

ELECTRONIC TUBE REFERENCE

EC81

Power - Triode Single (under 10W) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
TRIODE

Power-capable triode intended for amplifier or driver service. Manufacturer data support moderate-current operation and useful dissipation, but do not justify assignment to the large transmitting or specialized regulator families.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	9
NOMINAL HEATER	6.3 V / 240 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	3000 Ω
TRANSCONDUCTANCE	0.0055 S
AMPLIFICATION FACTOR	16
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	5 W
MAXIMUM CATHODE CURRENT	30 mA
Triode section; values semantically promoted from published characteristics/maximum-ratings tables where present.	

EC81 is listed in the supplied Amperex material as a radiation-cooled UHF power triode. Published operating conditions and electrical characteristics were captured from the supplied tables.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1953 La Radiotechnique

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

1953 LA RADIOTECHNIQUE

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
(750 MHz maximum)	750 MHz	Triode
Tension de l'anode	150 V	Triode
Tension de la grille	2 V	Triode
Courant anodique	30 mA	Triode
Resistance interne	3 kohm	Triode
Tension de l'anode	275 V	Triode
Puissance dissipee sur l'anode	3.5 W	Triode
Courant cathodique	0 mA	Triode
Courant de la grille	7.55 mA	Triode
Tension de la grille	100 V	Triode
Tension de la grille	1.3 V	Triode
Tension entre cathode et filament. V _{kf}	100 V	Triode
Resistance du circuit de la grille	1 Mohm	Triode
(7150 MHz maximum)	7150 MHz	Triode
Frequence	375 MHz	Triode
Courant anodique	17.2 mA	Triode
Courant de la grille	28 mA	Triode
Puissance d'alimentation	47 W	Triode
Puissance de sortie	21 W	Triode
B. Avec tension de l'anode stabilisee; V _f	63 V	Triode

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Courant cathodique	20 mA	Triode
Courant de la grille	75 mA	Triode
Tension entre cathode et filament	100 V	Triode
Tension de l'anode	300 V	Triode
Courant anodique	18.6 mA	Triode
Courant de la grille	15 mA	Triode
Puissance alimentation	56 W	Triode
Puissance de sortie	22 W	Triode
(750 MHz maximum)	750 MHz	Triode
Puissance dissipee sur l'anode	5 W	Triode
Courant cathodique	30 mA	Triode
Tension entre cathode et filament. V _{kf}	100 V	Triode
Tension de l'anode	300 V	Triode
Courant anodique	26.3 mA	Triode
Courant de la grille	4 mA	Triode
Puissance d'alimentation	79 W	Triode
Puissance de sortie	38 W	Triode
Yamax	300 V	Triode
I _L	20 mA	Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Indirect (cathode isolee du filament)	6.8 V	Triode
Alimentation en parallele ' K -02 A	2 A	Triode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Capacite de la grille	1.8 pF	Triode
Capacite de l'anode	0.7 pF	Triode
Capacite anode-grille	1.6 pF	Triode

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Capacite grille-filament	0.25 pF	Triode
Capacite cathode-filament	2.3 pF	Triode



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1958 Amperex Industrial

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

1958 AMPEREX INDUSTRIAL

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	300 V	Published table
Maximum plate dissipation	16 W	UHF
Maximum plate current	27.7 mA	UHF
Power output	1.1 W	At 750 MHz
Maximum frequency	1200 MHz	UHF

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	5500 μ S	Published table
Heater/filament voltage	6.3 V	Published rating
Heater/filament current	240 mA	Published rating



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1963 Amperex Condensed

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

1963 AMPEREX CONDENSED

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Published heater rating
Heater current	240 mA	Published heater rating
Transconductance	5500 μ S	UHF

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate dissipation	16 W	UHF
Maximum plate voltage	300 V	UHF
Maximum plate current	27.7 mA	UHF
Power output	1.1 W	At 750 MHz
Maximum frequency	1200 MHz	UHF



SOURCE OPERATING CONDITIONS

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1963 Philips Electron Tubes Handbook V1a

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

1963 PHILIPS ELECTRON TUBES HANDBOOK V1A

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	150 V	—
Grid voltage	-2 V	—
Plate current	30 mA	—
Maximum plate voltage	300 V	—
Maximum plate dissipation	5 W	—
RF power output	2.1 W	UHF Oscillator 80cm
Maximum frequency	750 MHz	—

Characteristic		
Parameter	Published Value	Condition / Note
Transconductance	5500 μ S	—
Amplification factor	16	—

Capacitance		
Parameter	Published Value	Condition / Note
Grid capacitance	1.8 pF	—
Plate capacitance	0.55 pF	—
Grid-plate capacitance	1.5 pF	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1963 Philips Electron Tubes Handbook V3

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

1963 PHILIPS ELECTRON TUBES HANDBOOK V3

Section 1 · Triode

Characteristic		
Parameter	Published Value	Condition / Note
Heater voltage	6.3 V	Published heater rating
Heater current	175 mA	Published heater rating
Transconductance	5500 μ S	UHF
Amplification factor	16	UHF

Other		
Parameter	Published Value	Condition / Note
Plate voltage	150 V	UHF
Grid bias	-2 V	UHF
Plate current	30 mA	UHF

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1999 Philips E-Z

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

1999 PHILIPS E-Z

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical anode voltage	150 V	—
Maximum cathode-heater voltage	100 V	—