

Philips/Mullard direct-view monochrome television picture tube with magnetic deflection and family-specific focusing and heater arrangements. Manufacturer documentation identifies receiver display service across the MW22 and MW31 picture-tube families.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6.3 V / 300 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Cathode Ray	
MAXIMUM PLATE VOLTAGE	11000 V
CRT-specific optical, focusing, deflection, accelerating-voltage, scan, capacitance, and safety data are retained in TUBE_SECTION_PARAMETER because the locked promoted fields primarily target conventional electrode sections.	

Direct-view television picture tube with magnetic deflection.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1951 Mullard Valve and Service Manual

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

1951 MULLARD VALVE AND SERVICE MANUAL

Section 1 · Cathode Ray

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterOrFilamentVoltage	6.3 V	—
HeaterOrFilamentCurrent	300 mA	—
DeflectionMethod	Magnetic	—
Heater Voltage	6.3 V	—
Heater Current	300 mA	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1957 Philips Receiving and Amplifying Tubes

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

1957 PHILIPS RECEIVING AND AMPLIFYING TUBES

Section 1 · Cathode Ray

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	—
Heater Current	300 mA	—
DeflectionMethod	Magnetic	—
FocusingMethod	Magnetic	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
TypicalAcceleratingVoltage	7000 V	—
MaximumAcceleratingVoltage	11000 V	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1963 Philips Electron Tubes Handbook V2

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

1963 PHILIPS ELECTRON TUBES HANDBOOK V2

Section 1 · Cathode Ray

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	CathodeRay
Heater current	300 mA	CathodeRay
Electrical reference	MW22-16	SameFamilyCharacteristics
Heater supply	Series or parallel	TelevisionCRT

CONSTRUCTION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Focusing	Magnetic	CathodeRay
Deflection	Magnetic	CathodeRay
Screen color	White	CathodeRay
Variant construction	without ion trap	TelevisionCRT
Screen color	White	TelevisionCRT



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 · Cathode Ray

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	300 mA	—
Grid No.1 cutoff voltage	-20 to -50 V	—

CONSTRUCTION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Useful screen diameter	200 mm	—
Deflection method	Magnetic	—
Focusing method	Magnetic	—
Screen construction	Metal-backed	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Operating anode voltage	7000 V	—
Maximum anode voltage	9000 V	—
Grid No.2 / auxiliary anode voltage	200 V	—
Electrical data reference	MW2217	SourceCrossReference

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