



ELECTRONIC TUBE REFERENCE

306A

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	2.75 V / 2 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Pentode	
TRANSCONDUCTANCE	0.00405 S
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	15 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 plate-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	2.75 V	—
HeaterOrFilamentCurrent	2 A	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical Power Output	7 W	ClassC;PlateModulated



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
Audio-frequency amplifier in positions where power outputs of approximately	8 watts	Audio-frequency amplifier in positions where power outputs of approximately 8 watts or less
Filament voltage	2.75 volt	Filament voltage 2.75 volts, a.c. or d.c.
Nominal filament current	2 amperes	Nominal filament current 2.0 amperes
former secondary. When the tube is used in very high-frequency circuits,	20 second	former secondary. When the tube is used in very high-frequency circuits, 20 megacycles or above,

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
are shown in Figures	3 volt	are shown in Figures 3 and 4, respectively, as functions of control-grid voltage for several values
voltage in Figures	5 volt	voltage in Figures 5 and 6, respectively, for a screen-grid voltage of 300 volts. Corresponding
amplification factor, plate resistance, and transconductance characteristics are shown in Figures	7	amplification factor, plate resistance, and transconductance characteristics are shown in Figures 7,
swing of input voltage +	30 volt	swing of input voltage +30 volts
frequency a m p l i f i c a t i o n	50 milliamperes	frequency a m p l i f i c a t i o n 50 milliamperes
ABCDE, in Figure	3	ABCDE, in Figure 3. Amplification factor, plate resistance, transconductance, and performance
voltage for several values of load resistance are shown in Figures	10 volt	voltage for several values of load resistance are shown in Figures 10, 11 and 12, respectively, for
Direct plate voltage	300 volt	Direct plate voltage 300 volts
Direct screen-grid voltage (approximate)	180 volt	Direct screen-grid voltage (approximate) 180 volts
Screen-grid circuit resistance	8000 ohms	Screen-grid circuit resistance 8000 ohms
Control-grid circuit resistance	10000 ohms	Control-grid circuit resistance 10000 ohms
Fixed control-grid bias	-20 volts	Fixed control-grid bias —20 volts
R-F control-grid driving voltage	70 volt	R-F control-grid driving voltage 70 peak volts
Direct plate current	36 milliamperes	Direct plate current 36 milliamperes
Direct screen-grid current	15 milliamperes	Direct screen-grid current 15 milliamperes
Direct control-grid current	3 milliamperes	Direct control-grid current 3 milliamperes
Effective load resistance	4500 ohms	Effective load resistance 4500 ohms
Carrier power output	7 watts	Carrier power output 7 watts
Power output on a-f peaks	28 watts	Power output on a-f peaks 28 watts
and to the screen grid through the	8000 ohm	and to the screen grid through the 8000 ohm screen-grid resistance. No by-pass condenser is used
PLATE VOLTAGE =	300 VOLT	PLATE VOLTAGE = 300 VOLTS [
FILAMENT VOLTAGE =	2.75 VOLT	FILAMENT VOLTAGE =2.75 VOLTS DCF

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
SCREEN-GRID VOLTAGE =	300 VOLT	SCREEN-GRID VOLTAGE = 300 VOLTS E
CONTROL-GRID VOLTAGE =	-20 VOLT	CONTROL-GRID VOLTAGE = -20 VOLTS E

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	300 volt	Maximum plate voltage 300 volts
Maximum screen-grid voltage	300 volt	Maximum screen-grid voltage 300 volts
Maximum plate current for audio-frequency amplifier applications	60 milliamperes	Maximum plate current for audio-frequency amplifier applications 60 milliamperes
Maximum plate dissipation	15 watts	Maximum plate dissipation 15 watts
Maximum screen-grid current	20 milliamperes	Maximum screen-grid current 20 milliamperes
Maximum control-grid current	7 milliamperes	Maximum control-grid current 7 milliamperes
columns of the table to other maximum harmonic levels. Each ordinate in Figure	13	columns of the table to other maximum harmonic levels. Each ordinate in Figure 13 gives the
Maximum direct plate voltage	300 volt	Maximum direct plate voltage 300 225 volts
Maximum direct plate current	50 milliamperes	Maximum direct plate current 50 50 milliamperes