ELECTRONIC TUBE REFERENCE

4021C

Voltage - Triode (single) electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
TRIODE

Directly heated low-impedance oxide-filament triode with top-cap grid connection and published audio operating, output, and harmonic-performance data.

General characteristics

BASE DESIGNATION	–	**BASE PINS**	4
NOMINAL HEATER	4 V / 250 mA	**PARALLEL HEATER**	– / –
HEATING	Direct	**SERIES OPERATION**	Not specified
CATHODE ARRANGEMENT	Separate cathodes	**SECTION CONSTRUCTION**	Similar

Section ratings

SECTION1 Triode

PLATE RESISTANCE	2000 Ω
TRANSCONDUCTANCE	0.003 S
AMPLIFICATION FACTOR	6

Published ratings/characteristics promoted; remaining useful source values represented as parameters.

Standard Valves 4021C is an oxide-coated directly heated triode. The sheet publishes its filament rating, static constants, interelectrode capacitances, and a table of typical anode/grid/load operating conditions with output and harmonic performance. Oxide-coated filament low-impedance triode, medium 4-pin bayonet-thrust base with grid connected to top cap.

SOURCE OPERATING CONDITIONS

1937 Standard Valves

SOURCE PDF

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

1937 STANDARD VALVES

Section 1 · Triode

CAPACITANCE		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Grid-Anode Capacitance	**9.7 pF**	Published specification
Anode-Filament Capacitance	**5.5 pF**	Published specification
Grid-Filament Capacitance	**7.3 pF**	Published specification

CHARACTERISTICS		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Characteristic Anode Current	**23 mA**	For impedance/amplification factor/transconductance values

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Output Power	**140 mW**	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-8V; AnodeCurrent=22.5mA; AnodeResistance=2050ohm; LoadImpedance=2050ohm
Total Harmonics Below Fundamental	**27 dB**	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-8V; AnodeCurrent=22.5mA; AnodeResistance=2050ohm; LoadImpedance=2050ohm
Output Power	**100 mW**	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-8V; AnodeCurrent=22.5mA; AnodeResistance=2050ohm; LoadImpedance=4100ohm
Total Harmonics Below Fundamental	**31.5 dB**	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-8V; AnodeCurrent=22.5mA; AnodeResistance=2050ohm; LoadImpedance=4100ohm

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Output Power	**87 mW**	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-8V; AnodeCurrent=22.5mA; AnodeResistance=2050ohm; LoadImpedance=6150ohm
Total Harmonics Below Fundamental	**35 dB**	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-8V; AnodeCurrent=22.5mA; AnodeResistance=2050ohm; LoadImpedance=6150ohm
Output Power	**65 mW**	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-6V; AnodeCurrent=28.4mA; AnodeResistance=1750ohm; LoadImpedance=1750ohm
Total Harmonics Below Fundamental	**31 dB**	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-6V; AnodeCurrent=28.4mA; AnodeResistance=1750ohm; LoadImpedance=1750ohm
Output Power	**63 mW**	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-6V; AnodeCurrent=28.4mA; AnodeResistance=1750ohm; LoadImpedance=2900ohm
Total Harmonics Below Fundamental	**32.5 dB**	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-6V; AnodeCurrent=28.4mA; AnodeResistance=1750ohm; LoadImpedance=2900ohm
Output Power	**56 mW**	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-6V; AnodeCurrent=28.4mA; AnodeResistance=1750ohm; LoadImpedance=5250ohm
Total Harmonics Below Fundamental	**38 dB**	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-6V; AnodeCurrent=28.4mA; AnodeResistance=1750ohm; LoadImpedance=5250ohm
Output Power	**160 mW**	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-10V; AnodeCurrent=17mA; AnodeResistance=2100ohm; LoadImpedance=2100ohm

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Total Harmonics Below Fundamental	**24 dB**	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-10V; AnodeCurrent=17mA; AnodeResistance=2100ohm; LoadImpedance=2100ohm
Output Power	**125 mW**	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-10V; AnodeCurrent=17mA; AnodeResistance=2100ohm; LoadImpedance=4200ohm
Total Harmonics Below Fundamental	**30.4 dB**	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-10V; AnodeCurrent=17mA; AnodeResistance=2100ohm; LoadImpedance=4200ohm
Output Power	**107 mW**	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-10V; AnodeCurrent=17mA; AnodeResistance=2100ohm; LoadImpedance=6300ohm
Total Harmonics Below Fundamental	**33 dB**	TypicalOperatingConditions; PlateVoltage=130V; GridBias=-10V; AnodeCurrent=17mA; AnodeResistance=2100ohm; LoadImpedance=6300ohm
Output Power	**250 mW**	TypicalOperatingConditions; PlateVoltage=160V; GridBias=-10V; AnodeCurrent=32.5mA; AnodeResistance=1800ohm; LoadImpedance=1800ohm
Total Harmonics Below Fundamental	**28 dB**	TypicalOperatingConditions; PlateVoltage=160V; GridBias=-10V; AnodeCurrent=32.5mA; AnodeResistance=1800ohm; LoadImpedance=1800ohm
Output Power	**180 mW**	TypicalOperatingConditions; PlateVoltage=160V; GridBias=-10V; AnodeCurrent=32.5mA; AnodeResistance=1800ohm; LoadImpedance=3600ohm
Total Harmonics Below Fundamental	**33.5 dB**	TypicalOperatingConditions; PlateVoltage=160V; GridBias=-10V; AnodeCurrent=32.5mA; AnodeResistance=1800ohm; LoadImpedance=3600ohm

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Output Power	**158 mW**	TypicalOperatingConditions; PlateVoltage=160V; GridBias=-10V; AnodeCurrent=32.5mA; AnodeResistance=1800ohm; LoadImpedance=5400ohm
Total Harmonics Below Fundamental	**35.5 dB**	TypicalOperatingConditions; PlateVoltage=160V; GridBias=-10V; AnodeCurrent=32.5mA; AnodeResistance=1800ohm; LoadImpedance=5400ohm

SOURCE OPERATING CONDITIONS

1946 Standard Telephone and Cables

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

1946 STANDARD TELEPHONE AND CABLES

Section 1 · Triode

CHARACTERISTICS

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage	**4 V**	—
Heater/filament current	**250 mA**	—
Plate resistance	**2000 ohm**	—
Transconductance	**0.003 A/V**	—
Amplification factor	**6**	—

TUBE TINKER

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