

ELECTRONIC TUBE REFERENCE

6CW5

Power - TV Vertical Output electronic tube

CONSOLIDATED TECHNICAL DATA  
1 SECTION  
CONSTRUCTION  
BEAMPOWER

Power pentode designed for television vertical-deflection amplifier service in color and black-and-white receivers.

GENERAL CHARACTERISTICS

|                     |                   |                      |               |
|---------------------|-------------------|----------------------|---------------|
| BASE DESIGNATION    | 9CV               | BASE PINS            | 9             |
| NOMINAL HEATER      | 6.3 V / 760 mA    | PARALLEL HEATER      | – / –         |
| HEATING             | Indirect          | SERIES OPERATION     | Not specified |
| CATHODE ARRANGEMENT | Separate cathodes | SECTION CONSTRUCTION | Similar       |

9CV - TERMINAL PINOUT

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

SECTION RATINGS

| SECTION1 Beam Power                                                                                                      |                |
|--------------------------------------------------------------------------------------------------------------------------|----------------|
| PLATE RESISTANCE                                                                                                         | 23000 $\Omega$ |
| TRANSCONDUCTANCE                                                                                                         | 0.01 S         |
| AMPLIFICATION FACTOR                                                                                                     | 8              |
| MAXIMUM PLATE VOLTAGE                                                                                                    | 250 V          |
| MAXIMUM SCREEN VOLTAGE                                                                                                   | 200 V          |
| MAXIMUM PLATE DISSIPATION                                                                                                | 12 W           |
| MAXIMUM SCREEN DISSIPATION                                                                                               | 1.75 W         |
| MAXIMUM CATHODE CURRENT                                                                                                  | 100 mA         |
| <i>Published promoted values applied where applicable; additional ratings and operating data retained as parameters.</i> |                |

Power pentode used for vertical-deflection amplifier service in color and black-and-white television receivers.



## SOURCE OPERATING CONDITIONS

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# 1963 Amperex Condensed

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

## 1963 AMPEREX CONDENSED

## Section 1 · Beam Power

| OTHER                          |                 |                               |
|--------------------------------|-----------------|-------------------------------|
| PARAMETER                      | PUBLISHED VALUE | CONDITION / NOTE              |
| Plate voltage                  | 250 V           | AudioOutput                   |
| Screen voltage                 | 200 V           | AudioOutput                   |
| Control-grid voltage           | -18.5 V         | AudioOutput                   |
| Plate current                  | 70 mA           | AudioOutput                   |
| Screen current                 | 17 mA           | AudioOutput                   |
| Power output                   | 25 W            | AudioOutput;PushPull;TwoTubes |
| Load resistance plate-to-plate | 8000 $\Omega$   | AudioOutput;PushPull;TwoTubes |

| CHARACTERISTIC   |                     |                  |
|------------------|---------------------|------------------|
| PARAMETER        | PUBLISHED VALUE     | CONDITION / NOTE |
| Transconductance | 10000 $\mu\text{S}$ | Section1         |



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# 1966 Tung Sol Electronic Tubes 2 of 4

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

## 1966 TUNG SOL ELECTRONIC TUBES 2 OF 4

## Section 1 · Beam Power

| OTHER         |                 |                  |
|---------------|-----------------|------------------|
| PARAMETER     | PUBLISHED VALUE | CONDITION / NOTE |
| Plate voltage | 170 V           | ClassA,OneTube   |

| PARAMETER                                  | PUBLISHED VALUE | CONDITION / NOTE  |
|--------------------------------------------|-----------------|-------------------|
| Screen voltage                             | 170 V           | ClassA,OneTube    |
| Grid-1 bias                                | -12.5 V         | ClassA,OneTube    |
| Load resistance                            | 2400 ohm        | ClassA,OneTube    |
| Maximum power output                       | 5.6 W           | ClassA,OneTube    |
| Total harmonic distortion at maximum power | 10 percent      | ClassA,OneTube    |
| Supply voltage                             | 300 V           | PushPull,TwoTubes |
| Load resistance                            | 1000 ohm        | PushPull,TwoTubes |
| Maximum power output                       | 4.8 W           | PushPull,TwoTubes |

| CHARACTERISTIC            |                 |                  |
|---------------------------|-----------------|------------------|
| PARAMETER                 | PUBLISHED VALUE | CONDITION / NOTE |
| Zero-signal plate current | 70 mA           | ClassA,OneTube   |



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# 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 · Beam Power

| OTHER                       |                 |                  |
|-----------------------------|-----------------|------------------|
| PARAMETER                   | PUBLISHED VALUE | CONDITION / NOTE |
| HeaterVoltageNominal        | 6.3 V           | —                |
| HeaterCurrentNominal        | 760 mA          | —                |
| PeakScreenDissipation       | 6 W             | —                |
| Typical Plate Voltage       | 170 V           | ClassA           |
| Maximum Signal Power Output | 5.6 W           | ClassA           |

| CHARACTERISTIC   |                 |                  |
|------------------|-----------------|------------------|
| PARAMETER        | PUBLISHED VALUE | CONDITION / NOTE |
| Plate Resistance | 23000 Ohm       | —                |
| Transconductance | 10000 uS        | —                |

## SOURCE OPERATING CONDITIONS

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# 1971 RCA HB3 Binder 4 of 7

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

1971 RCA HB3 BINDER 4 OF 7

## Section 1 · Beam Power

| CHARACTERISTICS                          |                 |                                                                                                  |
|------------------------------------------|-----------------|--------------------------------------------------------------------------------------------------|
| PARAMETER                                | PUBLISHED VALUE | CONDITION / NOTE                                                                                 |
| Voltage (AC or DC) – published value 1   | 6.3 V           | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Voltage (AC or DC) – published value 2   | 0.6 V           | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Current at 6.3 volts – published value 1 | 6.3 V           | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Current at 6.3 volts – published value 2 | 0.76 V          | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Peak                                     | 330 V           | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Pin 2-Grid No.1                          | 2               | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Pin 3-Cathode, Grid No.3                 | 3               | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Pin 4-Heater                             | 4               | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Pin 5-Heater                             | 5               | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Pin 7-Plate                              | 7               | Published datasheet value; multiple values represent separate source-table limits or conditions. |
|                                          |                 |                                                                                                  |

| PARAMETER                                             | PUBLISHED VALUE  | CONDITION / NOTE                                                                                 |
|-------------------------------------------------------|------------------|--------------------------------------------------------------------------------------------------|
| Pin 9-Grid No.2                                       | <b>9</b>         | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Plate Voltage                                         | <b>170 V</b>     | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Grid-No.2 (Screen-Grid) Voltage                       | <b>170 V</b>     | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Grid-No.1 (Control-Grid) Voltage                      | <b>-12.5 V</b>   | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Mu-Factor, Grid No.2 to Grid No 1 – published value 1 | <b>1</b>         | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Mu-Factor, Grid No.2 to Grid No 1 – published value 2 | <b>8</b>         | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Plate Resistance (Approx.)                            | <b>26000 ohm</b> | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Transconductance                                      | <b>11000</b>     | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Plate Current                                         | <b>70 mA</b>     | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Grid-No.2 Current                                     | <b>3.5 mA</b>    | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Plate Supply Voltage                                  | <b>600 V</b>     | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Plate Voltage                                         | <b>275 V</b>     | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Grid No.2 Supply Voltage                              | <b>600 V</b>     | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Grid No.2 Voltage                                     | <b>220 V</b>     | Published datasheet value; multiple values represent separate source-table limits or conditions. |
|                                                       |                  |                                                                                                  |

| PARAMETER                             | PUBLISHED VALUE | CONDITION / NOTE                                                                                 |
|---------------------------------------|-----------------|--------------------------------------------------------------------------------------------------|
| Average Cathode Current               | 110 mA          | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Peak                                  | 7 W             | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Plate Dissipation                     | 14 W            | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Grid-No.1-Circuit Resistance          | 1 Mohm          | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| DC Plate Voltage                      | 275 V           | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Peak Positive-Pulse Plate Voltage     | 2200 V          | Pulse                                                                                            |
| DC Grid-No.2 Voltage                  | 275 V           | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Peak Negative-Pulse Grid-No.1 Voltage | 250 V           | Pulse                                                                                            |
| Peak                                  | 240 mA          | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Grid No.2 Input                       | 2.1 W           | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Plate Dissipation                     | 12 W            | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Grid-No.1-Circuit Resistance          | 2.2             | Published datasheet value; multiple values represent separate source-table limits or conditions. |

| OTHER               |                 |                                                                                                  |
|---------------------|-----------------|--------------------------------------------------------------------------------------------------|
| PARAMETER           | PUBLISHED VALUE | CONDITION / NOTE                                                                                 |
| Plate to grid No.1  | 0.6 mA          | Published datasheet value; multiple values represent separate source-table limits or conditions. |
| Grid No.1 to heater | 0.25 mA         | Published datasheet value; multiple values represent separate source-table limits or conditions. |
|                     |                 |                                                                                                  |

| PARAMETER                                                                             | PUBLISHED VALUE | CONDITION / NOTE |
|---------------------------------------------------------------------------------------|-----------------|------------------|
| pulse duration 6 percent of a cycle with amaximum of 1.2 mi 11 i- – published value 1 | <b>6</b>        | Pulse            |
| pulse duration 6 percent of a cycle with amaximum of 1.2 mi 11 i- – published value 2 | <b>1.2</b>      | Pulse            |
| pulse duration 6 percent of a cycle with amaximum of 1.2 mi 11 i- – published value 3 | <b>11</b>       | Pulse            |



## SOURCE OPERATING CONDITIONS

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# 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 · Beam Power

| OTHER                                  |                 |                                                             |
|----------------------------------------|-----------------|-------------------------------------------------------------|
| PARAMETER                              | PUBLISHED VALUE | CONDITION / NOTE                                            |
| Heater Voltage (ac/dc) 8 10.6          | <b>15 V</b>     | Published in approved XL86 target datasheet entry; Section1 |
| Heater Current 0.76 0.6 0.45           | <b>300 mA</b>   | Published in approved XL86 target datasheet entry; Section1 |
| Plate Supply Voltage                   | <b>600 V</b>    | Published in approved XL86 target datasheet entry; Section1 |
| Grid-No.2 Voltage                      | <b>220 V</b>    | Published in approved XL86 target datasheet entry; Section1 |
| Grid-No.2 (Screen-Grid) Supply Voltage | <b>600 V</b>    | Published in approved XL86 target datasheet entry; Section1 |
| Grid-No.2 Input                        | <b>2.1 W</b>    | Published in approved XL86 target datasheet entry; Section1 |
| Peak Grid-No.2 Input                   | <b>7 W</b>      | Published in approved XL86 target datasheet entry; Section1 |
| Plate Voltage                          | <b>170 V</b>    | Published in approved XL86 target datasheet entry; Section1 |
| Grid-No.1-Circuit Resistance           | <b>1 MΩ</b>     | Published in approved XL86 target datasheet entry; Section1 |

| PARAMETER                                                             | PUBLISHED VALUE         | CONDITION / NOTE                                            |
|-----------------------------------------------------------------------|-------------------------|-------------------------------------------------------------|
| Plate Voltage                                                         | <b>275 V</b>            | Published in approved XL86 target datasheet entry; Section1 |
| Peak Positive-Pulse Plate Voltage#                                    | <b>2200 V</b>           | Published in approved XL86 target datasheet entry; Section1 |
| Grid-No.2 Voltage                                                     | <b>275 V</b>            | Published in approved XL86 target datasheet entry; Section1 |
| Peak Negative-Pulse Grid-No.1 Voltage                                 | <b>250 V</b>            | Published in approved XL86 target datasheet entry; Section1 |
| Peak Cathode Current                                                  | <b>240 mA</b>           | Published in approved XL86 target datasheet entry; Section1 |
| Average Cathode Current                                               | <b>110 mA</b>           | Published in approved XL86 target datasheet entry; Section1 |
| Plate Dissipation                                                     | <b>12 W</b>             | Published in approved XL86 target datasheet entry; Section1 |
| Grid-No.1-Circuit Resistance                                          | <b>2.2 MΩ</b>           | Published in approved XL86 target datasheet entry; Section1 |
| # Pulse duration must not exceed 6 r/, of a vertical scanning cycle ( | <b>1.2 milliseconds</b> | Published in approved XL86 target datasheet entry; Section1 |

| CAPACITANCE                                            |                 |                                                             |
|--------------------------------------------------------|-----------------|-------------------------------------------------------------|
| PARAMETER                                              | PUBLISHED VALUE | CONDITION / NOTE                                            |
| Grid No.1 to Plate                                     | <b>0.6 pF</b>   | Published in approved XL86 target datasheet entry; Section1 |
| Grid No.1 to Cathode, Heater, Grid No.2, and Grid No.3 | <b>13 pF</b>    | Published in approved XL86 target datasheet entry; Section1 |
| Plate to Cathode, Heater, Grid No.2, and Grid No.3     | <b>6.8 pF</b>   | Published in approved XL86 target datasheet entry; Section1 |

| CHARACTERISTIC                   |                 |                                                             |
|----------------------------------|-----------------|-------------------------------------------------------------|
| PARAMETER                        | PUBLISHED VALUE | CONDITION / NOTE                                            |
| Grid-No.2 Voltage                | <b>170 V</b>    | Published in approved XL86 target datasheet entry; Section1 |
| Grid-No.1 (Control-Grid) Voltage | <b>12.5 V</b>   | Published in approved XL86 target datasheet entry; Section1 |
| Plate Resistance                 | <b>26000 Ω</b>  | Published in approved XL86 target datasheet entry; Section1 |
| Transconductance                 | <b>11000 μS</b> | Published in approved XL86 target datasheet entry; Section1 |
|                                  |                 |                                                             |

| PARAMETER         | PUBLISHED VALUE | CONDITION / NOTE                                            |
|-------------------|-----------------|-------------------------------------------------------------|
| Plate Current     | <b>70 mA</b>    | Published in approved XL86 target datasheet entry; Section1 |
| Grid-No.2 Current | <b>3.5 mA</b>   | Published in approved XL86 target datasheet entry; Section1 |