



## ELECTRONIC TUBE REFERENCE

## 6KR8

Voltage - Triode Pentode electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

Medium-mu triode plus sharp-cutoff pentode; the pentode serves as a television video amplifier and the triode as a general-purpose amplifier.

## GENERAL CHARACTERISTICS

|                     |                   |                      |               |
|---------------------|-------------------|----------------------|---------------|
| BASE DESIGNATION    | 9DX               | BASE PINS            | 9             |
| NOMINAL HEATER      | 6.3 V / 750 mA    | PARALLEL HEATER      | – / –         |
| HEATING             | Indirect          | SERIES OPERATION     | Not specified |
| CATHODE ARRANGEMENT | Separate cathodes | SECTION CONSTRUCTION | Dissimilar    |

## 9DX - TERMINAL PINOUT

| TERMINAL   | SECTION | ELEMENT              | STATUS    |
|------------|---------|----------------------|-----------|
| PIN1 – 2K  | B       | K – Cathode          | CONNECTED |
| PIN2 – 2G1 | B       | G1 – Control Grid    | CONNECTED |
| PIN3 – 2P  | B       | P – Plate (Anode)    | CONNECTED |
| PIN4 – H   | –       | H – Heater           | CONNECTED |
| PIN5 – H   | –       | H – Heater           | CONNECTED |
| PIN6 – 1G3 | A       | G3 – Suppressor Grid | CONNECTED |
| PIN6 – IS  | A       | IS – Internal Screen | CONNECTED |
| PIN6 – 1K  | A       | K – Cathode          | CONNECTED |
| PIN7 – 1G1 | A       | G1 – Control Grid    | CONNECTED |
| PIN8 – 1G2 | A       | G2 – Screen Grid     | CONNECTED |
| PIN9 – 1P  | A       | P – Plate (Anode)    | CONNECTED |

## SECTION RATINGS

| SECTION1 Pentode                                                                                                                                  |                |
|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| PLATE RESISTANCE                                                                                                                                  | 60000 $\Omega$ |
| TRANSCONDUCTANCE                                                                                                                                  | 0.02 S         |
| MAXIMUM PLATE VOLTAGE                                                                                                                             | 330 V          |
| MAXIMUM SCREEN VOLTAGE                                                                                                                            | 330 V          |
| MAXIMUM PLATE DISSIPATION                                                                                                                         | 5 W            |
| MAXIMUM SCREEN DISSIPATION                                                                                                                        | 1.1 W          |
| <i>Promoted from published ratings/characteristics where directly applicable; additional published values retained in TUBE_SECTION_PARAMETER.</i> |                |

| SECTION2 Triode                                                                                                                                   |               |
|---------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| PLATE RESISTANCE                                                                                                                                  | 4400 $\Omega$ |
| TRANSCONDUCTANCE                                                                                                                                  | 0.0104 S      |
| AMPLIFICATION FACTOR                                                                                                                              | 46            |
| MAXIMUM PLATE VOLTAGE                                                                                                                             | 330 V         |
| MAXIMUM PLATE DISSIPATION                                                                                                                         | 2 W           |
| <i>Promoted from published ratings/characteristics where directly applicable; additional published values retained in TUBE_SECTION_PARAMETER.</i> |               |

Medium-mu triode plus sharp-cutoff pentode; the pentode is used as a television video amplifier and the triode as a general-purpose amplifier.

## 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 · Pentode

| OTHER                                                                   |                        |                                                             |
|-------------------------------------------------------------------------|------------------------|-------------------------------------------------------------|
| PARAMETER                                                               | PUBLISHED VALUE        | CONDITION / NOTE                                            |
| # Pulse duration must not exceed 15% of one horizontal scanning cycle ( | <b>10 microseconds</b> | Published in approved 6KR8 target datasheet entry; Section2 |
| Heater Voltage (ac/dc) 6.3                                              | <b>10.5 V</b>          | Published in approved 6KR8 target datasheet entry; Section2 |
| Heater Current 0.7B                                                     | <b>450 mA</b>          | Published in approved 6KR8 target datasheet entry; Section2 |
| Heater Warm-up Time (Average)                                           | <b>11 seconds</b>      | Published in approved 6KR8 target datasheet entry; Section2 |
| –                                                                       | <b>330 V</b>           | Published in approved 6KR8 target datasheet entry; Section2 |
| 330                                                                     | <b>330 V</b>           | Published in approved 6KR8 target datasheet entry; Section2 |
| Grid-No. 1 (Control-Grid) Voltage, Positive-bias value 0                | <b>0 V</b>             | Published in approved 6KR8 target datasheet entry; Section2 |
| Plate Dissipation 2                                                     | <b>5 W</b>             | Published in approved 6KR8 target datasheet entry; Section2 |
| For voltages up to                                                      | <b>165 V</b>           | Published in approved 6KR8 target datasheet entry; Section2 |
| – See curve page                                                        | <b>300 W</b>           | Published in approved 6KR8 target datasheet entry; Section2 |
| For voltages between 165 and                                            | <b>330 V</b>           | Published in approved 6KR8 target datasheet entry; Section2 |
| Transconductance 10400                                                  | <b>20000 μS</b>        | Published in approved 6KR8 target datasheet entry; Section2 |
| Plate Current 15 54                                                     | <b>19.5 mA</b>         | Published in approved 6KR8 target datasheet entry; Section2 |

| PARAMETER                                 | PUBLISHED VALUE                 | CONDITION / NOTE                                            |
|-------------------------------------------|---------------------------------|-------------------------------------------------------------|
| Grid-No.2 Current – 13.5                  | <b>3 mA</b>                     | Published in approved 6KR8 target datasheet entry; Section2 |
| of 100 $\mu$ A – –                        | <b>6.3 V</b>                    | Published in approved 6KR8 target datasheet entry; Section2 |
| For fixed-bias operation 0.5              | <b>0.5 M<math>\Omega</math></b> | Published in approved 6KR8 target datasheet entry; Section2 |
| For cathode-bias operation 1              | <b>1 M<math>\Omega</math></b>   | Published in approved 6KR8 target datasheet entry; Section2 |
| quency in the order of                    | <b>40 MHz</b>                   | Published in approved 6KR8 target datasheet entry; Section2 |
| Heater Voltage (ac/dc) 3.5<br>4.5         | <b>6.3 V</b>                    | Published in approved 6KR8 target datasheet entry; Section2 |
| Heater Current 0.6 0.45                   | <b>300 mA</b>                   | Published in approved 6KR8 target datasheet entry; Section2 |
| Heater Warm-up Time<br>(Average) 11       | <b>11 seconds</b>               | Published in approved 6KR8 target datasheet entry; Section2 |
| Plate Voltage                             | <b>330 V</b>                    | Published in approved 6KR8 target datasheet entry; Section2 |
| Grid-No.3 (Suppressor-Grid)<br>Voltage    | <b>0 V</b>                      | Published in approved 6KR8 target datasheet entry; Section2 |
| Grid-No.2 (Screen-Grid)<br>Supply Voltage | <b>330 V</b>                    | Published in approved 6KR8 target datasheet entry; Section2 |
| Grid-No.1 (Control-Grid)<br>Voltage       | <b>0 V</b>                      | Published in approved 6KR8 target datasheet entry; Section2 |
| Plate Dissipation                         | <b>3.1 W</b>                    | Published in approved 6KR8 target datasheet entry; Section2 |
| For grid-No.2 voltages up to              | <b>165 V</b>                    | Published in approved 6KR8 target datasheet entry; Section2 |
| For grid-No.2 voltages up to<br>165 volts | <b>0.6 W</b>                    | Published in approved 6KR8 target datasheet entry; Section2 |
| For grid-No.2 voltages<br>between 165 and | <b>330 V</b>                    | Published in approved 6KR8 target datasheet entry; Section2 |

| CHARACTERISTIC                    |                 |                                                             |
|-----------------------------------|-----------------|-------------------------------------------------------------|
| PARAMETER                         | PUBLISHED VALUE | CONDITION / NOTE                                            |
| Plate Supply Voltage 125 35       | <b>200 V</b>    | Published in approved 6KR8 target datasheet entry; Section2 |
| Grid-No.2 Supply Voltage –<br>100 | <b>100 V</b>    | Published in approved 6KR8 target datasheet entry; Section2 |
|                                   |                 |                                                             |

| PARAMETER | PUBLISHED VALUE                  | CONDITION / NOTE                                            |
|-----------|----------------------------------|-------------------------------------------------------------|
| 4400      | <b>60000 <math>\Omega</math></b> | Published in approved 6KR8 target datasheet entry; Section2 |

| CAPACITANCE     |                 |                                                             |
|-----------------|-----------------|-------------------------------------------------------------|
| PARAMETER       | PUBLISHED VALUE | CONDITION / NOTE                                            |
| Internal Shield | <b>9.5 pF</b>   | Published in approved 6KR8 target datasheet entry; Section2 |

1975 RCA RC30

## Section 2 · Triode

| OTHER                                                                   |                                 |                                                             |
|-------------------------------------------------------------------------|---------------------------------|-------------------------------------------------------------|
| PARAMETER                                                               | PUBLISHED VALUE                 | CONDITION / NOTE                                            |
| # Pulse duration must not exceed 15% of one horizontal scanning cycle ( | <b>10 microseconds</b>          | Published in approved 6KR8 target datasheet entry; Section1 |
| Heater Voltage (ac/dc) 6.3                                              | <b>10.5 V</b>                   | Published in approved 6KR8 target datasheet entry; Section1 |
| Heater Current 0.7B                                                     | <b>450 mA</b>                   | Published in approved 6KR8 target datasheet entry; Section1 |
| Heater Warm-up Time (Average)                                           | <b>11 seconds</b>               | Published in approved 6KR8 target datasheet entry; Section1 |
| –                                                                       | <b>330 V</b>                    | Published in approved 6KR8 target datasheet entry; Section1 |
| 330                                                                     | <b>330 V</b>                    | Published in approved 6KR8 target datasheet entry; Section1 |
| Grid-No. 1 (Control-Grid) Voltage, Positive-bias value 0                | <b>0 V</b>                      | Published in approved 6KR8 target datasheet entry; Section1 |
| Plate Dissipation 2                                                     | <b>5 W</b>                      | Published in approved 6KR8 target datasheet entry; Section1 |
| For voltages up to                                                      | <b>165 V</b>                    | Published in approved 6KR8 target datasheet entry; Section1 |
| – See curve page                                                        | <b>300 W</b>                    | Published in approved 6KR8 target datasheet entry; Section1 |
| For voltages between 165 and                                            | <b>330 V</b>                    | Published in approved 6KR8 target datasheet entry; Section1 |
| Transconductance 10400                                                  | <b>20000 <math>\mu S</math></b> | Published in approved 6KR8 target datasheet entry; Section1 |
| Plate Current 15 54                                                     | <b>19.5 mA</b>                  | Published in approved 6KR8 target datasheet entry; Section1 |

| PARAMETER                                 | PUBLISHED VALUE | CONDITION / NOTE                                            |
|-------------------------------------------|-----------------|-------------------------------------------------------------|
| Grid-No.2 Current – 13.5                  | 3 mA            | Published in approved 6KR8 target datasheet entry; Section1 |
| of 100 $\mu$ A – –                        | 6.3 V           | Published in approved 6KR8 target datasheet entry; Section1 |
| For fixed-bias operation 0.5              | 0.5 M $\Omega$  | Published in approved 6KR8 target datasheet entry; Section1 |
| For cathode-bias operation 1              | 1 M $\Omega$    | Published in approved 6KR8 target datasheet entry; Section1 |
| quency in the order of                    | 40 MHz          | Published in approved 6KR8 target datasheet entry; Section1 |
| Heater Voltage (ac/dc) 3.5<br>4.5         | 6.3 V           | Published in approved 6KR8 target datasheet entry; Section1 |
| Heater Current 0.6 0.45                   | 300 mA          | Published in approved 6KR8 target datasheet entry; Section1 |
| Heater Warm-up Time<br>(Average) 11       | 11 seconds      | Published in approved 6KR8 target datasheet entry; Section1 |
| Plate Voltage                             | 330 V           | Published in approved 6KR8 target datasheet entry; Section1 |
| Grid-No.3 (Suppressor-Grid)<br>Voltage    | 0 V             | Published in approved 6KR8 target datasheet entry; Section1 |
| Grid-No.2 (Screen-Grid)<br>Supply Voltage | 330 V           | Published in approved 6KR8 target datasheet entry; Section1 |
| Grid-No.1 (Control-Grid)<br>Voltage       | 0 V             | Published in approved 6KR8 target datasheet entry; Section1 |
| Plate Dissipation                         | 3.1 W           | Published in approved 6KR8 target datasheet entry; Section1 |
| For grid-No.2 voltages up to              | 165 V           | Published in approved 6KR8 target datasheet entry; Section1 |
| For grid-No.2 voltages up to<br>165 volts | 0.6 W           | Published in approved 6KR8 target datasheet entry; Section1 |
| For grid-No.2 voltages<br>between 165 and | 330 V           | Published in approved 6KR8 target datasheet entry; Section1 |

| CHARACTERISTIC                    |                 |                                                             |
|-----------------------------------|-----------------|-------------------------------------------------------------|
| PARAMETER                         | PUBLISHED VALUE | CONDITION / NOTE                                            |
| Plate Supply Voltage 125 35       | 200 V           | Published in approved 6KR8 target datasheet entry; Section1 |
| Grid-No.2 Supply Voltage –<br>100 | 100 V           | Published in approved 6KR8 target datasheet entry; Section1 |
|                                   |                 |                                                             |

| PARAMETER | PUBLISHED VALUE | CONDITION / NOTE                                            |
|-----------|-----------------|-------------------------------------------------------------|
| 4400      | 60000 $\Omega$  | Published in approved 6KR8 target datasheet entry; Section1 |

| CAPACITANCE     |                 |                                                             |
|-----------------|-----------------|-------------------------------------------------------------|
| PARAMETER       | PUBLISHED VALUE | CONDITION / NOTE                                            |
| Internal Shield | 9.5 pF          | Published in approved 6KR8 target datasheet entry; Section1 |

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