

ELECTRONIC TUBE REFERENCE

404A

Voltage Pentode electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
PENTODE

Low-noise frame-grid pentode developed for UHF and broadband professional amplification, combining very high transconductance with low capacitances.

GENERAL CHARACTERISTICS

BASE DESIGNATION	E9-1	BASE PINS	9
NOMINAL HEATER	6.3 V / 300 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	100000 Ω
TRANSCONDUCTANCE	0.0125 S
MAXIMUM PLATE VOLTAGE	180 V
MAXIMUM SCREEN VOLTAGE	150 V
MAXIMUM PLATE DISSIPATION	3 W
MAXIMUM SCREEN DISSIPATION	0.75 W
MAXIMUM CATHODE CURRENT	35 mA
Promoted fields mapped from printed maximum-rating and characteristic headings; additional published values preserved in parameter rows.	

Low-noise frame-grid RF pentode for ultrahigh-frequency and broadband service, with high transconductance and low capacitances.

SOURCE OPERATING CONDITIONS

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
Grid To Plate Capacitance	0.04 pF	Maximum;WithShield
Input Capacitance	7.8 pF	WithShield
Output Capacitance	3.4 pF	WithShield

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	15000 uS	Typical

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1965 Ericsson Longlife

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

1965 ERICSSON LONGLIFE

Section 1 · Pentode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.05 pF	ColdTube;Maximum
Input capacitance	7 pF	ColdTube;WithoutExternalShield
Output capacitance	2.5 pF	ColdTube;WithoutExternalShield

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate supply voltage	150 V	ClassA
Screen-grid supply voltage	150 V	ClassA
Cathode bias resistor	110 0hm	ClassA
Plate current	13.5 mA	ClassA
Screen-grid current	4 mA	ClassA
Transconductance minimum	10000 uS	—
Transconductance maximum	16000 uS	—
Plate current maximum	18 mA	—
Screen-grid current maximum	6 mA	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	13000 uS	ClassA
Plate resistance	0.2 MOhm	ClassA
Equivalent noise resistance	500 0hm	ClassA
Input conductance at 100 MHz	2000 uS	ClassA



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1971 RCA HB3 Binder 3 of 7

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

1971 RCA HB3 BINDER 3 OF 7
Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	—200 V	—
Maximum screen voltage	—165 V	—
Maximum plate dissipation	—3.3 W	—
Maximum screen dissipation	—0.85 W	—
Maximum cathode current	—40 mA	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	12500 μ S	—
Plate supply voltage	150 V	ClassA
Plate supply voltage	160 V	ClassA
Grid No.2 supply voltage	150 V	ClassA
Grid No.2 supply voltage	160 V	ClassA
Cathode resistor	110 Ω	ClassA
Cathode resistor	600 Ω	ClassA
Transconductance	12500 μ S	ClassA
Plate current	13 mA	ClassA
Grid No.2 current	4.5 mA	ClassA



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

2026 Western Electric 400s

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

2026 WESTERN ELECTRIC 400S

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Screen-Grid Dissipation	0.75 watt	Screen-Grid Dissipation 0.75 watt

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Current	300 amperes	Heater Current 300 mi I I i amperes
Screen-Grid Current U	5 amperes	Screen-Grid Current U.5 U.5 mII 1i amperes



SOURCE DATA APPENDIX

2026 Western Electric Other

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

2026 WESTERN ELECTRIC OTHER

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage Maximum	180 V	Design-center value
Screen-Grid Voltage Maximum	150 V	Design-center value
Plate Dissipation Maximum	3 W	Design-center value
Screen-Grid Dissipation Maximum	0.75 W	Design-center value
Cathode Current Maximum	35 mA	Design-center value
Heater-Cathode Voltage Maximum	50 V	Design-center value
Grid Resistance Maximum	0.1 megohm	Design-center value
Bulb Temperature Maximum	120 degC	Design-center value
Heater Voltage	6.3 V	A-C or D-C
Heater Current	300 mA	General characteristics
Plate Supply Voltage	150 V	Operating column 1
Screen-Grid Supply Voltage	150 V	Operating column 1
Control Grid Voltage	0 V	Operating column 1
Cathode Resistor	110 ohm	Operating column 1
Plate Supply Voltage	160 V	Operating column 2; minimized gain variation
Screen-Grid Supply Voltage	160 V	Operating column 2; minimized gain variation
Control Grid Voltage	8.5 V	Operating column 2 as printed
Cathode Resistor	600 ohm	Operating column 2

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-Plate Capacitance Maximum	0.5 pF	Without external shield
Input Capacitance	7 pF	Without external shield
Output Capacitance	2.5 pF	Without external shield

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-Plate Capacitance Maximum	0.4 pF	With external shield RMA #315
Input Capacitance	7.1 pF	With external shield RMA #315
Output Capacitance	2.9 pF	With external shield RMA #315

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	13 mA	Operating column 1
Screen-Grid Current	4.5 mA	Operating column 1
Transconductance	12500 uS	Operating column 1
Plate Current	13 mA	Operating column 2
Screen-Grid Current	4.5 mA	Operating column 2
Transconductance	12500 uS	Operating column 2