



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. μf Input 4.0 μf Output 2.85 μf **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
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

TENTATIVE DATA

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Cathode-Bias Resistor	180	180	ohms
Plate Resistance (Approx.) . . .	0.30	0.50	megohm
Transconductance	5000	5100	μ mhos
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
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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 mf
Input Capacitance	-	3.4	4.6	μ mf
Output Capacitance	-	2.45	3.25	μ mf
Plate Current	1,2	3.0	12.0	ma
Transconductance	1,2	3500	6500	μ mhos
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

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