

ELECTRONIC TUBE REFERENCE

OD3

Voltage Regulator electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

VOLTAGEREGULATOR

Gas-filled 150 V voltage regulator designed for a broad approximately 5-40 mA operating range.

GENERAL CHARACTERISTICS

BASE DESIGNATION	4AJ	BASE PINS	8
NOMINAL HEATER	– / –	PARALLEL HEATER	– / –
HEATING	Indirect; cold cathode	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

4AJ - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN2 – K	A	K – Cathode	CONNECTED
PIN5 – P	A	P – Plate (Anode)	CONNECTED

SECTION RATINGS

SECTION1 Voltage Regulator	
MAXIMUM CATHODE CURRENT	40 mA
REGULATOR VOLTAGE	153 V
MINIMUM REGULATOR CURRENT	5 mA
MAXIMUM REGULATOR CURRENT	40 mA
STARTING VOLTAGE	185 V
MAINTAINING VOLTAGE	153 V
Published maximum ratings and characteristics audited; remaining useful numerical data retained in parameter table.	

Industrial cold-cathode glow-discharge voltage regulator for regulated DC supply service.

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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Nominal stabilising voltage	150 V	Published datasheet value
DC operating current minimum	5 mA	Published datasheet value

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC operating current maximum	30 mA	Published datasheet value

SOURCE OPERATING CONDITIONS

1955 Marconi

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

1955 MARCONI

Section 1 · Voltage Regulator

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
VOLTAGE STABILISER QS1 [1]	50 V	VOLTAGE STABILISER QS150/40
VOLTAGE STABILISER QS1 [2]	40 V	VOLTAGE STABILISER QS150/40
Stability {([1]	1000	Stability {(1000 hr, period) *2 ¥2 %
Stability {([2]	2	Stability {(1000 hr, period) *2 ¥2 %
Stability {([3]	2	Stability {(1000 hr, period) *2 ¥2 %
Published value	10 mA	10 mA should be allowed in addition to the load current.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Stabilized voltage	150 V	Published regulated voltage.
Tube current minimum	5 mA	Minimum maintaining current.
Tube current maximum	40 mA	Maximum operating current.
Ignition voltage	180 V	Published minimum or maximum ignition/start voltage as applicable.



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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	—100 mA	Starting period ≤10 s
DC cathode current maximum	—40 mA	Steady-state
DC cathode current minimum	5— mA	Steady-state
Ambient temperature minimum	-55— °C	—
Ambient temperature maximum	—90 °C	—
Shunt capacitor maximum	—0.1 μF	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC anode supply voltage minimum	185— V	To insure starting throughout useful life
Anode breakdown voltage average	160 V	—
Anode breakdown voltage maximum	—185 V	—
Anode voltage drop minimum	142— V	—
Anode voltage drop average	153 V	—
Anode voltage drop maximum	—165 V	—
Regulation average	4 V	DC cathode current 5 to 40 mA

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Regulation maximum	—5.5 V	DC cathode current 5 to 40 mA



SOURCE DATA APPENDIX

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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Average starting current	100 mA	Starting
DC cathode current	40 mA	—
Shunt capacitor maximum	0.1 uF	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC anode-supply voltage	185 V	MinimumForStarting
Anode breakdown voltage	160 V	Average
Anode voltage drop	153 V	Average
Anode voltage drop minimum	142 V	EquipmentDesign
Anode voltage drop maximum	165 V	EquipmentDesign
Regulation	5.5 V	5to40mA