



ELECTRONIC TUBE REFERENCE

12SA7

Voltage - Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

HEPTODE

Heptode oscillator-converter for superheterodyne radio receivers. It combines local oscillation and mixing in one multi-grid tube, translating incoming RF signals to the receiver intermediate frequency.

GENERAL CHARACTERISTICS

BASE DESIGNATION	8RV	BASE PINS	8
NOMINAL HEATER	12.6 V / 150 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Heptode	
PLATE RESISTANCE	800000 Ω
TRANSCONDUCTANCE	0.00035 S
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	100 V
MAXIMUM PLATE DISSIPATION	1 W
MAXIMUM SCREEN DISSIPATION	0.35 W
MAXIMUM CATHODE CURRENT	6 mA
<i>Promoted from printed maximum/characteristic columns; additional published values retained in TUBE_SECTION_PARAMETER.</i>	

Pentagrid-converter/heptode tube; 12.6-volt heater version of 6SA7.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

195X General Electric Essential Characteristics

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

195X GENERAL ELECTRIC ESSENTIAL CHARACTERISTICS

Section 1 · Heptode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Oscillator-grid current	0.5 mA	Converter
Oscillator-grid resistor	20000 Ω	Converter
Plate voltage	250 V	Converter
Screen voltage	100 V	Converter
Control-grid voltage	-2 V	Converter
Plate current	3.5 mA	Converter
Screen current	8.5 mA	Converter

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	1000000 Ω	Converter
Conversion transconductance	450 μS	Converter

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1961 Tung Sol

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

1961 TUNG SOL

Section 1 · Heptode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	12.6 V	Nominal



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1971 RCA HB3 Binder 5 of 7

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

1971 RCA HB3 BINDER 5 OF 7

Section 1 · Heptode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	12.6 V	—
Heater current	150 mA	—
Plate voltage	250 V	Converter
Screen supply voltage	100 V	Converter
Oscillator anode voltage	100 V	Converter
Cathode resistor	200 ohm	Converter
Plate current	3 mA	Converter
Screen current	1 mA	Converter
Oscillator-anode current	4 mA	Converter
Maximum plate voltage	300 V	—
Maximum screen voltage	100 V	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Conversion transconductance	450 uS	Converter

TUBE TINKER

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

