



ELECTRONIC TUBE REFERENCE

242B

Power - Triode electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Transmitting power triode for radio-frequency amplifier and oscillator duty. Its published operating conditions emphasize substantial RF output, plate input, and dissipation rather than low-level receiving applications.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	4
NOMINAL HEATER	10 V / 3.25 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
PLATE RESISTANCE	3500 Ω
TRANSCONDUCTANCE	0.0036 S
AMPLIFICATION FACTOR	12.5
MAXIMUM PLATE VOLTAGE	1250 V
MAXIMUM PLATE DISSIPATION	100 W
MAXIMUM CATHODE CURRENT	150 mA
<i>Promoted fields mapped from published ratings/characteristics; additional published values preserved in parameter table.</i>	

United Electronics type 242B: A-F power amplifier and Class A/AB modulator. The datasheet provides general ratings, maximum ratings, installation guidance, and representative operating conditions for continuous service.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1945 United Electronics

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

1945 UNITED ELECTRONICS

Section 1 · Triode

CHARACTERISTICS

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament voltage	10 V	—
Filament current	3.25 A	—

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum direct plate voltage	1250 V	—
Maximum plate dissipation	100 W	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

2026 Western Electric 200s

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

2026 WESTERN ELECTRIC 200S

Section 1 · Triode

CHARACTERISTIC

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament Voltage	10 Volt	Filament Voltage 10 Volts
Nominal Filament Current	3.25 Amperes	Nominal Filament Current 3.25 Amperes
Average Characteristics with Plate Voltage, Eb, of	1000 Volt	Average Characteristics with Plate Voltage, Eb, of 1000, Grid Voltage, Ec, of -50 and
Filament Voltage Ea, of	10 Volt	Filament Voltage Ea, of 10 volts D.C.
Plate Resistance	3500 Ohms	Plate Resistance 3,500 Ohms

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
A m p l i f i c a t i o n Factor	12.5	A m p l i f i c a t i o n Factor 12.5
Mutual Conductance	3570 Micromhos	Mutual Conductance 3,570 Micromhos
Grid Bias Voltage	-50 Volt	Grid Bias Voltage -50 Volts
Load Impedance	7000 Ohms	Load Impedance 7,000 Ohms
Undistorted Output	10 Watts	Undistorted Output 10 Watts
Grid Bias Voltage	-100 Volt	Grid Bias Voltage -100 - 1 0V
Average thermionic emission	1.5 amperes	Average thermionic emission 1.5 amperes
Amplification factor	12.5	Amplification factor 12.5
Plate resistance	3500 ohms	Plate resistance 3500 ohms
Grid to plate transconductance	3600 micromhos	Grid to plate transconductance 3600 micromhos
Direct plate voltage	1250 volt	Direct plate voltage 1250 1000 volts
Grid bias	-6 volts	Grid bias - 6 8 — 42 volts
Direct plate current	68 milliamperes	Direct plate current 68 85 milliamperes
Plate dissipation	8 watts	Plate dissipation 8 5 85 watts
Load impedance	8000 ohms	Load impedance 8000 7000 ohms
Undistorted output	22 watts	Undistorted output 22.0 12.0 watts
Grid bias	-8 volts	Grid bias - 8 0 — 55 volts
Plate dissipation	100 watts	Plate dissipation 100 100 watts
Load resistance, plate-to- plate	7600 ohms	Load resistance, plate-to-plate 7600 6000 ohms
Load resistance, per tube	1900 ohms	Load resistance, per tube 1900 1500 ohms
Direct plate voltage	1000 volt	Direct plate voltage 1000 volts
Direct plate current for carrier conditions	150 milliamperes	Direct plate current for carrier conditions 150 milliamperes
Grid bias	-60 volts	Grid bias — 60 volts
Direct plate voltage	1250 volt	Direct plate voltage 1250 1000 1 0 0 0 v v c o l t s
Direct plate current	150 milliamperes	Direct plate current 150 150 150mmilliamperes
Direct plate voltage	1000 volt	Direct plate voltage 1000 750 volts
Direct plate current	150 milliamperes	Direct plate current 150 150 milliamperes
Grid bias	-160 volts	Grid bias —160 -120 volts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
or circuit breaker should remove the plate voltage if the plate current exceeds	175 volt	or circuit breaker should remove the plate voltage if the plate current exceeds 175 milliamperes.
circuit, reduced plate voltage or a series resistance of	1000 volt	circuit, reduced plate voltage or a series resistance of 1000 to 5000 ohms in the plate circuit should
A	5 volt	A 5% decrease in filament voltage reduces the thermionic emission approximately 25%. Either
A resistance of	20 ohms	A resistance of 20 to 30 ohms of three watt rating is suitable.
voltages off,	30 volt	voltages off, 30% above normal voltage for 10 minutes followed by a longer period at normal voltage.
on the basis of	5	on the basis of 5% second harmonic distortion.
of the plate voltage. For complete or	100 volt	of the plate voltage. For complete or 100% modulation, the plate voltage varies from zero
fourth of the peak power output under	100 volt	fourth of the peak power output under 100% modulation. In this case, since the plate voltage

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	1250 Volt	Maximum Plate Voltage 1,250 Volts
Maximum Plate Current	0.15 Ampere	Maximum Plate Current 0.150 Ampere
Maximum Plate Voltage	1000 Volt	Maximum Plate Voltage 1,000 Volts
Maximum Plate Current	0.85 Ampere	Maximum Plate Current 0.85 Ampere
Maximum Plate Dissipation	85 Watts	Maximum Plate Dissipation 85 Watts
Maximum Plate Voltage	12 Volt	Maximum Plate Voltage 1,2 5
Maximum Non-modulated Plate Voltage (D.C.)	1250 Volt	Maximum Non-modulated Plate Voltage (D.C.) 1,250 Volts
Max. direct plate voltage	1250 volt	Max. direct plate voltage 1250 volts
Max. direct plate current	150 milliamperes	Max. direct plate current 150 milliamperes
Max. plate dissipation	100 watts	Max. plate dissipation 100 watts
Max. direct grid current	50 milliamperes	Max. direct grid current 50 milliamperes
Max. r-f grid current	5 amperes	Max. r-f grid current 5 amperes
Max. frequency for the above ratings	6 megacycles	Max. frequency for the above ratings 6 megacycles
Max. plate voltage for upper frequency limit of	30 volt	Max. plate voltage for upper frequency limit of 30 Mc. . 600 volts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Max. plate voltage for frequencies between	6 volt	Max. plate voltage for frequencies between 6 and 30 Mc in proportion.
Approximate maximum output	2 watts	Approximate maximum output—2 tubes 200 165 watts
Max. direct grid current	50 milliamperes	Max. direct grid current 50 50 milliamperes

TUBE TINKER

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