

ELECTRONIC TUBE REFERENCE

MW411

Specialized - Cathode Ray electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
CATHODERAY

Direct-view monochrome television picture tube with magnetic beam scanning and high-voltage operation. Manufacturer documentation identifies it for television receiver service and provides the applicable screen, focusing, and deflection construction.

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	12000 V
Round television picture tube with magnetic focusing and magnetic deflection.	

Television picture tube with metal cone, ion trap, magnetic focusing, and magnetic deflection.



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	—
UsefulScreenDiameterMinimum	365 mm	—
IonTrapPresent	1 boolean	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
TypicalAcceleratingVoltage	12000 V	—
MaximumAcceleratingVoltage	14000 V	—



SOURCE OPERATING CONDITIONS

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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

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-1 capacitance	6 pF	—
Cathode capacitance	4 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Screen color	White	—
Color temperature	7500 K	—
Useful diameter	365— mm	Minimum
Deflection angle	—70 deg	—
Grid-3 voltage	12000 V	—
Grid-2 voltage	250 V	—
Minimum grid-3 voltage	7000 V	—
Maximum grid-2 voltage	410 V	—
Maximum grid-1 bias magnitude	150 V	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-1 cutoff-voltage magnitude	33–72 V	—



SOURCE DATA APPENDIX

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 · Cathode Ray

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Capacitance	6 pF	Capacités Ce 6 pF

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Capacitance	6 pF	Capacitances Cgt = 6 pF
Capacitance	4	Capacités Cr = 4 oF

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	9.5 V	the heater voltage must not exceed 9,5 V when the
Heater voltage	9.5	wird, darf die Heizspannung beim Einschalten 9,5
Heater voltage	9.5 V	heater voltage must not exceed 9.5 V when the supply
Heater voltage	9.5 V	darf die Heizspannung beim Einschalten 9,5 V nichs
Deflection	3	3) Space for deflection and focusing coils.
Deflection	0.3	Deflection 0.3 x P x Hxcel
Deflection	0	Ablenkun, =0 x P xHxcL
Focusing	290	for focusing is about 290 VvazikVS

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Deflection	70	The deflection angle is max. 70°
Deflection	70	Der Ablenkungswinkel ist max. 70°.

TUBE TINKER

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