

ELECTRONIC TUBE REFERENCE

DB42

Specialized - Cathode Ray electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
CATHODERAY

High-vacuum Mullard and Philips electrostatic oscilloscope tube with an approximately 1.5-inch screen and blue short-persistence phosphor, intended for compact oscillographic measurement equipment.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6.3 V / 310 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Cathode Ray	
MAXIMUM PLATE VOLTAGE	1000 V
Electrostatic focusing/deflection CRT section; electrical/screen/deflection data retained in parameter rows.	

The Mullard DB42 is a high-vacuum electrostatic oscilloscope tube with an approximately 1.5-inch screen and blue short persistence phosphor.

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
Screen Colour / Persistence	Blue, short persistence	—
Focusing Method	Electrostatic	—
Deflecting Method	Double Electrostatic	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode Voltage	800 V	—
Focusing Electrode Voltage Minimum	200 V	—
Focusing Electrode Voltage Maximum	300 V	—

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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	400 V	—
Grid 2 Operating Voltage Minimum	200 V	—
Grid 2 Operating Voltage Maximum	300 V	—
Maximum Grid 2 Voltage	400 V	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Focusing Method	Electrostatic	—
Deflection Method	Double electrostatic	—
Screen Variant	blue, short persistence	—



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
Accelerating-grid voltage	800 V	—
Focusing-grid voltage	200–300 V	—
Maximum accelerating-grid voltage	1000 V	—
Maximum focusing-grid voltage	400 V	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Deflection sensitivity N1	0.25 mm/V	—
Deflection sensitivity N2	0.16 mm/V	—



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1999 Philips 0-D

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

1999 PHILIPS 0-D

Section 1 · Cathode Ray

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heating: indirect by A.C. or D.C. Ve	6.3 V	Published datasheet condition
Cg1	10 pF	Published datasheet condition
Cpq	5.3 pF	Published datasheet condition
Cpq = 5,3 pF Cp1p1?	0.6 pF	Published datasheet condition
Cpqe	5.3 pF	Published datasheet condition
Cpqe = 5,3 pF Cpopot	0.8 pF	Published datasheet condition
Cpz	4.5 pF	Published datasheet condition
Cpz = 4,5 pF Cp1pit-peper	0.1 PF	Published datasheet condition
Epaisseur de la ligne (Vg3	800 V	Published datasheet condition
Epaisseur de la ligne (Vg3 =800V)	0.7 mm	Published datasheet condition
Betriebsdaten Vg3	800 V	Published datasheet condition
Vg2 = 200	-300 V	Published datasheet condition
_Vg«] = 0	-50 V	Published datasheet condition
Nt	0.25 mm	Published datasheet condition
No	0.16 mm	Published datasheet condition
1) Measured on a circle of	30 mm	Published datasheet condition
Mesuré & un cercle de	30 mm	Published datasheet condition

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Gemessen an einem Kreis von	30 mm	Published datasheet condition
Cg1	7 pF	Published datasheet condition
Cg1 = 7,0 pF Cpo	2.8 pF	Published datasheet condition
Cp1	3.27 pF	Published datasheet condition
Cp1 = 3,27pF Cp1p1!	0.7 PF	Published datasheet condition
Cpyr	3.5 pF	Published datasheet condition
Cpyr = 3,5 pF Cp2pa!	0.9 PF	Published datasheet condition
Cp2	3 pF	Published datasheet condition
Epaisseur de la ligne (Vg3	8007 V	Published datasheet condition
Epaisseur de la ligne (Vg3 =8007V)	0.7 mm	Published datasheet condition
Vgt	50 V	Published datasheet condition
N4	0.25 mm	Published datasheet condition
N2	0.16 mm	Published datasheet condition
Va2	1000 V	Published datasheet condition
——la2	800 V	Published datasheet condition
7 i / :] i	71 v	Published datasheet condition
AP	4 v	Published datasheet condition
Published value	4 V	Published datasheet condition
Published value	-60 V	Published datasheet condition
11	11.1949 A	Published datasheet condition
Vo3	800 V	Published datasheet condition
Published value	40 V	Published datasheet condition
Published value	5 A	Published datasheet condition
Published value	6 A	Published datasheet condition

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Vg3	1000 V	Published datasheet condition
Vg3 = max. 1000 V VD1D1'p	450 V	Published datasheet condition
Vg3 = min.,	800 V	Published datasheet condition
Vg3 = min., 800 V Vp2p2'p	750 V	Published datasheet condition
Vg2	400 V	Published datasheet condition

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
$V_{g2} = \max. 400 \text{ V We}$	3 mW	Published datasheet condition
$-V_{g1}$	100 V	Published datasheet condition
$-V_{g1} = \max. 100 \text{ V Rg1}$	0.5 MΩ	Published datasheet condition
$V_{g3} = \max. 1000 \text{ V VD1D1'p = mex}$	450 V	Published datasheet condition
$V_{e3} = \min,$	800 V	Published datasheet condition
$V_{e3} = \min, 800 \text{ V Vp2p2'p}$	750 V	Published datasheet condition
$V_{g1} = \max. \text{ov Rp}$	5 MΩ	Published datasheet condition
V_{g1}	1007 V	Published datasheet condition
$V_{g1} = \max. 1007 \text{V Rg1}$	0.5 MΩ	Published datasheet condition