

ELECTRONIC TUBE REFERENCE

OB2

Voltage Regulator electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
VOLTAGEREGULATOR

Gas-filled voltage regulator providing approximately 108 V stabilization over roughly 5–30 mA for reference and regulated-supply circuits.

GENERAL CHARACTERISTICS

BASE DESIGNATION	5B0	BASE PINS	7
NOMINAL HEATER	– / –	PARALLEL HEATER	– / –
HEATING	Indirect; cold cathode	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Voltage Regulator	
REGULATOR VOLTAGE	108 V
MINIMUM REGULATOR CURRENT	5 mA
MAXIMUM REGULATOR CURRENT	30 mA
STARTING VOLTAGE	133 V
MAINTAINING VOLTAGE	108 V
DYNAMIC IMPEDANCE	350 Ω
Published electrical characteristics preserved in parameter rows; regulator-specific fields promoted where applicable.	

Miniature type cold-cathode, glow-discharge tube used in voltage regulator applications. Outlines section, 5D; requires miniature 7-contact socket. 5B0

SOURCE OPERATING CONDITIONS

1946 Standard Telephone and Cables

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

1946 STANDARD TELEPHONE AND CABLES

Section 1 · Voltage Regulator

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum stabilising voltage at 30 mA	112 V	Published datasheet value
Maximum peak current	75 mA	Published datasheet value
Maximum regulation 5-30 mA	3.5 V	Published datasheet value

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Minimum stabilising voltage at 5 mA	105 V	Published datasheet value

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1950 General Electric Transmitting Types

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

1950 GENERAL ELECTRIC TRANSMITTING TYPES

Section 1 · Voltage Regulator

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode Supply Voltage	133 V	—



SOURCE OPERATING CONDITIONS

1953 AEG

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

1953 AEG

Section 1 · Voltage Regulator

CONSTRUCTION

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filling	Inert gas	—



SOURCE OPERATING CONDITIONS

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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 · Voltage Regulator

CHARACTERISTICS

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Operating Voltage	108 V	—

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Ignition Voltage Maximum	127 V	—



1962 Cerberus

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

1962 CERBERUS

Section 1 · Voltage Regulator

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Breakdown voltage A-K	127 V	—
Inverse anode voltage	75 V	—
Starting current	75 mA	—
Typical supply voltage	250 V	—
Typical operating current	15 mA	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Stabilized voltage at 30 mA	112 V	—
Stabilized voltage at 5 mA	105 V	—
Operating current	5–30 mA	—
Regulation over 5-30 mA	3.5 V	—
RMS noise voltage	5 mV	5-30 mA; 50-5000 Hz
Life expectancy	10000— h	Exceeding



SOURCE DATA APPENDIX

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 · Voltage Regulator

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maintaining voltage at 17.5 mA	106–111 V	—
Nominal maintaining voltage	108 V	—
Ignition voltage	—127 V	Typical maximum
Voltage regulation	—3.5 V	Ia=5-30mA

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Absolute maximum ignition voltage	—133 V	—
Operating current minimum	5 mA	—
Operating current maximum	30 mA	—
Maximum starting current	—75 mA	—
Maximum shunt capacitance	—0.1 uF	—



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1971 RCA HB3 Binder 2 of 7

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

1971 RCA HB3 BINDER 2 OF 7

Section 1 · Voltage Regulator

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Average starting current	75 mA	—
DC cathode current	5 mA–30 mA	—
Ambient temperature range	-55 to +90 C	—
Maximum shunt capacitance	0.1 uF	—
Minimum DC anode supply voltage	133 V	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode breakdown / starting voltage	133 V	—
Anode voltage drop	101–114 V	—
Regulation over specified cathode-current range	—4 V	—



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1975 RCA RC30

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

1975 RCA RC30

Section 1 · Voltage Regulator

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
in voltage regulator applications. Outlines section,	5	Published value from supplied target entry
Average Starting Current*	75	Published value from supplied target entry
DC Cathode Current	30 mA	Published value from supplied target entry
DC Anode-Supply Voltage	133 volts	Published value from supplied target entry
Anode Breakdown Voltage	133 volts	Published value from supplied target entry
Anode Voltage Drop	114 volts	Published value from supplied target entry
Regulation (	4 mA	Published value from supplied target entry
in voltage regulator applications. Outlines section,	22	Published value from supplied target entry
Average Starting Current*	100 mA	Published value from supplied target entry
DC Cathode Current	4	Published value from supplied target entry

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Shunt Capacitor	0.1	Published value from supplied target entry