



ELECTRONIC TUBE REFERENCE

6A8

Voltage - Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

HEPTODE

Metal-envelope pentagrid oscillator-converter for superheterodyne radio receivers. It combines local oscillation and mixing within one multi-grid tube, providing established frequency-changing performance for mains-powered receiving equipment.

GENERAL CHARACTERISTICS

BASE DESIGNATION	8A	BASE PINS	8
NOMINAL HEATER	6.3 V / 300 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Heptode	
PLATE RESISTANCE	360000 Ω
TRANSCONDUCTANCE	0.00055 S
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	100 V
MAXIMUM PLATE DISSIPATION	1 W
MAXIMUM CATHODE CURRENT	14 mA
<i>Published promoted fields populated from the datasheet; identical repeated sections compressed where applicable.</i>	

Sylvania 6A8 is a pentagrid frequency converter for superheterodyne receiver service, combining oscillator and mixer action.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1935 RCA All Metal Radio Tubes

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

1935 RCA ALL METAL RADIO TUBES

Section 1 · Heptode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	AsFrequencyConverter
Screen voltage	100 V	AsFrequencyConverter
Anode-grid voltage	200 V	AsFrequencyConverter
Anode-grid supply voltage	250 V	AsFrequencyConverter
Total cathode current	14 mA	AsFrequencyConverter
Plate current	3.3 mA	Plate250V;Screen100V
Screen current	3.2 mA	Plate250V;Screen100V
Anode-grid current	4 mA	Plate250V;Screen100V
Oscillator grid current	0.5 mA	Plate250V;Screen100V

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Conversion conductance	500 μ S	Plate250V;Screen100V



SOURCE OPERATING CONDITIONS

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1937 Raytheon Radio Receiving Tubes

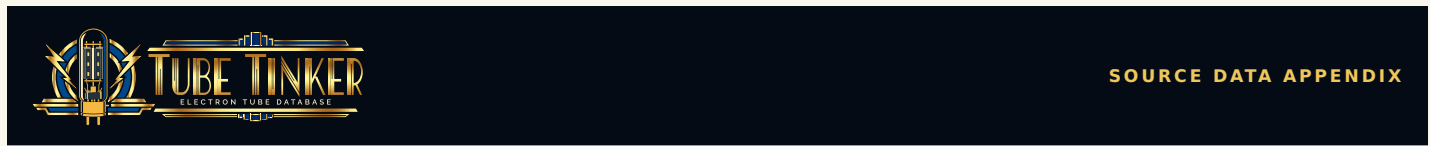
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1937 RAYTHEON RADIO RECEIVING TUBES

Section 1 · Heptode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	100 V	Converter
Screen voltage	50 V	Converter
Plate voltage	250 V	Converter
Screen voltage	100 V	Converter
Oscillator-grid resistor	50000 Ω	Converter

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Conversion transconductance	360 μS	Converter
Plate resistance	300000 Ω	Converter
Conversion transconductance	550 μS	Converter



SOURCE OPERATING CONDITIONS

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1940 RCA

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1940 RCA

Section 1 · Heptode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	6.3 V	Nominal
HeaterCurrentNominal	300 mA	Nominal
Maximum Plate Voltage	250 V	—
Maximum Screen Voltage	100 V	—
Maximum Cathode Current	18 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	520 μS	Typical

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	600000 ohm	Typical



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1950 Sylvania

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1950 SYLVANIA

Section 1 · Heptode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	550 μ S	—
Conversion Transconductance	550 μ S	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	300 V	—



SOURCE DATA APPENDIX

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195X General Electric Essential Characteristics

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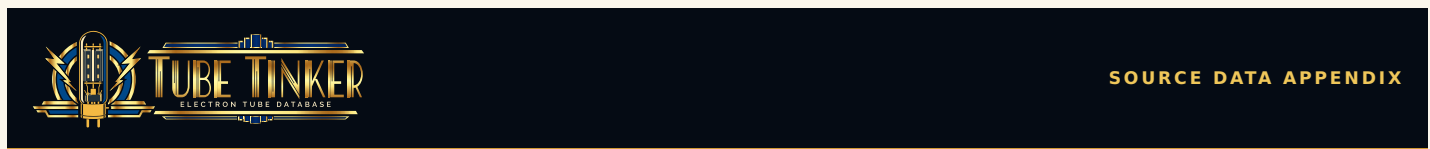
195X GENERAL ELECTRIC ESSENTIAL CHARACTERISTICS

Section 1 · Heptode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	300 V	Published handbook rating
Maximum screen voltage	100 V	Published handbook rating
Plate voltage	250 V	ClassA

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Screen voltage	100 V	ClassA
Control-grid bias	3 V	ClassA
Plate current	3.5 mA	ClassA
Screen current	2.7 mA	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	360000 ohm	Published handbook characteristic
Transconductance	550 μ S	Published handbook characteristic
Heater/filament voltage	6.3 V	Published heater/filament rating
Heater/filament current	300 mA	Published heater/filament rating



SOURCE OPERATING CONDITIONS

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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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Conversion Transconductance	550 μ S	Typical

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Screen Voltage	100 V	Typical

TUBE TINKER

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