



ELECTRONIC TUBE REFERENCE

3EJ7

Voltage - Pentode Sharp Cutoff (single) electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
PENTODE

Sharp-cutoff high-transconductance pentode for fixed-gain IF amplification in color and monochrome television receivers.

GENERAL CHARACTERISTICS

BASE DESIGNATION	E9-1	BASE PINS	9
NOMINAL HEATER	3.15 V / 600 mA	PARALLEL HEATER	- / -
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	350000 Ω
TRANSCONDUCTANCE	0.015 S
AMPLIFICATION FACTOR	60
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM SCREEN VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	2.5 W
MAXIMUM SCREEN DISSIPATION	0.9 W
MAXIMUM CATHODE CURRENT	25 mA
MAXIMUM HEATER-CATHODE VOLTAGE	150 V
Promoted from published ratings/characteristics where directly applicable; additional published values retained in TUBE_SECTION_PARAMETER.	

Sharp-cutoff pentode used as a high-transconductance IF amplifier in color and black-and-white television receivers.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1953 Amperex

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

1953 AMPEREX

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage cut-off condition	550 V	—
Screen voltage cut-off condition	550 V	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input resistance at 40 Mc/s	10000 ohm	—



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 · Pentode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
INPUT: G1 TO (Htk+G2+a3+1.5.)	10 PF	Published datasheet value
oUTPUT: P TO (Htktg2ta3ti.s.)	3 PF	Published datasheet value

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PLATE VOLTAGE WITH $I_b = 0$ MA	550 VOLTS	Published datasheet value
PLATE VOLTAGE	250 VOLTS	Published datasheet value
CATHODE CURRENT	25 MA	Published datasheet value


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1963 Amperex Condensed

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

1963 AMPEREX CONDENSED

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	200 V	IFAmplifier
Screen voltage	200 V	IFAmplifier
Control-grid voltage	-2.5 V	IFAmplifier
Plate current	10 mA	IFAmplifier
Screen current	4.1 mA	IFAmplifier

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	350000 Ω	Section1
Transconductance	15000 μS	Section1


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1966 Tung Sol Electronic Tubes 1 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 1 OF 4

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Zero-current plate voltage maximum	550 V	Section1
Zero-current screen voltage maximum	550 V	Section1
Plate voltage	200 V	IFAmplifier
Screen voltage	200 V	IFAmplifier
Grid-1 voltage	-2.5 V	IFAmplifier
Plate current	10 mA	IFAmplifier
Screen current	4.1 mA	IFAmplifier

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	15000 μ S	Section1
Amplification factor	60	Section1
Plate resistance	0.35 M Ω	Section1
Grid-1 impedance at 40 MHz	30000 Ω	Section1
Heater warm-up time	11 s	Section1



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

1967 Mullard Receiving and Amplifying Valves

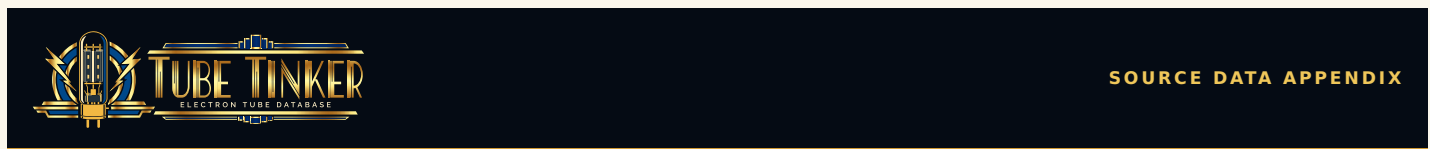
Published test conditions and operating points. Values on this page are preserved as reported by this source.

1967 MULLARD RECEIVING AND AMPLIFYING VALVES

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Ci n	10 pF	Published in approved EF184 target datasheet entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Co ut	3 pF	Published in approved EF184 target datasheet entry; Section1
Cg l - g 2	2.8 pF	Published in approved EF184 target datasheet entry; Section1
P g2 max	900 mW	Published in approved EF184 target datasheet entry; Section1
T b u l b max	180 °C	Published in approved EF184 target datasheet entry; Section1
gm =2	2 mA	Published in approved EF184 target datasheet entry; Section1



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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage (ac/dc) 3.4 4.4	6.3 V	Published in approved XF184 target datasheet entry; Section1
Heater Current 0.6 0.45	300 mA	Published in approved XF184 target datasheet entry; Section1
Plate Supply Voltage B	50 V	Published in approved XF184 target datasheet entry; Section1
Plate Voltage	250 V	Published in approved XF184 target datasheet entry; Section1
Grid-No.2 (Screen-Grid) Supply Voltage	550 V	Published in approved XF184 target datasheet entry; Section1
Grid-No.2 Voltage	250 V	Published in approved XF184 target datasheet entry; Section1
Cathode Current	25 mA	Published in approved XF184 target datasheet entry; Section1
Plate Dissipation	2.5 W	Published in approved XF184 target datasheet entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.2 Input	0.9 W	Published in approved XF184 target datasheet entry; Section1
Plate Voltage 190	200 V	Published in approved XF184 target datasheet entry; Section1
Grid-No.2 Voltage 190	200 V	Published in approved XF184 target datasheet entry; Section1
Grid-No. 1 Voltage -2.35	-2.5 V	Published in approved XF184 target datasheet entry; Section1
Grid-No.1-Circuit Resistance	1 MΩ	Published in approved XF184 target datasheet entry; Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Internal Shield	10 pF	Published in approved XF184 target datasheet entry; Section1
Internal Shield	3 pF	Published in approved XF184 target datasheet entry; Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance (Approx.) 0.35	0.35 MΩ	Published in approved XF184 target datasheet entry; Section1
Transconductance 15000	15000 μS	Published in approved XF184 target datasheet entry; Section1
Plate Current 10	10 mA	Published in approved XF184 target datasheet entry; Section1
Grid-No.2 Current 4.1	-4.1 mA	Published in approved XF184 target datasheet entry; Section1

TUBE TINKER

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