



## ELECTRONIC TUBE REFERENCE

## EY86

Rectifier - TV Line Scan Boost electronic tube

CONSOLIDATED TECHNICAL DATA

**1 SECTION**  
CONSTRUCTION  
**RECTIFIER**

Widely used low-heater-power television flyback/EHT rectifier for generating CRT accelerating voltage from horizontal-output transformer pulses.

## GENERAL CHARACTERISTICS

|                     |                   |                      |               |
|---------------------|-------------------|----------------------|---------------|
| BASE DESIGNATION    | B9A               | BASE PINS            | 9             |
| NOMINAL HEATER      | 6.3 V / 90 mA     | PARALLEL HEATER      | – / –         |
| HEATING             | Indirect          | SERIES OPERATION     | Not specified |
| CATHODE ARRANGEMENT | Separate cathodes | SECTION CONSTRUCTION | Similar       |

## SECTION RATINGS

|                                      |               |
|--------------------------------------|---------------|
| <b>SECTION1</b> Rectifier            |               |
| PLATE RESISTANCE                     | 0.02 $\Omega$ |
| MAXIMUM CATHODE CURRENT              | 3 mA          |
| PEAK INVERSE VOLTAGE                 | 22000 V       |
| NOMINAL OUTPUT CURRENT               | 0.8 mA        |
| PEAK FORWARD CURRENT                 | 40 mA         |
| Filename-matched Russian entry only. |               |

High-voltage half-wave rectifier for television flyback EHT service.



## SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

# 1953 La Radiotechnique

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

## 1953 LA RADIOTECHNIQUE

## Section 1 · Rectifier

**CHARACTERISTICS**

| PARAMETER      | PUBLISHED VALUE | CONDITION / NOTE        |
|----------------|-----------------|-------------------------|
| Heater voltage | 6.3 V           | Published nominal value |
| Heater current | 60 mA           | Published nominal value |

**CAPACITANCE**

| PARAMETER         | PUBLISHED VALUE | CONDITION / NOTE        |
|-------------------|-----------------|-------------------------|
| Anode capacitance | 1.8 pF          | Without external shield |

**OTHER**

| PARAMETER         | PUBLISHED VALUE | CONDITION / NOTE        |
|-------------------|-----------------|-------------------------|
| Rectified voltage | 18 kV           | Published use condition |



## SOURCE OPERATING CONDITIONS

# 1953 RFT Rundfunk Technik

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

## 1953 RFT RUNDFUNK TECHNIK

## Section 1 · Rectifier

**CHARACTERISTICS**

| PARAMETER      | PUBLISHED VALUE | CONDITION / NOTE        |
|----------------|-----------------|-------------------------|
| Heater voltage | 6.3 V           | Published nominal value |
| Heater current | 90 mA           | Published nominal value |

| OTHER                |                 |                           |
|----------------------|-----------------|---------------------------|
| PARAMETER            | PUBLISHED VALUE | CONDITION / NOTE          |
| Peak inverse voltage | 22000 V         | Published rectifier limit |



SOURCE DATA APPENDIX

#### SOURCE OPERATING CONDITIONS

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# 1961 Ferranti Technical Handbook

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

#### 1961 FERRANTI TECHNICAL HANDBOOK

### Section 1 · Rectifier

| OTHER                         |                 |                                             |
|-------------------------------|-----------------|---------------------------------------------|
| PARAMETER                     | PUBLISHED VALUE | CONDITION / NOTE                            |
| Peak inverse voltage          | 22 kV           | PulseInput                                  |
| Rectified current maximum     | 800 uA          | PulseInput                                  |
| Peak plate current maximum    | 40 mA           | PulseInput                                  |
| Reservoir capacitance maximum | 2000 pF         | PulseInput                                  |
| RMS input voltage maximum     | 5 kV            | SinusoidalInput                             |
| Rectified current maximum     | 3 mA            | SinusoidalInput                             |
| Reservoir capacitance maximum | 0.2 uF          | SinusoidalInput                             |
| Minimum limiting resistance   | 100 kOhm        | SinusoidalInput                             |
| X-ray shielding threshold     | 6 kV            | ShieldingMayBeRequiredAboveThisPlateVoltage |

| CAPACITANCE                                |                 |                  |
|--------------------------------------------|-----------------|------------------|
| PARAMETER                                  | PUBLISHED VALUE | CONDITION / NOTE |
| Plate-to-heater/cathode/shield capacitance | 1.8 pF          | —                |



SOURCE DATA APPENDIX

# 1963 Philips Electron Tubes Handbook V1a

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

## 1963 PHILIPS ELECTRON TUBES HANDBOOK V1A

### Section 1 · Rectifier

| CAPACITANCE       |                 |                       |
|-------------------|-----------------|-----------------------|
| PARAMETER         | PUBLISHED VALUE | CONDITION / NOTE      |
| Anode capacitance | 1.55 pF         | WithoutExternalShield |

  

| CHARACTERISTIC                     |                 |                  |
|------------------------------------|-----------------|------------------|
| PARAMETER                          | PUBLISHED VALUE | CONDITION / NOTE |
| Internal resistance at 1 mA output | 20 kOhm         | —                |

  

| OTHER                               |                 |                   |
|-------------------------------------|-----------------|-------------------|
| PARAMETER                           | PUBLISHED VALUE | CONDITION / NOTE  |
| Peak inverse voltage                | 22000 V         | PulsedEHT         |
| Peak inverse voltage at zero output | 24000 V         | PulsedEHT         |
| Absolute peak inverse voltage       | 27000 V         | PulsedEHT         |
| Maximum DC output current           | 0.5 mA          | PulsedEHT         |
| Short-period DC output current      | 0.8 mA          | TelevisionService |
| Maximum DC output current           | 3 mA            | 50HzSinusoidal    |



SOURCE DATA APPENDIX

# 1967 Mullard Receiving and Amplifying Valves

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

## 1967 MULLARD RECEIVING AND AMPLIFYING VALVES

| OTHER                      |                 |                                                             |
|----------------------------|-----------------|-------------------------------------------------------------|
| PARAMETER                  | PUBLISHED VALUE | CONDITION / NOTE                                            |
| I                          | 90 mA           | Published in approved EY86 target datasheet entry; Section1 |
| l                          | 7 pF            | Published in approved EY86 target datasheet entry; Section1 |
| t P . I. V. max            | 22000 V         | Published in approved EY86 target datasheet entry; Section1 |
| ( ttia(Pk) max             | 40 mA           | Published in approved EY86 target datasheet entry; Section1 |
| C m ax                     | 2000 pF         | Published in approved EY86 target datasheet entry; Section1 |
| Vin (r . m . s . ) max . 5 | 0 V             | Published in approved EY86 target datasheet entry; Section1 |
| when operated above        | 16000 V         | Published in approved EY86 target datasheet entry; Section1 |
| Pins 1, 4,6 and            | 9 mA            | Published in approved EY86 target datasheet entry; Section1 |



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

SOURCE PDF

# 1973 Mazda Valves Binder 2

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

1973 MAZDA VALVES BINDER 2

| CHARACTERISTICS |                 |                         |
|-----------------|-----------------|-------------------------|
| PARAMETER       | PUBLISHED VALUE | CONDITION / NOTE        |
| Heater voltage  | 6.3 V           | Published nominal value |
| Heater current  | 90 mA           | Published nominal value |

| OTHER                     |                 |                           |
|---------------------------|-----------------|---------------------------|
| PARAMETER                 | PUBLISHED VALUE | CONDITION / NOTE          |
| Maximum DC anode current  | 0.8 mA          | Television flyback EHT    |
| X-ray shielding threshold | 16 kV           | Design-centre PIV warning |

## SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

# 1981 Russian Tubes Katsnelson and Larionov

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

## 1981 RUSSIAN TUBES KATSNELSON AND LARIONOV

## Section 1 · Rectifier

| CHARACTERISTICS      |                 |                                                                                    |
|----------------------|-----------------|------------------------------------------------------------------------------------|
| PARAMETER            | PUBLISHED VALUE | CONDITION / NOTE                                                                   |
| Heater current       | 90 mA           | Translated from Russian source; Ток накала . К, 90 мА                              |
| Plate current        | 12 mA           | Translated from Russian source; Ток анода (при !./д=100 В) МАЕ ВНО 12 мА           |
| Capacitance          | 1.8 pF          | Translated from Russian source; Емкость между анодом и катодом . . . . . , 1,8 пФ  |
| Plate current        | 100 mA          | Translated from Russian source; Ток анода . . . . . , 100 мА                       |
| Transconductance     | 14 mA/V         | Translated from Russian source; Крутизна характеристики . . , . . . . . , 14 мА/В  |
| Amplification factor | 1               | Translated from Russian source; Коэффициент усиления по 2-й сетке относительно 1-й |

| OTHER                |                 |                                                                                       |
|----------------------|-----------------|---------------------------------------------------------------------------------------|
| PARAMETER            | PUBLISHED VALUE | CONDITION / NOTE                                                                      |
| Rectified current    | 150 mA          | Translated from Russian source; Выпрямленный ток (при Пвы,р_18 кВ) К . . . . 150 мкА  |
| Peak inverse voltage | 22 V            | Translated from Russian source; Обратное напряжение (в импульсе} . . . . . , 22 кВ    |
| Rectified current    | 800 mA          | Translated from Russian source; Выпрямленный ток (среднее значение) . . . . . 800 мкА |
| Heater voltage       | 25 V            | Translated from Russian source; Напряжение накала . . . . . , 25 В                    |

## SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

# 1999 Philips E-Z

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

1999 PHILIPS E-Z

## Section 1 · Rectifier

| CHARACTERISTIC             |                 |                                                         |
|----------------------------|-----------------|---------------------------------------------------------|
| PARAMETER                  | PUBLISHED VALUE | CONDITION / NOTE                                        |
| Published electrical datum | —               | Ce tube est equivalent au type EY 87, a 1! exception de |

| OTHER          |                 |                       |
|----------------|-----------------|-----------------------|
| PARAMETER      | PUBLISHED VALUE | CONDITION / NOTE      |
| Heater voltage | 6.3 V           | Nominal heater rating |
| Heater current | 90 mA           | Nominal heater rating |

## TUBE TINKER

An independent reference for electronic tubes, vacuum tubes,  
and their source documents.

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