



## ELECTRONIC TUBE REFERENCE

## 6MD8

Voltage - Triple Triode electronic tube

CONSOLIDATED TECHNICAL DATA

3 SECTIONS

CONSTRUCTION

TRIODE-TRIODE-TRIODE

Medium-mu triode for matrixing circuits in color and black-and-white television receivers.

## GENERAL CHARACTERISTICS

|                     |                   |                      |               |
|---------------------|-------------------|----------------------|---------------|
| BASE DESIGNATION    | 9RQ               | BASE PINS            | 9             |
| NOMINAL HEATER      | 6.3 V / 900 mA    | PARALLEL HEATER      | – / –         |
| HEATING             | Indirect          | SERIES OPERATION     | Not specified |
| CATHODE ARRANGEMENT | Separate cathodes | SECTION CONSTRUCTION | Similar       |

## SECTION RATINGS

|                                                                                                                      |               |
|----------------------------------------------------------------------------------------------------------------------|---------------|
| SECTION1 Triode                                                                                                      |               |
| PLATE RESISTANCE                                                                                                     | 5500 $\Omega$ |
| TRANSCONDUCTANCE                                                                                                     | 0.0031 S      |
| AMPLIFICATION FACTOR                                                                                                 | 17            |
| MAXIMUM PLATE VOLTAGE                                                                                                | 330 V         |
| MAXIMUM PLATE DISSIPATION                                                                                            | 3 W           |
| Representative specification for all three identical triode sections; values semantically read from current OCR PDF. |               |

|                                                                                                                                            |               |
|--------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| <b>SECTION2</b> Triode                                                                                                                     |               |
| <b>PLATE RESISTANCE</b>                                                                                                                    | 5500 $\Omega$ |
| <b>TRANSCONDUCTANCE</b>                                                                                                                    | 0.0031 S      |
| <b>MAXIMUM PLATE VOLTAGE</b>                                                                                                               | 250 V         |
| <b>MAXIMUM PLATE DISSIPATION</b>                                                                                                           | 3 W           |
| <i>Published promoted values applied where applicable; additional ratings, characteristics, and operating data retained as parameters.</i> |               |

|                                                                                                                                 |               |
|---------------------------------------------------------------------------------------------------------------------------------|---------------|
| <b>SECTION3</b> Triode                                                                                                          |               |
| <b>PLATE RESISTANCE</b>                                                                                                         | 5500 $\Omega$ |
| <b>TRANSCONDUCTANCE</b>                                                                                                         | 0.0031 S      |
| <b>MAXIMUM PLATE DISSIPATION</b>                                                                                                | 3 W           |
| <i>Third physical triode section; added to align rows with SectionCount while avoiding conflicting source-point promotions.</i> |               |

Medium-mu triple triode for matrixing circuits in color and black-and-white television receivers. Explicit heater variant/co-designation of 12MD8 in the approved source.

## SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

# 1968 General Electric Co

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

1968 GENERAL ELECTRIC CO

## Section 1 · Triode

| OTHER                     |                 |                  |
|---------------------------|-----------------|------------------|
| PARAMETER                 | PUBLISHED VALUE | CONDITION / NOTE |
| Maximum Plate Voltage     | 330 V           | —                |
| Maximum Plate Dissipation | 3 W             | —                |
| Typical Plate Voltage     | 250 V           | ClassA           |
| TypicalGridVoltage        | -10.5 V         | ClassA           |
| Typical Plate Current     | 11.5 mA         | ClassA           |

| CHARACTERISTIC       |                 |                  |
|----------------------|-----------------|------------------|
| PARAMETER            | PUBLISHED VALUE | CONDITION / NOTE |
| Amplification Factor | 17              | —                |
| Plate Resistance     | 5500 ohm        | —                |
| Transconductance     | 3100 uS         | —                |

| CAPACITANCE               |                 |                  |
|---------------------------|-----------------|------------------|
| PARAMETER                 | PUBLISHED VALUE | CONDITION / NOTE |
| Grid To Plate Capacitance | 3 pF            | Section1         |
| Input Capacitance         | 3.6 pF          | Section1         |
| Output Capacitance        | 0.48 pF         | Section1         |
| Grid To Plate Capacitance | 3 pF            | Section2         |
| Input Capacitance         | 3.6 pF          | Section2         |
| Output Capacitance        | 0.48 pF         | Section2         |
| Grid To Plate Capacitance | 3 pF            | Section3         |
| Input Capacitance         | 3.4 pF          | Section3         |
| Output Capacitance        | 0.36 pF         | Section3         |

## SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

# 1971 RCA HB3 Binder 5 of 7

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

1971 RCA HB3 BINDER 5 OF 7

## Section 1 · Triode

| CHARACTERISTICS                        |                 |                                                                                                  |
|----------------------------------------|-----------------|--------------------------------------------------------------------------------------------------|
| PARAMETER                              | PUBLISHED VALUE | CONDITION / NOTE                                                                                 |
| Voltage (AC or DC) – published value 1 | 6 V             | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Voltage (AC or DC) – published value 2 | 3 V             | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Voltage (AC or DC) – published value 3 | 0.6 V           | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Current at 6.3 V – published value 1   | 6.3             | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Current at 6.3 V – published value 2   | 0.9             | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Grid to plate – published value 1      | 3 pF            | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Grid to plate – published value 2      | 0 pF            | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Grid to plate – published value 3      | 3 pF            | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Grid to plate – published value 4      | 3 pF            | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Pin 1 - Plate of Unit No.3             | 1               | Published datasheet value; multiple values represent separate source-table limits or conditions. |

| PARAMETER                         | PUBLISHED VALUE | CONDITION / NOTE                                                                                 |
|-----------------------------------|-----------------|--------------------------------------------------------------------------------------------------|
| Pin 2 - Plate of Unit No.2        | <b>2</b>        | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Pin 3 - Plate of Unit No.1        | <b>3</b>        | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Pin 4 -Heater                     | <b>4</b>        | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Pin 5 -Heater                     | <b>5</b>        | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Pin 6 -Grid of Unit No.1          | <b>6</b>        | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Pin 7 -Cathode                    | <b>7</b>        | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Pin 8 -Grid of Unit No.2          | <b>8</b>        | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Pin 9 -Grid of Unit No.3          | <b>9</b>        | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Plate Voltage                     | <b>250 V</b>    | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Grid Voltage – published value 1  | <b>-10 V</b>    | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Grid Voltage – published value 2  | <b>5 V</b>      | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Plate Resistance (Approx.)        | <b>5500</b>     | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Transconductance                  | <b>3100</b>     | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Plate Current – published value 1 | <b>1 mA</b>     | Published datasheet value; multiple values represent separate source-table limits or conditions. |
|                                   |                 |                                                                                                  |

| PARAMETER                                                               | PUBLISHED VALUE | CONDITION / NOTE                                                                                 |
|-------------------------------------------------------------------------|-----------------|--------------------------------------------------------------------------------------------------|
| Plate Current – published value 2                                       | 1.5 mA          | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Plate Current for grid volts = -14 – published value 1                  | -14 V           | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Plate Current for grid volts = -14 – published value 2                  | 4 V             | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Grid Voltage (Approx.) for plate $\mu\text{A} = 50$ – published value 1 | 50 V            | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Grid Voltage (Approx.) for plate $\mu\text{A} = 50$ – published value 2 | -23 V           | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Plate Voltage                                                           | 330 V           | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Positive-bias value                                                     | 0               | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Plate Dissipation                                                       | 3               | Published datasheet value; multiple values represent separate source-table limits or conditions. |



SOURCE DATA APPENDIX

## SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

# 1975 RCA RC30

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

1975 RCA RC30

## Section 1 · Triode

| OTHER                           |                 |                       |
|---------------------------------|-----------------|-----------------------|
| PARAMETER                       | PUBLISHED VALUE | CONDITION / NOTE      |
| Heater Warm-up Time (Average) – | 11 s            | Other                 |
| Peak value                      | 200 V           | Other;PublishedValue1 |
| Peak value                      | 200 V           | Other;PublishedValue2 |

| PARAMETER                                         | PUBLISHED VALUE | CONDITION / NOTE      |
|---------------------------------------------------|-----------------|-----------------------|
| Average value                                     | 100 V           | Other;PublishedValue1 |
| Average value                                     | 100 V           | Other;PublishedValue2 |
| Plate Voltage                                     | 330 V           | MaximumRating         |
| Grid Voltage, Positive-bias value                 | 0 V             | MaximumRating         |
| Plate Dissipation                                 | 3 W             | MaximumRating         |
| Grid-Circuit Resistance, for fixed-bias operation | 1 megohm        | MaximumCircuitValue   |
| Maximum Plate Voltage                             | 330 V           | Section1              |
| Maximum Plate Dissipation                         | 3 W             | Section1              |

| CAPACITANCE                 |                 |                             |
|-----------------------------|-----------------|-----------------------------|
| PARAMETER                   | PUBLISHED VALUE | CONDITION / NOTE            |
| Grid to Plate               | 3 pF            | Capacitance;PublishedValue1 |
| Grid to Plate               | 3 pF            | Capacitance;PublishedValue2 |
| Grid to Plate               | 3 pF            | Capacitance;PublishedValue3 |
| Grid to Cathode and Heater  | 3.6 pF          | Capacitance;PublishedValue1 |
| Grid to Cathode and Heater  | 3.6 pF          | Capacitance;PublishedValue2 |
| Grid to Cathode and Heater  | 3.4 pF          | Capacitance;PublishedValue3 |
| Plate to Cathode and Heater | 0.48 pF         | Capacitance;PublishedValue1 |
| Plate to Cathode and Heater | 0.48 pF         | Capacitance;PublishedValue2 |
| Plate to Cathode and Heater | 0.36 pF         | Capacitance;PublishedValue3 |

| CHARACTERISTIC                              |                 |                                |
|---------------------------------------------|-----------------|--------------------------------|
| PARAMETER                                   | PUBLISHED VALUE | CONDITION / NOTE               |
| Plate Voltage                               | 2 V             | Characteristic                 |
| Grid Voltage                                | -10.5 V         | Characteristic                 |
| PLATE                                       | 92 V            | Characteristic                 |
| Plate Current                               | 11.5 mA         | Characteristic                 |
| Plate Current for grid voltage of –         | 14 V            | Characteristic;PublishedValue1 |
| Plate Current for grid voltage of –         | 4 V             | Characteristic;PublishedValue2 |
| Grid Voltage (Approx.) for plate current of | 50 V            | Characteristic;PublishedValue1 |
|                                             |                 |                                |

| PARAMETER                                   | PUBLISHED VALUE | CONDITION / NOTE               |
|---------------------------------------------|-----------------|--------------------------------|
| Grid Voltage (Approx.) for plate current of | <b>-23 V</b>    | Characteristic;PublishedValue2 |
| Plate Resistance                            | <b>5500 ohm</b> | Section1                       |
| Transconductance                            | <b>3100 uS</b>  | Section1                       |
| Amplification Factor                        | <b>17</b>       | Section1                       |

# TUBE TINKER

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