



## ELECTRONIC TUBE REFERENCE

8417

Power - Beam (NOT sweep) electronic tube

CONSOLIDATED TECHNICAL DATA

## 1 SECTION

CONSTRUCTION

## BEAMPOWER

Glass-octal beam-power output tube designed for high-fidelity, high-power sound systems and demanding audio-frequency amplifier output stages.

## GENERAL CHARACTERISTICS

|                     |                   |                      |               |
|---------------------|-------------------|----------------------|---------------|
| BASE DESIGNATION    | 8LY               | BASE PINS            | 8             |
| NOMINAL HEATER      | 6.3 V / 1.6 A     | PARALLEL HEATER      | – / –         |
| HEATING             | Indirect          | SERIES OPERATION     | Not specified |
| CATHODE ARRANGEMENT | Separate cathodes | SECTION CONSTRUCTION | Similar       |

## SECTION RATINGS

|                                                                                                                                                         |                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| SECTION 1 Beam Power                                                                                                                                    |                |
| PLATE RESISTANCE                                                                                                                                        | 16000 $\Omega$ |
| TRANSCONDUCTANCE                                                                                                                                        | 0.023 S        |
| AMPLIFICATION FACTOR                                                                                                                                    | 16.5           |
| MAXIMUM PLATE VOLTAGE                                                                                                                                   | 680 V          |
| MAXIMUM SCREEN VOLTAGE                                                                                                                                  | 500 V          |
| MAXIMUM PLATE DISSIPATION                                                                                                                               | 35 W           |
| MAXIMUM SCREEN DISSIPATION                                                                                                                              | 5 W            |
| MAXIMUM CATHODE CURRENT                                                                                                                                 | 200 mA         |
| <i>Published electrical limits and characteristics promoted from the approved source; non-schema quantities are retained in TUBE_SECTION_PARAMETER.</i> |                |

Glass-octal beam-power output tube for high-fidelity, high-power sound systems.



## SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

# 1947 Westinghouse

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

1947 WESTINGHOUSE

## Section 1 · Beam Power

| OTHER                          |                 |                  |
|--------------------------------|-----------------|------------------|
| PARAMETER                      | PUBLISHED VALUE | CONDITION / NOTE |
| HeaterVoltageNominal           | 6.3 V           | Nominal          |
| HeaterCurrentNominal           | 1.6 A           | Nominal          |
| MaximumPlateOrOperatingVoltage | 680 V           | —                |
| Maximum Screen Voltage         | 500 V           | —                |
| Maximum Plate Dissipation      | 35 W            | —                |
| Maximum Screen Dissipation     | 5 W             | —                |
| Maximum Cathode Current        | 200 mA          | —                |

| CHARACTERISTIC              |                 |                                                 |
|-----------------------------|-----------------|-------------------------------------------------|
| PARAMETER                   | PUBLISHED VALUE | CONDITION / NOTE                                |
| Transconductance            | 23000 $\mu$ S   | Typical                                         |
| Amplification Factor        | 165             | Typical                                         |
| Plate Resistance            | 16000 ohm       | Typical                                         |
| Maximum Signal Power Output | 100 W           | PushPull ClassAB1 pentode connection; two tubes |



## SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

# 1950 Sylvania

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

1950 SYLVANIA

## Section 1 · Beam Power

| CHARACTERISTIC       |                 |                  |
|----------------------|-----------------|------------------|
| PARAMETER            | PUBLISHED VALUE | CONDITION / NOTE |
| Plate Resistance     | 16000 ohm       | —                |
| Transconductance     | 23000 $\mu$ S   | —                |
| Amplification Factor | 16.5            | —                |

| OTHER                       |                 |                                       |
|-----------------------------|-----------------|---------------------------------------|
| PARAMETER                   | PUBLISHED VALUE | CONDITION / NOTE                      |
| Maximum Plate Voltage       | 660 V           | —                                     |
| Maximum Screen Voltage      | 500 V           | —                                     |
| Maximum Plate Dissipation   | 35 W            | —                                     |
| Maximum Screen Dissipation  | 5 W             | —                                     |
| Maximum Cathode Current     | 200 mA          | —                                     |
| Plate Voltage               | 300 V           | —                                     |
| Screen Voltage              | 300 V           | —                                     |
| Plate Current               | 100 mA          | —                                     |
| Maximum Signal Power Output | 70 W            | ClassAB,UltraLinear,PushPull,TwoTubes |



SOURCE DATA APPENDIX

### SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

# 1965 Sylvania Electronic Tubes Vol3

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

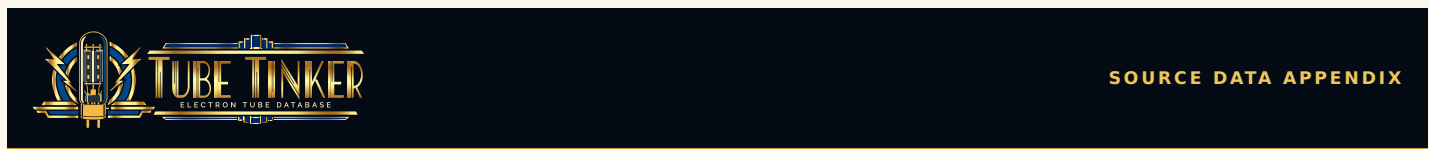
### 1965 SYLVANIA ELECTRONIC TUBES VOL3

## Section 1 · Beam Power

| CHARACTERISTIC            |                 |                  |
|---------------------------|-----------------|------------------|
| PARAMETER                 | PUBLISHED VALUE | CONDITION / NOTE |
| Heater Voltage            | 6.3 V           | —                |
| Heater Current            | 1.6 A           | —                |
| Grid To Plate Capacitance | 0.9 pF          | —                |
| Input Capacitance         | 22 pF           | —                |
| Output Capacitance        | 9 pF            | —                |

| PARAMETER            | PUBLISHED VALUE | CONDITION / NOTE |
|----------------------|-----------------|------------------|
| Plate Voltage        | 300 V           | —                |
| Screen Voltage       | 300 V           | —                |
| Grid Voltage         | -12 V           | —                |
| Plate Current        | 100 mA          | —                |
| Screen Current       | 5.5 mA          | —                |
| Transconductance     | 23000 uS        | —                |
| Plate Resistance     | 16000 ohm       | —                |
| Amplification Factor | 16.5            | —                |
| Grid Cutoff Voltage  | -37 V           | —                |

| OTHER        |                 |                                                        |
|--------------|-----------------|--------------------------------------------------------|
| PARAMETER    | PUBLISHED VALUE | CONDITION / NOTE                                       |
| Power Output | 70 W            | TwoTubes;PushPull;ClassAB;UltraLinear;PlateSupply=455V |
| Power Output | 100 W           | TwoTubes;PushPull;ClassAB;Pentode;PlateSupply=560V     |



## 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 · Beam Power

| OTHER                                  |                 |                                                             |
|----------------------------------------|-----------------|-------------------------------------------------------------|
| PARAMETER                              | PUBLISHED VALUE | CONDITION / NOTE                                            |
| Cathode Current                        | 200 mA          | Published in approved 8417 target datasheet entry; Section1 |
| Plate Dissipation"                     | 35 W            | Published in approved 8417 target datasheet entry; Section1 |
| Plate Voltage                          | 300 V           | Published in approved 8417 target datasheet entry; Section1 |
| Grid-No.2 Voltage                      | 300 V           | Published in approved 8417 target datasheet entry; Section1 |
| Grid-No.1 Voltage for plate current of | 1 mA            | Published in approved 8417 target datasheet entry; Section1 |

| PARAMETER                           | PUBLISHED VALUE                  | CONDITION / NOTE                                            |
|-------------------------------------|----------------------------------|-------------------------------------------------------------|
| For fixed-bias operation            | <b>1 M<math>\Omega</math></b>    | Published in approved 8417 target datasheet entry; Section1 |
| For cathode-bias operation          | <b>0.25 M<math>\Omega</math></b> | Published in approved 8417 target datasheet entry; Section1 |
| Plate Supply Voltage 400            | <b>560 V</b>                     | Published in approved 8417 target datasheet entry; Section1 |
| Grid-No.2 Supply Voltage 275        | <b>300 V</b>                     | Published in approved 8417 target datasheet entry; Section1 |
| Zero-Signal Plate Current 150       | <b>100 mA</b>                    | Published in approved 8417 target datasheet entry; Section1 |
| Maximum-Signal Plate Current 294    | <b>270 mA</b>                    | Published in approved 8417 target datasheet entry; Section1 |
| Zero-Signal Grid-No.2 Current 4.4   | <b>3.4 mA</b>                    | Published in approved 8417 target datasheet entry; Section1 |
| Maximum-Signal Grid-No.2 Current 34 | <b>31 mA</b>                     | Published in approved 8417 target datasheet entry; Section1 |
| Effective 2800                      | <b>4200 <math>\Omega</math></b>  | Published in approved 8417 target datasheet entry; Section1 |
| TotalHarmonic Distortion 2.5        | <b>2 %</b>                       | Published in approved 8417 target datasheet entry; Section1 |
| Maximum Signal Power Output 65      | <b>100 W</b>                     | Published in approved 8417 target datasheet entry; Section1 |
| * Grid-No.2 may reach               | <b>8 W</b>                       | Published in approved 8417 target datasheet entry; Section1 |

| CHARACTERISTIC    |                                  |                                                             |
|-------------------|----------------------------------|-------------------------------------------------------------|
| PARAMETER         | PUBLISHED VALUE                  | CONDITION / NOTE                                            |
| Plate Resistance  | <b>16000 <math>\Omega</math></b> | Published in approved 8417 target datasheet entry; Section1 |
| Transconductance  | <b>23000 <math>\mu</math>S</b>   | Published in approved 8417 target datasheet entry; Section1 |
| Plate Current     | <b>100 mA</b>                    | Published in approved 8417 target datasheet entry; Section1 |
| Grid-No.2 Current | <b>5.5 mA</b>                    | Published in approved 8417 target datasheet entry; Section1 |