

ELECTRONIC TUBE REFERENCE

6CK3

Rectifier - Damper Diode electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
RECTIFIER

Half-wave vacuum rectifier designed as a damper tube in television horizontal-deflection circuits.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9HP	BASE PINS	9
NOMINAL HEATER	6.3 V / 1.2 A	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

9HP - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1	–	–	IC
PIN2	–	P – Plate (Anode)	CONNECTED
PIN3	–	–	IC
PIN4	–	H – Heater	CONNECTED
PIN5	–	H – Heater	CONNECTED
PIN6	–	–	IC
PIN7	–	P – Plate (Anode)	CONNECTED
PIN8	–	–	IC
PIN9	–	K – Cathode	CONNECTED

SECTION RATINGS

SECTION1 Rectifier	
MAXIMUM PLATE DISSIPATION	8.5 W
PEAK INVERSE VOLTAGE	5500 V
NOMINAL OUTPUT CURRENT	250 mA
PEAK FORWARD CURRENT	1.3 A
FORWARD VOLTAGE DROP	16 V
MAXIMUM HEATER-CATHODE VOLTAGE	5200 V
WARM-UP TIME	11 s
<i>Half-wave damper rectifier for black-and-white television.</i>	

Half-wave vacuum rectifier used as a damper tube in television horizontal-deflection circuits.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1971 RCA HB3 Binder 4 of 7

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

1971 RCA HB3 BINDER 4 OF 7

Section 1 · Rectifier

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
and heater op(k +h)	6.5 pF	—
Heater to cathode	3 pF	—
(ib) =	350 mA	Published table column 1 of 2
(ib) =	16 mA	Published table column 2 of 2
Instantaneous Tube Voltage Drop	16 V	At 350 mA instantaneous plate current

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
test point on envelope surface) TE	220 °C	—



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 · Rectifier

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Tube Voltage Drop for plate current of	700 mA	Published in approved 12CL3 target entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Tube Voltage Drop for plate current of 700 mA	25 V	Published in approved 12CL3 target entry; Section1
# Pulse duration must not exceed 15% of a horizontal scanning cycle (	10 microseconds	Published in approved 12CL3 target entry; Section1

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage (ac/dc) 6.3	12.6 V	Published in approved 12CL3 target entry; Section1
Heater Current 1.2	600 mA	Published in approved 12CL3 target entry; Section1
Heater Warm-up Time (Average)	11 seconds	Published in approved 12CL3 target entry; Section1
Peak Inverse Plate Voltage#	5500 V	Published in approved 12CL3 target entry; Section1
Peak Plate Current	1300 mA	Published in approved 12CL3 target entry; Section1
Average Plate Current	250 mA	Published in approved 12CL3 target entry; Section1
Plate Dissipation	8.5 W	Published in approved 12CL3 target entry; Section1
Bulb Temperature (At hottest point)	220 °C	Published in approved 12CL3 target entry; Section1
Peak value +300	-5000 V	Published in approved 12CL3 target entry; Section1
Average value -j-100	-900 V	Published in approved 12CL3 target entry; Section1
Tube Voltage Drop for plate current of	350 mA	Published in approved 12CL3 target entry; Section1
Tube Voltage Drop for plate current of 350 mA	16 V	Published in approved 12CL3 target entry; Section1
# Pulse duration must not exceed 15% of a horizontal scanning cycle (	10 microseconds	Published in approved 12CL3 target entry; Section1
Heater Voltage (ac/dc)	6.3 V	Published in approved 12CL3 target entry; Section1
Heater Current	650 mA	Published in approved 12CL3 target entry; Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate to Cathode and Heater	6.5 pF	Published in approved 12CL3 target entry; Section1
Cathode to Plate and Heater	9 pF	Published in approved 12CL3 target entry; Section1
Heater to Cathode	3 pF	Published in approved 12CL3 target entry; Section1
Grid No.1 to Plate	0.12 pF	Published in approved 12CL3 target entry; Section1
and Internal Shield	11 pF	Published in approved 12CL3 target entry; Section1
and Internal Shield	5.5 pF	Published in approved 12CL3 target entry; Section1

TUBE TINKER

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