

ELECTRONIC TUBE REFERENCE

6AD10

Power - Beam (NOT sweep) electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

BEAMPOWER-PENTODE

Combination beam-power and sharp-cutoff pentode designed for television FM detection and audio-frequency output service, integrating detector and power-amplifier functions.

GENERAL CHARACTERISTICS

BASE DESIGNATION	12EZ	BASE PINS	12
NOMINAL HEATER	6.3 V / 1.05 A	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

12EZ - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – Pin 1	–	H – Heater	CONNECTED • verified
PIN2 – Pin 2	B	K – Cathode	CONNECTED • verified
PIN2 – Pin 2	B	SH – Internal Shield	CONNECTED • verified
PIN2	–	IS – Internal Screen	CONNECTED
PIN3 – Pin 3	B	G1 – Control Grid	CONNECTED • verified
PIN4 – Pin 4	–	–	NC • verified
PIN5 – Pin 5	B	G3 – Suppressor Grid	CONNECTED • verified
PIN6 – Pin 6	B	G2 – Screen Grid	CONNECTED • verified

TERMINAL	SECTION	ELEMENT	STATUS
PIN7 – Pin 7	B	P – Plate (Anode)	CONNECTED · verified
PIN8 – Pin 8	A	G1 – Control Grid	CONNECTED · verified
PIN9 – Pin 9	A	BP – Beam-Forming Plate	CONNECTED · verified
PIN9	A	G3 – Suppressor Grid	CONNECTED
PIN9 – Pin 9	A	K – Cathode	CONNECTED · verified
PIN10 – Pin 10	A	G2 – Screen Grid	CONNECTED · verified
PIN11 – Pin 11	A	P – Plate (Anode)	CONNECTED · verified
PIN12 – Pin 12	–	H – Heater	CONNECTED · verified

SECTION RATINGS

SECTION1 Beam Power	
PLATE RESISTANCE	100000 Ω
TRANSCONDUCTANCE	0.0085 S
MAXIMUM PLATE VOLTAGE	275 V
MAXIMUM SCREEN VOLTAGE	275 V
MAXIMUM PLATE DISSIPATION	10 W
MAXIMUM SCREEN DISSIPATION	2 W
<i>Beam-power section used as an audio-frequency output amplifier.</i>	

SECTION2 Pentode	
PLATE RESISTANCE	110000 Ω
TRANSCONDUCTANCE	0.0034 S
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	1.7 W
MAXIMUM SCREEN DISSIPATION	1 W
<i>Sharp-cutoff pentode section used as FM detector; plate maximum is represented by the published detector-service supply/rating table where the plate-voltage row is OCR-damaged.</i>	

Combined beam-power and sharp-cutoff pentode for FM detection and audio-frequency output service in television receivers.

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.

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Section 1 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	250 V	ClassA;Section1
Grid No.2 Voltage	250 V	ClassA;Section1
Control Grid Voltage	-8 V	ClassA;Section1
Zero-Signal Plate Current	36 mA	ClassA;Section1
Maximum-Signal Plate Current	39 mA	ClassA;Section1
Zero-Signal Grid No.2 Current	2.5 mA	ClassA;Section1
Maximum-Signal Grid No.2 Current	7 mA	ClassA;Section1
Load Resistance	5000 ohm	ClassA;Section1
Maximum-Signal Power Output	4.2 W	ClassA;Section1

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Section 2 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Supply Voltage	150 V	ClassA;Section2
Grid No.2 Voltage	100 V	ClassA;Section2
Cathode Bias Resistor	180 ohm	ClassA;Section2
Transconductance Grid No.1 to Plate	3400 uS	ClassA;Section2
Transconductance Grid No.3 to Plate	600 uS	ClassA;Section2
Plate Current	3.2 mA	ClassA;Section2
Grid No.2 Current	3.2 mA	ClassA;Section2

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.3 Negative Bias Maximum	100 V	FMDetector;Section2
Grid No.3 Positive Bias Maximum	25 V	FMDetector;Section2

TUBE TINKER

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