

ELECTRONIC TUBE REFERENCE

6DT6A

Voltage - Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
PENTODE

Improved dual-control sharp-cutoff pentode designed primarily as an FM detector in color and monochrome television receivers. Both control grids independently influence plate current for specialized detector and control functions.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7EN	BASE PINS	7
NOMINAL HEATER	6.3 V / 300 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

7EN - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – G1	A	G1 – Control Grid	CONNECTED
PIN2 – IS	A	IS – Internal Screen	CONNECTED
PIN2 – K	A	K – Cathode	CONNECTED
PIN3 – H	–	H – Heater	CONNECTED
PIN4 – H	–	H – Heater	CONNECTED
PIN5 – P	A	P – Plate (Anode)	CONNECTED
PIN6 – G2	A	G2 – Screen Grid	CONNECTED
PIN7 – G3	A	G3 – Suppressor Grid	CONNECTED

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	150000 Ω
TRANSCONDUCTANCE	0.00135 S
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM SCREEN VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	1.7 W
MAXIMUM SCREEN DISSIPATION	1.1 W
MAXIMUM CATHODE CURRENT	20 mA
<i>Dual-control FM-detector pentode.</i>	

Miniature sharp-cutoff pentode used as an FM detector in color and black-and-white television receivers.

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 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	300 mA	—
Plate supply voltage	150 V	ClassA
Screen supply voltage	100 V	ClassA
Cathode resistor	560 ohm	ClassA
Plate current	1.55 mA	ClassA
Screen current	1.8 mA	ClassA
Maximum plate voltage	330 V	FMDetector
Maximum grid No.3 voltage	28 V	FMDetector
Maximum screen supply voltage	330 V	FMDetector
Plate dissipation	1.7 W	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	150000 ohm	ClassA
Grid No.1 transconductance	1350 uS	ClassA
Grid No.3 transconductance	515 uS	ClassA

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1-to-plate capacitance	0.02 pF	—
Grid No.3-to-plate capacitance	1.7 pF	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1-to-grid No.3 capacitance	0.1 pF	—



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 · Pentode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 to Plate	0.02 pF	Capacitance
Grid No.1 to Cathode/Heater/Grid No.2/Grid No.3/Internal Shield	5.8 pF	Capacitance
Grid No.3 to Plate	1.7 pF	Capacitance

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Supply Voltage	160 V	ClassA
Grid-No.2 Supply Voltage	100 V	ClassA
Cathode-Bias Resistor	560 ohm	ClassA
Transconductance Grid No.1 to Plate	1350 uS	ClassA
Transconductance Grid No.3 to Plate	515 uS	ClassA
Plate Current	1.55 mA	ClassA
Grid-No.2 Current	1.8 mA	ClassA

TUBE TINKER

An independent reference for electronic tubes, vacuum tubes, and their source documents.

