



ELECTRONIC TUBE REFERENCE

303A

Voltage - Triode (with diode, heptode or hexode) electronic tube

CONSOLIDATED TECHNICAL
DATA

3 SECTIONS

CONSTRUCTION

DIODE-DIODE-TRIODE

Western Electric double-diode triode combining two rectifying elements with a medium-mu voltage-amplifier section. The paired diodes provide detector or signal rectification while the triode supplies subsequent gain.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	4
NOMINAL HEATER	2 V / 1.6 A	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Common cathode	SECTION CONSTRUCTION	Dissimilar

SECTION RATINGS

SECTION1 Diode

No fixed ratings recorded.

Promoted fields audited from printed ratings/characteristics; remaining published values preserved as parameters.

SECTION2 Diode

No fixed ratings recorded.

Promoted fields audited from printed ratings/characteristics; remaining published values preserved as parameters.

SECTION3 Triode	
PLATE RESISTANCE	17000 Ω
AMPLIFICATION FACTOR	14.1
MAXIMUM PLATE VOLTAGE	200 V
<i>Promoted fields audited from printed ratings/characteristics; remaining published values preserved as parameters.</i>	

Duodiode triode with indirectly heated common cathode.

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 · Diode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	2 volt	Heater voltage 2.0 volts, a.c. or d.c.
Nominal heater current	1.6 amperes	Nominal heater current 1.60 amperes
tube are shown in Figure	3 volt	tube are shown in Figure 3 as functions of grid bias for several values of plate voltage. Corresponding
amplification-factor, plate-resistance, and transconductance characteristics are given in Figures	4	amplification-factor, plate-resistance, and transconductance characteristics are given in Figures 4,
Published value	5 volt	5, and 6 respectively. Plate current characteristics as functions of plate voltage for several values
included within the area, ABCD, in Figure	3	included within the area, ABCD, in Figure 3. Values of amplification factor and plate resistance
ponding power output, P _m , in milliwatts, and the second and third harmonic levels, F	2 watts	ponding power output, P _m , in milliwatts, and the second and third harmonic levels, F _{2m} and F _{gm} ,
the level of the third harmonic is lower than	45	the level of the third harmonic is lower than 45 db below the fundamental, its value may be widely
levels of individual tubes extends from	20 volt	levels of individual tubes extends from 20 to 64 db below 1 volt. Since microphonic noise output
Diode Characteristics—The current-voltage characteristic of a single diode is shown in Figure	8 volt	Diode Characteristics—The current-voltage characteristic of a single diode is shown in Figure 8.
voltage. Load lines for zero fixed bias are shown in Figure	9 volt	voltage. Load lines for zero fixed bias are shown in Figure 9 for load resistance values of 0.25,

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
voltage should be limited to a maximum value of +	10 volt	voltage should be limited to a maximum value of +10 volts. Rectification characteristics for a

2026 WESTERN ELECTRIC 300S

Section 3 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Triode Microphonic Noise—With a plate voltage of	135 volt	Triode Microphonic Noise—With a plate voltage of 135 volts, a grid bias of — 6 volts, and a
load resistance of	100000 ohms	load resistance of 100,000 ohms, the mean microphonic noise output level of the triode section of

TUBE TINKER

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