



## ELECTRONIC TUBE REFERENCE

## YL1430

Power - Tetrode (NOT beam) (over 1000V 100W) electronic tube

CONSOLIDATED TECHNICAL  
DATA

**1 SECTION**  
CONSTRUCTION  
**TETRODE**

High-power forced-air-cooled metal-ceramic VHF tetrode for television transmitters, AM/FM broadcasting, transposers, and AF modulation. Approximately 12 kW plate dissipation and high-voltage operation suit large professional broadcast installations.

## GENERAL CHARACTERISTICS

|                     |                   |                      |               |
|---------------------|-------------------|----------------------|---------------|
| BASE DESIGNATION    | —                 | BASE PINS            | —             |
| NOMINAL HEATER      | 8 V / 120 A       | PARALLEL HEATER      | — / —         |
| HEATING             | Direct            | SERIES OPERATION     | Not specified |
| CATHODE ARRANGEMENT | Separate cathodes | SECTION CONSTRUCTION | Similar       |

## SECTION RATINGS

|                             |         |
|-----------------------------|---------|
| <b>SECTION1</b> Tetrode     |         |
| TRANSCONDUCTANCE            | 0.045 S |
| AMPLIFICATION FACTOR        | 8.5     |
| MAXIMUM PLATE VOLTAGE       | 9500 V  |
| MAXIMUM SCREEN VOLTAGE      | 1000 V  |
| MAXIMUM PLATE DISSIPATION   | 12000 W |
| MAXIMUM SCREEN DISSIPATION  | 100 W   |
| MAXIMUM GRID DISSIPATION    | 50 W    |
| MAXIMUM CATHODE CURRENT     | 6 A     |
| <i>VHF RF power tetrode</i> |         |

Forced-air-cooled metal-ceramic VHF power tetrode for high-power television transmitters, AM/FM

broadcast, AF modulation, and transposer service.

## 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 · Tetrode

| OTHER                                        |                 |                  |
|----------------------------------------------|-----------------|------------------|
| PARAMETER                                    | PUBLISHED VALUE | CONDITION / NOTE |
| Frequency f 175,                             | 25 MHz          | Transposer       |
| Anode voltage Va                             | 7 kV            | Transposer       |
| Output power in load W <sub>yg</sub>         | 18.4 kW         | —                |
| Frequency f                                  | 260 MHz         | ClassB           |
| Anode voltage Va                             | 7.5 kV          | ClassB           |
| Output power in load W,                      | 13 kW           | ClassB           |
| Frequency f                                  | 260 MHz         | ClassC           |
| Anode voltage Vg                             | 8 kV            | ClassC           |
| Output power in load W <sub>y</sub>          | 18 kW           | ClassC           |
| Frequency f                                  | 175 to 225 MHz  | Transposer       |
| Anode voltage Va                             | 6 kV            | Transposer       |
| Output power in load W <sub>y</sub>          | 7 kW            | Transposer       |
| Filament current I <sub>φ</sub>              | 120 A           | —                |
| Filament peak starting current pr max        | 750 A           | —                |
| Waiting time T <sub>w</sub> min              | 1 s             | —                |
| Absolute max. envelope temperature topy Mmax | 240 °c          | —                |
| Frequency f up to                            | 260 MHz         | ClassB           |
| Anode voltage Va max                         | 9 kv            | —                |
| Grid no. 2 voltage Vg <sub>o</sub> max       | 1 kV            | —                |
| Grid na. I voltage Vg <sub>1</sub> max       | 500 V           | —                |
| Anode input power W <sub>ia</sub> max        | 24 kW           | —                |

| PARAMETER                                    | PUBLISHED VALUE | CONDITION / NOTE |
|----------------------------------------------|-----------------|------------------|
| Anode dissipation $W_a$ max                  | 12 kW           | —                |
| Grid no. 2 dissipation $W_{g2}$ max          | 100 W           | —                |
| Grid no. 1 dissipation $W_{g1}$ max          | 50 W            | —                |
| Cathode current $I_c$ max                    | 6 A             | —                |
| Frequency $f$ up to                          | 260 MHz         | —                |
| Anode voltage $V_a$                          | 7.5 kV          | —                |
| Grid no. 2 voltage $V_{g2}$                  | 650 V           | —                |
| Grid no. 1 voltage $V_{g1}$                  | 125 V           | —                |
| Anode current, no signal condition $I_{a0}$  | 100 mA          | —                |
| Anode current $I_a$                          | 2.5 A           | —                |
| Grid no. 2 current $I_{g2}$                  | 80 mA           | —                |
| Grid no. 1 current $I_{g1}$                  | 90 mA           | —                |
| Anode input power $W_{in}$                   | 18.75 kW        | —                |
| Anode dissipation $W_a$                      | 5 kW            | —                |
| Output power in load $W_o$                   | 13 kW           | —                |
| Driving power $W_{dr}$                       | 400 W           | —                |
| Frequency $f$ up to                          | 260 MHz         | —                |
| Anode input power, black $W_{in, black}$ max | 24 kW           | —                |
| Anode dissipation $W_{a, black}$ max         | 12 kW           | —                |
| Grid no. 2 dissipation $W_{g2, black}$ max   | 100 W           | —                |
| Bandwidth ( )                                | -1 dB           | —                |
| Frequency of vision carrier $f_c$            | 83.25 MHz       | —                |
| Bandwidth ( [1] )                            | -1 dB           | —                |
| Bandwidth ( [2] )                            | 7 MHz           | —                |
| Anode voltage $V_a$                          | 3.5 kV          | —                |
| Grid no. 2 voltage $V_{g2}$                  | 700 V           | —                |
| Grid no. 1 voltage $V_{g1}$                  | ~72 V           | —                |
| Anode current, no signal condition $I_{a0}$  | 0 mA            | —                |

| PARAMETER                                 | PUBLISHED VALUE | CONDITION / NOTE |
|-------------------------------------------|-----------------|------------------|
| Anode current, black Lajyg                | 3.2 A           | —                |
| Grid no.2 current, black Igoby            | 55 mA           | —                |
| Grid no. 1 current. black Iglbl           | 165 mA          | —                |
| Output power in load, sync We cvne        | 13.2 kW         | —                |
| black Wi plack                            | 7.9 kW          | —                |
| Driving power. svnc Wdr svne              | 660 w           | —                |
| black War black                           | 330 W           | —                |
| Frequency of visions carrier I            | 55.25 MHz       | —                |
| Anode voltage Va 4                        | 5.5 kV          | —                |
| Grid no. 2 voltage Va2 700                | 700 v           | —                |
| Grid no. 1 voltage Vgl -70                | 72 A            | —                |
| Anode current. no signal condition I, 800 | 900 mA          | —                |
| Anode current, black Iabl 2,4             | 3.4 A           | —                |
| Grid no. 2 current. black lg2bi 33        | 45 mA           | —                |
| Griano.1 current, black Iglbl 60          | 175 ma          | —                |
| Output power in load. sync Wi evne 6,4    | 13.2 kW         | —                |
| Driving power. svnc Wiy syne 352          | 733 W           | —                |
| black Wdr black 190                       | 390 W           | —                |
| Frequency f                               | 175 to 225 MHz  | —                |
| Bandwidth ( [2]                           | 8 MHz           | —                |
| Anode voltage Vy                          | 6 kV            | —                |
| Grid no. 2 voltage Vgg                    | 800 V           | —                |
| Anode current, no signal condition Iy     | 1.2 A           | —                |
| Anode current 6) I                        | 2.5 A           | —                |
| Grid no. 2 current 6y lg2                 | 30 mA           | —                |
|                                           |                 |                  |

| PARAMETER                                   | PUBLISHED VALUE | CONDITION / NOTE |
|---------------------------------------------|-----------------|------------------|
| Grid no. 1 current 6) $I_{g1}$              | 50 mA           | —                |
| Driving power, sync $W_{ar}$                | 220 W           | —                |
| Output power in load, sync $W_y$            | 7 kW            | —                |
| Intermodulation products 7')<br>d           | -52 dB          | —                |
| Frequency $f$ upto                          | 260 MHz         | ClassC           |
| Anode voltage $V_a$ max                     | 9.5 kV          | —                |
| Grid no. 2 voltage $V_{g0}$ max             | 1 kV            | —                |
| Grid no. 1 voltage $\sim V_{g1}$ max        | 500 V           | —                |
| Anode current $I_y$ max                     | 5 A             | —                |
| Anode input power $W_{ia}$ max              | 30 kW           | —                |
| Anode dissipation $W_j$ max                 | 12 kW           | —                |
| Grid no. 2 dissipation $W_{g0}$<br>max      | 100 W           | —                |
| Cathode current $I$ max                     | 6 A             | —                |
| Frequency $f$                               | 260 MHz         | —                |
| Anode voltage $V_a$                         | 8 kV            | —                |
| Grid no. 2 voltage $V_{g2}$                 | 700 V           | —                |
| Anode current, no signal<br>condition $I_a$ | 300 mA          | —                |
| Anode current $I_y$                         | 3.5 A           | —                |
| Grid no. 2 current $I_{g0}$                 | 100 mA          | —                |
| Grid no. 1 current $I_g$                    | 300 mA          | —                |

| CHARACTERISTIC        |                 |                  |
|-----------------------|-----------------|------------------|
| PARAMETER             | PUBLISHED VALUE | CONDITION / NOTE |
| Anode voltage $V_y$ , | 6 kV            | —                |
| Transconductance $S$  | 45 mA           | —                |

| CAPACITANCE                        |                 |                  |
|------------------------------------|-----------------|------------------|
| PARAMETER                          | PUBLISHED VALUE | CONDITION / NOTE |
| Input $C_{gi(a)}$ 110 $C_{t(a)}$   | 55 pF           | —                |
| Output $C_{a(g1)}$ 17,5 $C_{a(f)}$ | 18 pF           | —                |
| Anode to grid no. 1 $C_{ag1}$      | 0.7 pF          | —                |

| PARAMETER             | PUBLISHED VALUE | CONDITION / NOTE |
|-----------------------|-----------------|------------------|
| Anode to filament Caf | <b>0.2 pF</b>   | —                |

## TUBE TINKER

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

[Catalog](#)   [Tube types](#)   [Full books](#)   [Blog](#)   [Feedback & corrections](#)

© 2026 Tube Tinker