



ELECTRONIC TUBE REFERENCE

4LJ8

Voltage - Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

Medium-mu triode plus sharp-cutoff pentode used as a combined oscillator and mixer in VHF television receivers.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	9
NOMINAL HEATER	4.3 V / 600 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	5000 Ω
TRANSCONDUCTANCE	0.008 S
AMPLIFICATION FACTOR	40
MAXIMUM PLATE VOLTAGE	280 V
MAXIMUM PLATE DISSIPATION	2 W
MAXIMUM CATHODE CURRENT	20 mA
<i>Promoted from published maximum-ratings/characteristics tables; additional source values are retained in TUBE_SECTION_PARAMETER.</i>	

SECTION2 Pentode	
PLATE RESISTANCE	125000 Ω
TRANSCONDUCTANCE	0.013 S
MAXIMUM PLATE VOLTAGE	280 V
MAXIMUM SCREEN VOLTAGE	280 V
MAXIMUM PLATE DISSIPATION	2 W
MAXIMUM CATHODE CURRENT	20 mA
<i>Promoted from published maximum-ratings/characteristics tables; additional source values are retained in TUBE_SECTION_PARAMETER.</i>	

Medium-mu triode plus sharp-cutoff pentode used as a combined oscillator and mixer in VHF 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.

1975 RCA RC30

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage (ac/dc) 4.3 5.6	6.3 V	Published in approved 4LJ8 target entry; Section1
Heater Current 0.6 0.45	400 mA	Published in approved 4LJ8 target entry; Section1
Plate Voltage 280	280 V	Published in approved 4LJ8 target entry; Section1
Cathode Current 20	20 mA	Published in approved 4LJ8 target entry; Section1
Grid-No.1 (Control-Grid) Voltage, Positive-bias value 0	0 V	Published in approved 4LJ8 target entry; Section1
Plate Dissipation 2	2 W	Published in approved 4LJ8 target entry; Section1
For grid-No.2 voltages up to	140 V	Published in approved 4LJ8 target entry; Section1
For grid-No.2 voltages between 140 and	280 V	Published in approved 4LJ8 target entry; Section1
For fixed-bias operation 1	0.5 MΩ	Published in approved 4LJ8 target entry; Section1
For cathode-bias operation 0.5	0.25 MΩ	Published in approved 4LJ8 target entry; Section1
Heater Voltage (ac/dc)	6.3 V	Published in approved 4LJ8 target entry; Section1
Heater Current	450 mA	Published in approved 4LJ8 target entry; Section1
Heater to Cathode (Each Unit)	3.2 pF	Published in approved 4LJ8 target entry; Section1
Plate Voltage 330	350 V	Published in approved 4LJ8 target entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.2 (Screen-Grid) Supply Voltage	330 V	Published in approved 4LJ8 target entry; Section1
Plate Dissipation 2.5	2.5 V	Published in approved 4LJ8 target entry; Section1
For grid-No. 2 voltages up to	165 V	Published in approved 4LJ8 target entry; Section1
For grid-No.2 voltages between 165 and	330 V	Published in approved 4LJ8 target entry; Section1
Plate Voltage 125	125 V	Published in approved 4LJ8 target entry; Section1
Grid-No.2 Voltage	125 V	Published in approved 4LJ8 target entry; Section1
Grid No.1 Voltage -1	-2 V	Published in approved 4LJ8 target entry; Section1
0.5	0.25 MΩ	Published in approved 4LJ8 target entry; Section1
1	0.5 MΩ	Published in approved 4LJ8 target entry; Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage 125	125 V	Published in approved 4LJ8 target entry; Section1
Grid-No.2 Voltage	125 V	Published in approved 4LJ8 target entry; Section1
Plate Resistance (Approx.) 5000	125000 Ω	Published in approved 4LJ8 target entry; Section1
Transconductance 8000	13000 μS	Published in approved 4LJ8 target entry; Section1
Plate Current 13	12 mA	Published in approved 4LJ8 target entry; Section1
Grid-No.2 Current	3.5 mA	Published in approved 4LJ8 target entry; Section1
30 nX -6.5	-4 V	Published in approved 4LJ8 target entry; Section1
5400	150000 Ω	Published in approved 4LJ8 target entry; Section1
8500	6000 μS	Published in approved 4LJ8 target entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
13.5	12 mA	Published in approved 4LJ8 target entry; Section1
10 iiA -8	-14 V	Published in approved 4LJ8 target entry; Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to Plate	1.8 pF	Published in approved 4LJ8 target entry; Section1
and Internal Shield	3.2 pF	Published in approved 4LJ8 target entry; Section1
Internal Shield	5.5 pF	Published in approved 4LJ8 target entry; Section1
Shield	3.8 pF	Published in approved 4LJ8 target entry; Section1

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Section 2 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage (ac/dc) 4.3 5.6	6.3 V	Published in approved 4LJ8 target entry; Section2
Heater Current 0.6 0.45	400 mA	Published in approved 4LJ8 target entry; Section2
Plate Voltage 280	280 V	Published in approved 4LJ8 target entry; Section2
Cathode Current 20	20 mA	Published in approved 4LJ8 target entry; Section2
Grid-No.1 (Control-Grid) Voltage, Positive-bias value 0	0 V	Published in approved 4LJ8 target entry; Section2
Plate Dissipation 2	2 W	Published in approved 4LJ8 target entry; Section2
For grid-No.2 voltages up to	140 V	Published in approved 4LJ8 target entry; Section2
For grid-No.2 voltages between 140 and	280 V	Published in approved 4LJ8 target entry; Section2
For fixed-bias operation 1	0.5 MΩ	Published in approved 4LJ8 target entry; Section2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
For cathode-bias operation 0.5	0.25 MΩ	Published in approved 4LJ8 target entry; Section2
Heater Voltage (ac/dc)	6.3 V	Published in approved 4LJ8 target entry; Section2
Heater Current	450 mA	Published in approved 4LJ8 target entry; Section2
Heater to Cathode (Each Unit)	3.2 pF	Published in approved 4LJ8 target entry; Section2
Plate Voltage 330	350 V	Published in approved 4LJ8 target entry; Section2
Grid-No.2 (Screen-Grid) Supply Voltage	330 V	Published in approved 4LJ8 target entry; Section2
Plate Dissipation 2.5	2.5 V	Published in approved 4LJ8 target entry; Section2
For grid-No. 2 voltages up to	165 V	Published in approved 4LJ8 target entry; Section2
For grid-No.2 voltages between 165 and	330 V	Published in approved 4LJ8 target entry; Section2
Plate Voltage 125	125 V	Published in approved 4LJ8 target entry; Section2
Grid-No.2 Voltage	125 V	Published in approved 4LJ8 target entry; Section2
Grid No.1 Voltage -1	-2 V	Published in approved 4LJ8 target entry; Section2
0.5	0.25 MΩ	Published in approved 4LJ8 target entry; Section2
1	0.5 MΩ	Published in approved 4LJ8 target entry; Section2

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage 125	125 V	Published in approved 4LJ8 target entry; Section2
Grid-No.2 Voltage	125 V	Published in approved 4LJ8 target entry; Section2
Plate Resistance (Approx.) 5000	125000 Ω	Published in approved 4LJ8 target entry; Section2
Transconductance 8000	13000 μS	Published in approved 4LJ8 target entry; Section2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current 13	12 mA	Published in approved 4LJ8 target entry; Section2
Grid-No.2 Current	3.5 mA	Published in approved 4LJ8 target entry; Section2
30 nX -6.5	-4 V	Published in approved 4LJ8 target entry; Section2
5400	150000 Ω	Published in approved 4LJ8 target entry; Section2
8500	6000 μS	Published in approved 4LJ8 target entry; Section2
13.5	12 mA	Published in approved 4LJ8 target entry; Section2
10 iiA -8	-14 V	Published in approved 4LJ8 target entry; Section2

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to Plate	1.8 pF	Published in approved 4LJ8 target entry; Section2
and Internal Shield	3.2 pF	Published in approved 4LJ8 target entry; Section2
Internal Shield	5.5 pF	Published in approved 4LJ8 target entry; Section2
Shield	3.8 pF	Published in approved 4LJ8 target entry; Section2

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