



ELECTRONIC TUBE REFERENCE

MHD4

Voltage - Triode (with diode, heptode or hexode) electronic tube

CONSOLIDATED TECHNICAL
DATA

3 SECTIONS

CONSTRUCTION

DIODE-DIODE-TRIODE

Early double-diode triode combining receiver detection, automatic volume control, and low-level amplification. Two diode sections provide signal and control-voltage rectification while the triode supplies the associated amplifier stage.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	7
NOMINAL HEATER	4 V / 1 A	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Common cathode	SECTION CONSTRUCTION	Dissimilar

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	18200 Ω
TRANSCONDUCTANCE	0.0022 S
AMPLIFICATION FACTOR	40
MAXIMUM PLATE VOLTAGE	250 V
Representative triode section; diode data retained as parameters. Osram MHD4 indirectly heated 4 V, 1 A double-diode triode for receiver detection, automatic volume control and low-frequency amplification. Triode maximum plate voltage 250 V; characteristic constants amplification factor 40, internal resistance 18.2 kΩ and transconductance 2.2 mA/V, measured at 100 V anode and zero grid bias. Two detector diodes share its common cathode.	

SECTION2 Diode

No fixed ratings recorded.

Physical diode section added during approved section-structure reconciliation. First physical diode of Osram MHD4; used for receiver detection. May combine with second diode for full-wave rectification. Common cathode shared with other two electrode sections.

SECTION3 Diode

No fixed ratings recorded.

Physical diode section added during approved section-structure reconciliation. Second physical diode of the Osram MHD4 double-diode triode. The second diode may serve automatic volume control using a separate circuit, or combine with the first diode for full-wave signal rectification. Both diodes share the common cathode and cathode-connected shield.

OSRAM MHD4 double-diode triode for detection, automatic volume control, and amplification.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1955 Marconi

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

1955 MARCONI

Section 1 · Triode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode-grid capacitance	3.8 pF	—
Grid-earth capacitance	2.4 pF	—
Anode-earth capacitance	4.7 pF	—
Grid-each-diode capacitance	0.15 pF	—
Diodes-earth capacitance	12.7 pF	—

CONSTRUCTION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Physical diode count	2	—
Physical triode count	1	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical HT voltage	250 V	—