



ELECTRONIC TUBE REFERENCE

307A

Power - Pentode (NOT beam) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

PENTODE

Power pentode designed primarily for Class-C radio-frequency transmitting, amplifier, oscillator, or modulated RF service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	4
NOMINAL HEATER	5.5 V / 1 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Pentode	
TRANSCONDUCTANCE	0.004 S
MAXIMUM PLATE VOLTAGE	500 V
MAXIMUM SCREEN VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	15 W
MAXIMUM SCREEN DISSIPATION	6 W
MAXIMUM CATHODE CURRENT	60 mA
<i>Promoted fields audited from printed ratings/characteristics; remaining published values preserved as parameters.</i>	

Air-cooled transmitting pentode for Class C RF screen-modulated service.



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	5.5 V	—
HeaterOrFilamentCurrent	1 A	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical Power Output	6 W	ClassC;ScreenModulated



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

2026 Western Electric 300s

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

2026 WESTERN ELECTRIC 300S

Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament voltage	5.5 volt	Filament voltage 5.5 volts, a.c. or d.c.
as functions of plate voltage in Figures	5 volt	as functions of plate voltage in Figures 5 and 6, respectively, for a screen-grid voltage of 200 volts
respectively, for a plate voltage of	500 volt	respectively, for a plate voltage of 500 volts, a screen-grid voltage of 200 volts, and several values
voltage on positive swing of input +	30 volt	voltage on positive swing of input +30 +30 volts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
For continuous operation the direct plate current should be limited to	45 milliamperes	For continuous operation the direct plate current should be limited to 45 milliamperes.
**Carrier conditions for use with a modulation factor up to	1	**Carrier conditions for use with a modulation factor up to 1.0.
Because of secondary emission effects, the suppressor grid should not be driven more than	20 second	Because of secondary emission effects, the suppressor grid should not be driven more than 20
mended values of load resistance and the indicated range of input voltages. In designing the	307 volt	mended values of load resistance and the indicated range of input voltages. In designing the 307A
Direct plate voltage	500 volt	Direct plate voltage 500 500 500 volts
Direct screen-grid voltage (approx.)	200 volt	Direct screen-grid voltage (approx.) 200 250 250 volts
Screen-grid circuit resistance	14000 ohms	Screen-grid circuit resistance 14000 20000 20000 ohms
Total control-grid bias (approx.)	-3 volts	Total control-grid bias (approx.) - 3 5 - 3 5 — 35 volts
Control-grid circuit resistance	10000 ohms	Control-grid circuit resistance 10000 10000 10000 ohms
Fixed control-grid bias	-2 volts	Fixed control-grid bias - 2 0 - 2 0 — 20 volts
Suppressor-grid bias o	0 volts	Suppressor-grid bias o 0 0 volts
R-F control-grid voltage	50 volt	R-F control-grid voltage 50 50 50 peak volts
Direct plate current	40 milliamperes	Direct plate current 40 4 5 60 milliamperes
Direct screen-grid current	20 milliamperes	Direct screen-grid current 20 12 13 milliamperes
Direct control-grid current	1.5 milliamperes	Direct control-grid current 1.5 1.3 1.4 milliamperes
A-F suppressor-grid voltage	50 volt	A-F suppressor-grid voltage 50 0 0 peak volts
Effective load resistance	4000 ohms	Effective load resistance 4000 6500 5000 ohms
Carrier power output	6 watts	Carrier power output 6 15 20 watts
Power output on a-f peaks	24 watts	Power output on a-f peaks 24 — watts
Note	1	Note 1—Carrier conditions for use with modulation factors up to 1.0.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
voltage of	50 volt	voltage of 50 peak volts. Corresponding plate current, screen-grid current, control-grid current,
; SUPPRESSOR-GRID VOLTAGE	0 VOLT	; SUPPRESSOR-GRID VOLTAGE -0
F	2 SECOND	F2 = SECOND HARMONIC OUTPUT VA Z
F	3	F3 «= THIRD HARMONIC OUTPUT
Si!:::;!!: iSiSSSi;!: LOAD RESISTANCE =	4000 OHM	Si!:::;!!: iSiSSSi;!: LOAD RESISTANCE = 4000 OHM S
CONTROL-GRID VOLTAGE =	-20 VOLT	CONTROL-GRID VOLTAGE =-20 VOLTS
SCREEN-GRID VOLTAGE	-250 VOLT	SCREEN-GRID VOLTAGE -250 VOLTS
CONTROL-GRID VOLTAGE »	-35 VOLT	CONTROL-GRID VOLTAGE » -35 VOLTS (APPROX)
SCREEN-GRtO VOLTAGE «	200 VOLT	SCREEN-GRtO VOLTAGE « 200VOLTS (APPROX)
LOAD IMPEDANCE	-4000 OHMS	LOAD IMPEDANCE - 4000 OHMS

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum direct plate voltage	500 volt	Maximum direct plate voltage 500 500 500 volts
Maximum direct screen-grid voltage	300 volt	Maximum direct screen-grid voltage. 300 250 250 volts
Maximum direct plate current	60 milliamperes	Maximum direct plate current 60 60 45 milliamperes
Maximum direct screen-grid current	25 milliamperes	Maximum direct screen-grid current. 25 25 25 milliamperes
Maximum direct control-grid current	7 milliamperes	Maximum direct control-grid current 7 7 milliamperes
Maximum plate dissipation	15 watts	Maximum plate dissipation 15 15 15 watts
Maximum screen-grid dissipation	6 watts	Maximum screen-grid dissipation... . 6 6 6 watts
Maximum direct plate voltage	500 volt	Maximum direct plate voltage 500 300 volts

TUBE TINKER

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

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