

ELECTRONIC TUBE REFERENCE

VR90

Voltage Regulator electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

VOLTAGEREGULATOR

Cold-cathode 90 V glow regulator also suitable for relaxation-oscillator and spark-over protection applications.

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	
REGULATOR VOLTAGE	90 V
MINIMUM REGULATOR CURRENT	10 mA
MAXIMUM REGULATOR CURRENT	30 mA
STARTING VOLTAGE	125 V
MAINTAINING VOLTAGE	90 V
Glow-discharge voltage-regulator section.	

VR90 is a VoltageRegulator device. Cold-cathode glow-discharge voltage regulator; also suitable for relaxation-oscillator and spark-over protection service.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1950 Sylvania

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

1950 SYLVANIA

Section 1 · Voltage Regulator

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Operating Voltage	90 V	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

195X General Electric Essential Characteristics

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195X GENERAL ELECTRIC ESSENTIAL CHARACTERISTICS

Section 1 · Voltage Regulator

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Operating voltage	90 V	—
Ionization voltage	110 V	—
Regulation over operating-current range	8 V	5to40mA

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Minimum DC operating current	5 mA	—
Maximum DC operating current	40 mA	—
Minimum anode supply voltage	125 V	—

SOURCE OPERATING CONDITIONS

195X Raytheon Special Purpose Tubes

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

195X RAYTHEON SPECIAL PURPOSE TUBES

Section 1 · Voltage Regulator

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Operating voltage	90 V	—
Maximum regulation	8 V	10to30mA

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Minimum operating current	10 mA	—
Maximum operating current	30 mA	—
Minimum starting-voltage supply	125 V	—

SOURCE OPERATING CONDITIONS

1966 Tung Sol Electronic Tubes 1 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 1 OF 4

Section 1 · Voltage Regulator

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC operating voltage	90 V	—
DC operating current minimum	10— mA	—
DC operating current maximum	—30 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC starting voltage	125 V	Approximate
Voltage regulation	—5 V	Ia=10-30mA

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