



ELECTRONIC TUBE REFERENCE

403B

Voltage - Pentode electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

PENTODE

Long-life high-transconductance miniature pentode for professional RF and broadband amplification, developed as a durable communications-service replacement.

GENERAL CHARACTERISTICS

BASE DESIGNATION	E7-1	BASE PINS	7
NOMINAL HEATER	6.3 V / 150 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Pentode	
PLATE RESISTANCE	300000 Ω
TRANSCONDUCTANCE	0.005 S
MAXIMUM PLATE VOLTAGE	200 V
MAXIMUM SCREEN VOLTAGE	155 V
MAXIMUM PLATE DISSIPATION	1.85 W
MAXIMUM SCREEN DISSIPATION	0.55 W
MAXIMUM CATHODE CURRENT	20 mA
<i>Promoted fields mapped from printed maximum-rating and characteristic headings; additional published values preserved in parameter rows.</i>	

Seven-pin miniature high-transconductance pentode.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1956 Western Electric Tubes

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

1956 WESTERN ELECTRIC TUBES

Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterOrFilamentVoltage	6.3 V	—
HeaterOrFilamentCurrent	150 mA	—



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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate supply voltage	130 V	ClassA
Screen-grid supply voltage	130 V	ClassA
Cathode bias resistor	200 Ohm	ClassA
Plate current	8 mA	ClassA
Screen-grid current	2 mA	ClassA
Transconductance minimum	4000 uS	—
Transconductance maximum	6200 uS	—
Plate current maximum	10.8 mA	—
Screen-grid current maximum	2.7 mA	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	5100 uS	ClassA
Plate resistance	0.35 MOhm	ClassA
Screen-to-control-grid amplification factor	28 ratio	ClassA
Equivalent noise resistance	1600 Ohm	ClassA
Input conductance at 100 MHz	125 uS	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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage . . _ « v v v v v v v e e	6.3 volts	Heater Voltage . . _ « v v v v v v v e e 6.3 volts
Plate Current E, = E;,	5 volts	Plate Current E, = E;;5 = 120 volts; .« . . 7.5 milliamperes
Transconductance Cathode Bias Resistor =	200 ohms	Transconductance Cathode Bias Resistor = 200 ohms 5000 micromhos
Heater Current. . . . e	150 milliamperes	Heater Current. . . e 150 milliamperes
Plate voltage	200 volts	Plate voltage . . 200 volts
Screen Grid Voltage	155 volts	Screen Grid Voltage 155 volts
Cathode Current	20 milliamperes	Cathode Current . 20 milliamperes
Heater Cathode Voltage	130 volts	Heater Cathode Voltage 130 volts
Bulb Temperature	130 centigrade	Bulb Temperature. 130 centigrade
For Fixed Bias	1 megohm	For Fixed Bias . 1.0 megohm
Plate voltage	120 volts	Plate voltage . 120 150 180 volts
Screen Grid Voltage	120 volts	Screen Grid Voltage 120 140 120 volts
Plate Current	7 milliamperes	Plate Current . . . 7.0 6.6 7.4 milliamperes-wt—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Screen Grid Current	2.2 milliamperes	Screen Grid Current- 2.2 2.1 2.1 milliamperes- -----
Plate Resistance	0.3 megohm	Plate Resistance. 0.30 0.40 0.45 megohm
Transconductance . .o	5000 micromhos	Transconductance . .o 5000 4500 5100 micromhos
Plate Current of	10 Microamperes	Plate Current of 10 Microamperes. -6.8 -7.8 6.9 volts
Published value	14 VOLTS	14 "SCREEN GRID VOLTAGE =120 VOLTS] g
[SCREEN GRID VOLTAGE =	120 VOLTS	[SCREEN GRID VOLTAGE =120 VOLTS

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Dissipation	1.85 watts	Plate Dissipation 1.85 watts
Screen Grid Dissipation	0.55 watt	Screen Grid Dissipation. 0.55 watt

TUBE TINKER

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

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