



## ELECTRONIC TUBE REFERENCE

## E438

Voltage - Triode (single) electronic tube

CONSOLIDATED TECHNICAL DATA

## 1 SECTION

CONSTRUCTION

## TRIODE

Philips triode for general amplifier service; available source material does not establish a narrower functional application confidently.

## GENERAL CHARACTERISTICS

|                     |                   |                      |               |
|---------------------|-------------------|----------------------|---------------|
| BASE DESIGNATION    | —                 | BASE PINS            | —             |
| NOMINAL HEATER      | 4 V / 1 A         | PARALLEL HEATER      | — / —         |
| HEATING             | Indirect          | SERIES OPERATION     | Not specified |
| CATHODE ARRANGEMENT | Separate cathodes | SECTION CONSTRUCTION | Similar       |

## SECTION RATINGS

|                                                                     |                 |
|---------------------------------------------------------------------|-----------------|
| SECTION 1 Triode                                                    |                 |
| PLATE RESISTANCE                                                    | 120000 $\Omega$ |
| TRANSCONDUCTANCE                                                    | 0.0015 S        |
| AMPLIFICATION FACTOR                                                | 38              |
| MAXIMUM PLATE DISSIPATION                                           | 3 W             |
| Philips indirectly heated triode with low-current operating points. |                 |

E438 is a Triode device in the supplied Philips literature. Philips indirectly heated triode with low-current operating points.



## SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

# 1938 Philips Miniwatt Vacuum Tube Catalog

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

## 1938 PHILIPS MINIWATT VACUUM TUBE CATALOG

## Section 1 · Triode

| OTHER                     |                 |                         |
|---------------------------|-----------------|-------------------------|
| PARAMETER                 | PUBLISHED VALUE | CONDITION / NOTE        |
| Plate voltage             | 200 V           | ClassA                  |
| Plate current             | 0.3 mA          | ClassA; OperatingPoint1 |
| Grid bias                 | -2.5 V          | ClassA; OperatingPoint1 |
| Plate current             | 0.1 mA          | ClassA; OperatingPoint2 |
| Grid bias                 | -2.5 V          | ClassA; OperatingPoint2 |
| Maximum anode dissipation | 3 W             | —                       |

| CHARACTERISTIC       |                 |                         |
|----------------------|-----------------|-------------------------|
| PARAMETER            | PUBLISHED VALUE | CONDITION / NOTE        |
| Transconductance     | 1.5 mA/V        | ClassA                  |
| Amplification factor | 38              | ClassA                  |
| Internal resistance  | 120000 ohm      | ClassA; OperatingPoint1 |
| Internal resistance  | 400000 ohm      | ClassA; OperatingPoint2 |



## 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

| OTHER                     |                 |                  |
|---------------------------|-----------------|------------------|
| PARAMETER                 | PUBLISHED VALUE | CONDITION / NOTE |
| Normal plate current      | 0.3 mA          | Ra=0.3MOhm       |
| External plate resistance | 0.3 MΩ          | Detector         |

### TUBE TINKER

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