

ELECTRONIC TUBE REFERENCE

102G

Voltage - Triode (single) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Low-noise filamentary voltage-amplifier triode for sensitive professional signal amplification.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	4
NOMINAL HEATER	2.1 V / 1 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	63000 Ω
TRANSCONDUCTANCE	0.00047 S
AMPLIFICATION FACTOR	29.8
MAXIMUM PLATE VOLTAGE	190 V
Low-noise filamentary voltage-amplifier triode; special precautions minimize insulation leaks and sputter noise.	

The 102G is a filamentary voltage-amplifier triode similar to the 102D, with special precautions to minimize insulation leaks and sputter noise; it is recommended for early stages of high-gain low-frequency amplifiers.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

2026 Western Electric 100s

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

2026 WESTERN ELECTRIC 100S

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament voltage	2.1 V	—
Filament current	1 A	—
Maximum plate voltage	190 V	—
Plate voltage	130 V	TypicalOperating; Point1
Grid voltage	-2 V	TypicalOperating; Point1
Plate current	0.36 mA	TypicalOperating; Point1
Amplification factor	29.4	TypicalOperating; Point1
Plate resistance	80000 ohm	TypicalOperating; Point1
Transconductance	370 uS	TypicalOperating; Point1
Peak output voltage	27 V	TypicalOperating; Point1
Plate voltage	130 V	TypicalOperating; Point2
Grid voltage	-1.5 V	TypicalOperating; Point2
Plate current	0.58 mA	TypicalOperating; Point2
Amplification factor	29.8	TypicalOperating; Point2
Plate resistance	63000 ohm	TypicalOperating; Point2
Transconductance	470 uS	TypicalOperating; Point2
Peak output voltage	20 V	TypicalOperating; Point2
Plate voltage	130 V	TypicalOperating; Point3
Grid voltage	-1 V	TypicalOperating; Point3
Plate current	0.85 mA	TypicalOperating; Point3
Amplification factor	30.1	TypicalOperating; Point3
Plate resistance	53000 ohm	TypicalOperating; Point3
Transconductance	570 uS	TypicalOperating; Point3

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak output voltage	15 V	TypicalOperating; Point3
Plate voltage	160 V	TypicalOperating; Point4
Grid voltage	-3 V	TypicalOperating; Point4
Plate current	0.34 mA	TypicalOperating; Point4
Amplification factor	29.2	TypicalOperating; Point4
Plate resistance	81000 ohm	TypicalOperating; Point4
Transconductance	360 uS	TypicalOperating; Point4
Peak output voltage	40 V	TypicalOperating; Point4
Plate voltage	160 V	TypicalOperating; Point5
Grid voltage	-2 V	TypicalOperating; Point5
Plate current	0.8 mA	TypicalOperating; Point5
Amplification factor	29.9	TypicalOperating; Point5
Plate resistance	54000 ohm	TypicalOperating; Point5
Transconductance	550 uS	TypicalOperating; Point5
Peak output voltage	28 V	TypicalOperating; Point5
Plate voltage	160 V	TypicalOperating; Point6
Grid voltage	-1 V	TypicalOperating; Point6
Plate current	1.45 mA	TypicalOperating; Point6
Amplification factor	30.3	TypicalOperating; Point6
Plate resistance	42000 ohm	TypicalOperating; Point6
Transconductance	720 uS	TypicalOperating; Point6
Peak output voltage	15 V	TypicalOperating; Point6
Plate voltage	190 V	MaximumOperating; Point7
Grid voltage	-3 V	MaximumOperating; Point7
Plate current	0.83 mA	MaximumOperating; Point7
Amplification factor	29.8	MaximumOperating; Point7
Plate resistance	54000 ohm	MaximumOperating; Point7
Transconductance	550 uS	MaximumOperating; Point7
Peak output voltage	42 V	MaximumOperating; Point7
Plate voltage	190 V	MaximumOperating; Point8
Grid voltage	-2 V	MaximumOperating; Point8
Plate current	1.46 mA	MaximumOperating; Point8

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Amplification factor	30.2	MaximumOperating; Point8
Plate resistance	43000 ohm	MaximumOperating; Point8
Transconductance	700 uS	MaximumOperating; Point8
Peak output voltage	30 V	MaximumOperating; Point8

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	5 pF	Based tube without socket
Grid-to-filament capacitance	2.9 pF	Based tube without socket
Plate-to-filament capacitance	1.7 pF	Based tube without socket

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	63000 ohm	Representative published operating point
Transconductance	470 uS	Representative published operating point
Amplification factor	29.8	Representative published operating point

TUBE TINKER

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