



ELECTRONIC TUBE REFERENCE

KH1

Voltage - Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
HEXODE

Directly heated multi-grid frequency changer for battery receivers, designed principally for mixer service but usable as a hexode, pentode, or tetrode. Its flexible electrode arrangement supports several portable-radio circuit configurations.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	2 V / 135 mA	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Hexode	
PLATE RESISTANCE	1000000 Ω
MAXIMUM PLATE VOLTAGE	150 V
MAXIMUM SCREEN VOLTAGE	60 V
MAXIMUM PLATE DISSIPATION	0.4 W
MAXIMUM SCREEN DISSIPATION	0.1 W
MAXIMUM CATHODE CURRENT	10 mA
<i>Directly heated multi-grid frequency-changer tube usable as hexode, pentode, or tetrode</i>	

Directly heated multi-grid frequency-changer tube usable as hexode, pentode, or tetrode. The supplied Philips datasheet provides operating characteristics, limiting values, capacitances, and application information; non-English material is represented in English in the descriptive output.

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 · Hexode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Chauffage dir., courant batterie, alimentation Vf	2 V	—
en parallèle If	135 mA	—
Cgl	7.8 pF	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Kapazitäten Cg3	12.5 pF	—
Capacitfs Ca	16.3 pF	—
Capacities Cglg3	0.17 pF	—
Cgla <	0.002 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Va	135 V	FrequencyChanger
Vg2	60 V	FrequencyChanger
Vg3 Rg3 = 0,5 MIT) 1	60 V	FrequencyChanger
Vgl – [1]	1.5 V	FrequencyChanger
Vgl – [2]	9.5 V	FrequencyChanger
Ia	1 mA	FrequencyChanger
Ig2+Ig4	1.1 mA	FrequencyChanger
Sc [1]	450 µA/V	FrequencyChanger
Sc [2]	4.5 µA/V	FrequencyChanger
Sc [3]	1 µA/V	FrequencyChanger

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Va	135 V	PentodeConnection
Vg2	60 V	PentodeConnection
Vg3	60 V	PentodeConnection
Vg4	0 V	PentodeConnection
Vg1 – [1]	1.5 V	PentodeConnection
Vg1 – [2]	7.5 V	PentodeConnection
Ia	2 mA	PentodeConnection
Ig2+Ig3	95 mA	PentodeConnection
Operating conditions for use as pentode (H.F. or I.F. amplifier). [1]	1400 μ A/V	PentodeConnection
Operating conditions for use as pentode (H.F. or I.F. amplifier). [2]	14 μ A/V	PentodeConnection
Operating conditions for use as pentode (H.F. or I.F. amplifier). [3]	1 μ A/V	PentodeConnection
Va	135 V	TetrodeConnection
Vg2	60 V	TetrodeConnection
Vg3	0 V	TetrodeConnection
Vg4	60 V	TetrodeConnection
Vg1 – [1]	1.5 V	TetrodeConnection
Vg1 – [2]	8.5 V	TetrodeConnection
Vg1 – [3]	11 V	TetrodeConnection
Ia	2.2 mA	TetrodeConnection
Ig2+Ig4	0.7 mA	TetrodeConnection
Operating conditions for use as Tetrode (H.F. or I.F. amplifier). [1]	1500 μ A/V	TetrodeConnection
Operating conditions for use as Tetrode (H.F. or I.F. amplifier). [2]	15 μ A/V	TetrodeConnection

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Operating conditions for use as Tetrode (H.F. or I.F. amplifier). [3]	1 μ A/V	TetrodeConnection
Va max	150 V	—
Wa max	0.4 W	—
Vg2 max	60 V	—
\Vg2 max	0.1 W	—
Vg3 max	60 V	—
Wg3 max	0.1 W	—
Vg4 max	60 V	—
Wg4 max	0.1 W	—
Vg1 (Ig2 = + [1])	0.3 μ A	—
Vg1 (Ig2 = + [2])	0.2 V	—
Vg3 (Ig3 = + [1])	0.3 μ A	—
Vg3 (Ig3 = + [2])	0.2 V	—
Ig2+Ig4 (Va [1])	135 V	—
Ig2+Ig4 (Va [2])	60 V	—
Vg3 [1]	10 V	—
Vg3 [2]	1.5 V	—
comme hexode, hexode connection) . min	0.75 mA	HexodeConnection
Ig2+Ig4 Va [1]	135 V	HexodeConnection
Ig2+Ig4 Va [2]	60 V	HexodeConnection
Vg3 [1]	10 V	HexodeConnection
Vg3 [2]	1.5 V	HexodeConnection
comme hexode, hexode connection) . max	1.45 mA	HexodeConnection
Ig2+Ig3 (Va [1])	135 V	HexodeConnection
Ig2+Ig3 (Va [2])	60 V	HexodeConnection
Vg4 [1]	0 V	HexodeConnection
Vg4 [2]	1.5 V	HexodeConnection
comme penthode, pentode connection) min	0.7 mA	PentodeConnection;HexodeConnection

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Ig2+Ig3 (Va [1])	135 V	PentodeConnection;HexodeConnection
Ig2+Ig3 (Va [2])	60 V	PentodeConnection;HexodeConnection
Vg4 [1]	0 V	PentodeConnection;HexodeConnection
Vg4 [2]	1.5 V	PentodeConnection;HexodeConnection
comme penthode, pentode connection) max	1.3 mA	PentodeConnection;HexodeConnection
Ig2+Ig4 (Va [1])	135 V	PentodeConnection;HexodeConnection
Ig2+Ig4 (Va [2])	60 V	PentodeConnection;HexodeConnection
Vg3 [1]	0 V	PentodeConnection;HexodeConnection
Vg3 [2]	1.5 V	PentodeConnection;HexodeConnection
comme tetrode, tetrode connection) min	0.5 mA	PentodeConnection;TetrodeConnection;HexodeConnection
Ig2+Ig4 (Va [1])	135 V	PentodeConnection;TetrodeConnection
Ig2+Ig4 (Va [2])	60 V	PentodeConnection;TetrodeConnection
Vg3 [1]	0 V	PentodeConnection;TetrodeConnection
Vg3 [2]	1.5 V	PentodeConnection;TetrodeConnection
comme tetrode, tetrode connection) max	0.9 mA	PentodeConnection;TetrodeConnection
Ik max	10 mA	PentodeConnection;TetrodeConnection

TUBE TINKER

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and their source documents.

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