



## ELECTRONIC TUBE REFERENCE

8203

Nuvistor Tubes (all numbers) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Power transmitting triode for RF amplification, oscillation, modulation, or related high-power electronic service.

## GENERAL CHARACTERISTICS

|                     |                   |                      |               |
|---------------------|-------------------|----------------------|---------------|
| BASE DESIGNATION    | —                 | BASE PINS            | 5             |
| NOMINAL HEATER      | 6.3 V / 160 mA    | PARALLEL HEATER      | — / —         |
| HEATING             | Indirect          | SERIES OPERATION     | Not specified |
| CATHODE ARRANGEMENT | Separate cathodes | SECTION CONSTRUCTION | Similar       |

## SECTION RATINGS

|                                                                   |               |
|-------------------------------------------------------------------|---------------|
| SECTION 1 Triode                                                  |               |
| PLATE RESISTANCE                                                  | 5000 $\Omega$ |
| TRANSCONDUCTANCE                                                  | 0.013 S       |
| AMPLIFICATION FACTOR                                              | 35            |
| MAXIMUM PLATE VOLTAGE                                             | 300 V         |
| MAXIMUM PLATE DISSIPATION                                         | 1.8 W         |
| MAXIMUM CATHODE CURRENT                                           | 30 mA         |
| <i>Electrical section extracted from supplied RCA data sheet.</i> |               |

Ceramic-metal Nuvistor power triode for Class C RF amplification, oscillation, frequency multiplication, and pulse service.

## SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

# 1964 RMA EIA

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1964 RMA EIA

## Section 1 · Triode

| CHARACTERISTIC            |                 |                  |
|---------------------------|-----------------|------------------|
| PARAMETER                 | PUBLISHED VALUE | CONDITION / NOTE |
| Heater Voltage            | 6.3 V           | —                |
| Heater Current            | 160 mA          | —                |
| Grid To Plate Capacitance | 2 pF            | —                |
| Input Capacitance         | 4.2 pF          | —                |
| Output Capacitance        | 1.6 pF          | —                |
| CathodeToPlateCapacitance | 0.26 pF         | —                |
| Plate Resistance          | 2700 ohm        | —                |
| Transconductance          | 13000 uS        | —                |
| Amplification Factor      | 35              | —                |

| OTHER                     |                 |                         |
|---------------------------|-----------------|-------------------------|
| PARAMETER                 | PUBLISHED VALUE | CONDITION / NOTE        |
| Plate Voltage Maximum     | 300 V           | ICAS                    |
| Cathode Current Maximum   | 30 mA           | ICAS                    |
| Plate Dissipation Maximum | 1.8 W           | ICAS                    |
| Plate Voltage             | 75 V            | ClassA                  |
| Plate Voltage             | 150 V           | ClassC;RFPowerAmplifier |
| Cathode Current           | 21 mA           | ClassC;RFPowerAmplifier |
| Useful Power Output       | 1.55 W          | ClassC;RFPowerAmplifier |
| MaximumOperatingFrequency | 250 MHz         | FrequencyMultiplier     |

# 1971 RCA HB3 Binder 6 of 7

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1971 RCA HB3 BINDER 6 OF 7

## Section 1 · Triode

| CHARACTERISTIC                             |                 |                      |
|--------------------------------------------|-----------------|----------------------|
| PARAMETER                                  | PUBLISHED VALUE | CONDITION / NOTE     |
| Heater/filament voltage nominal            | 6.3 V           | WholeTube            |
| Heater/filament current nominal            | 160 mA          | WholeTube            |
| Voltage (AC or DC)                         | 6.3 V           | Published source row |
| Voltage (AC or DC) (value 2)               | 0.6 V           | Published source row |
| Current at                                 | 6.3 V           | Published source row |
| Current at (value 2)                       | 0.16 V          | Published source row |
| Heater negative with respect to cathode    | 100 V           | Published source row |
| Heater positive with respect to cathode    | 100 V           | Published source row |
| Heater to cathode L                        | 5 pF            | Published source row |
| DC Plate Supply Voltage                    | 75 V            | Published source row |
| DC Plate Supply Voltage (value 2)          | 150 V           | Published source row |
| Grid Supply Voltage                        | 0 V             | Published source row |
| Grid Supply Voltage (value 2)              | 0 V             | Published source row |
| Plate Resistance (Approx.)                 | 2700 ohm        | Published source row |
| Plate Resistance (Approx.) (value 2)       | 5000 ohm        | Published source row |
| Transconductance                           | 13000           | Published source row |
| Transconductance (value 2)                 | 6000            | Published source row |
| Plate Current                              | 11.5 mA         | Published source row |
| Plate Current (value 2)                    | 7 mA            | Published source row |
| Grid Voltage (Approx.) for plate $\mu_a$ = | 10 V            | Published source row |
|                                            |                 |                      |

| PARAMETER                                            | PUBLISHED VALUE | CONDITION / NOTE     |
|------------------------------------------------------|-----------------|----------------------|
| Grid Voltage (Approx.) for plate $\mu_a$ = (value 2) | <b>-6.5 V</b>   | Published source row |
| Grid Voltage (Approx.) for plate $\mu_a$ = (value 3) | <b>-15 V</b>    | Published source row |
| Published electrical value                           | <b>9</b>        | Published source row |
| Published electrical value (value 2)                 | <b>150</b>      | Published source row |
| Heater Current                                       | <b>1 A</b>      | Published source row |
| Heater Current (value 2)                             | <b>150 mA</b>   | Published source row |
| Heater Current (value 3)                             | <b>170 mA</b>   | Published source row |
| Heater to cathode                                    | <b>2 pF</b>     | Published source row |
| Heater to cathode (value 2)                          | <b>1.2 pF</b>   | Published source row |

| OTHER                                |                 |                      |
|--------------------------------------|-----------------|----------------------|
| PARAMETER                            | PUBLISHED VALUE | CONDITION / NOTE     |
| DC Plate Supply Voltage              | <b>400 V</b>    | Published source row |
| DC Plate Supply Voltage (value 2)    | <b>400 V</b>    | Published source row |
| DC Plate Voltage                     | <b>250 V</b>    | Published source row |
| DC Plate Voltage (value 2)           | <b>300 V</b>    | Published source row |
| Peak-Positive Grid Voltage           | <b>5 V</b>      | Published source row |
| Peak-Positive Grid Voltage (value 2) | <b>5 V</b>      | Published source row |
| DC Cathode Current                   | <b>25 mA</b>    | Published source row |
| DC Cathode Current (value 2)         | <b>30 mA</b>    | Published source row |
| DC Grid Current                      | <b>5 mA</b>     | Published source row |
| DC Grid Current (value 2)            | <b>6 mA</b>     | Published source row |
| Plate Dissipation                    | <b>1 W</b>      | Published source row |
| Plate Dissipation (value 2)          | <b>5 W</b>      | Published source row |
| Plate Dissipation (value 3)          | <b>1.8 W</b>    | Published source row |
| DC Plate-to-Grid Voltage             | <b>155 V</b>    | Published source row |
| DC Cathode-to-Grid Voltage           | <b>14 V</b>     | Published source row |
| DC Cathode Current                   | <b>21 mA</b>    | Published source row |
| DC Grid Current                      | <b>5 mA</b>     | Published source row |
|                                      |                 |                      |

| PARAMETER                                        | PUBLISHED VALUE | CONDITION / NOTE     |
|--------------------------------------------------|-----------------|----------------------|
| Driver Power Output (Approx )                    | 0.4 W           | Published source row |
| Useful Power Output (Approx )                    | 1 W             | Published source row |
| Useful Power Output (Approx ) (value 2)          | 55 W            | Published source row |
| DC Plate Voltage                                 | 100 V           | Published source row |
| DC Grid Voltage                                  | -3.4 V          | Published source row |
| DC Cathode Current                               | 18 mA           | Published source row |
| DC Grid Current                                  | 2.5 mA          | Published source row |
| Useful Power Output (Approx )                    | 0.8 W           | Published source row |
| Grid-Circuit Resistance (CCS or ICAS conditions) | 9               | Published source row |
| DC Plate Supply Voltage                          | 400 V           | Published source row |
| DC Plate Supply Voltage (value 2)                | 400 V           | Published source row |
| Peak-Positive Grid Voltage                       | 5 V             | Published source row |
| Peak-Positive Grid Voltage (value 2)             | 5 V             | Published source row |
| DC Cathode Current                               | 20 mA           | Published source row |
| DC Cathode Current (value 2)                     | 24 mA           | Published source row |
| DC Grid Current                                  | 3 mA            | Published source row |
| DC Grid Current (value 2)                        | 4 mA            | Published source row |
| Plate Dissipation                                | 1.3 W           | Published source row |
| Plate Dissipation (value 2)                      | 1.5 W           | Published source row |
| DC Plate Voltage                                 | 125 V           | Published source row |
| DC Grid Voltage                                  | -70 V           | Published source row |
| DC Cathode Current                               | 22 mA           | Published source row |
| DC Grid Current                                  | 4 mA            | Published source row |
| Driver Power Output (Approx )                    | 0 W             | Published source row |
| Driver Power Output (Approx ) (value 2)          | 25 W            | Published source row |
| Useful Power Output (Approx )                    | 0 W             | Published source row |

| PARAMETER                                        | PUBLISHED VALUE | CONDITION / NOTE     |
|--------------------------------------------------|-----------------|----------------------|
| Useful Power Output (Approx ) (value 2)          | <b>85 W</b>     | Published source row |
| Grid-Circuit Resistance (CCS or ICAS conditions) | <b>9</b>        | Published source row |
| Peak Positive-Pulse Plate Voltage                | <b>500 V</b>    | Published source row |
| DC Plate Voltage                                 | <b>250 V</b>    | Published source row |
| Peak Positive Grid Voltage                       | <b>5 V</b>      | Published source row |
| DC Grid Current                                  | <b>5 mA</b>     | Published source row |
| DC Cathode Current                               | <b>18 mA</b>    | Published source row |
| Plate Dissipation ~                              | <b>1 W</b>      | Published source row |
| Grid-Circuit Resistance                          | <b>9</b>        | Published source row |
| frequency envelope does not exceed               | <b>115</b>      | Published source row |
| and plate voltage for the                        | <b>8203</b>     | Published source row |

## TUBE TINKER

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