NO.316.

JAN. 1, 1953

TUBE DEPARTMENT

TENTATIVE DATA

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

5654



5654

SHARP-CUTOFF PENTODE

Cathode-Bias Resistor	180	180	ohms
Plate Resistance (Approx.) . . .	0.30	0.50	megohm
Transconductance	5000	5100	μ hos
Plate Current	7.5	7.7	ma
Grid-No.2 Current	2.5	2.4	ma
Grid-No.1 Voltage (Approx.) for plate current of 10 μ amp .	-8.5	-8.5	volts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance	0.5 max.	megohm
--	----------	--------

SPECIAL RATINGS & PERFORMANCE DATA

Shock Rating:

Impact Acceleration 500 max. g
Tubes are held rigid in three different positions in a Navy Type, High Impact (flyweight) Shock Machine and are subjected to 500 g impact acceleration.

Fatigue Rating:

Vibrational Acceleration 2.5 max. g
Tubes are rigidly mounted and subjected in each of three positions to 2.5 g vibrational acceleration at 60 cycles per second for 32 hours.

Heater Cycling Life Performance:

Cycles of Intermittent Operation . . . 2000 min. cycles
Under the following conditions: With heater voltage of 7.5 volts cycled 1 minute on and 1 minute off, heater positive with respect to cathode by +100 volts dc, and plate, grid-No.2, and grid-No.1 voltage = 0 volts.

CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN

	Note	Min.	Max.	
Heater Current	1	0.160	0.190	amp
Grid-No.1-to-Plate Capacitance	-	-	0.020	μ f
Input Capacitance	-	3.4	4.6	μ f
Output Capacitance	-	2.45	3.25	μ f
Plate Current	1,2	3.0	12.0	ma
Transconductance	1,2	3500	6500	μ hos
Reverse Grid Current	1,3	-	0.1	μ amp

Note 1: With 6.3 volts ac on heater.

Note 2: With plate voltage of 120 volts, grid-No.2 voltage of 120 volts, and grid-No.1 voltage of -2 volts.

Note 3: With plate voltage of 120 volts, grid-No.2 voltage of 120 volts, grid-No.1 voltage of -2 volts, and grid-No.1 resistor of 0.1 megohm.

CURVES

are the same as shown for Type 6AK5
in the Receiving Tube Section

JAN. 1, 1953

TUBE DEPARTMENT

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

TENTATIVE DATA