



ELECTRONIC TUBE REFERENCE

EC158

Power - Triode 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	8C18	BASE PINS	8
NOMINAL HEATER	6.3 V / 850 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
TRANSCONDUCTANCE	0.005 S
AMPLIFICATION FACTOR	30
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	30 W
MAXIMUM CATHODE CURRENT	170 mA
Triode section; values semantically promoted from published characteristics/maximum-ratings tables where present.	

EC158 is listed in the supplied Amperex material as a microwave 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
(4 000 MHz)	0 MHz	Triode
Crmaxas 7/8"_32NS _ 2A	2 A	Triode
D SUF fLANCS .1 0000n s es e e en es en e es ds d 4 A n a Ac en e A s006 (	4 A	Triode
8 min a fond de filets	2220500 a	Triode
N.B. – Le tube EC 158 a exactement la meme disposition des electrodes et	158 a	Triode
Tension de l'anode	180 V	Triode
Courant anodique	140 mA	Triode
Tension de la grille	42 V	Triode
Pente	5 mA/V	Triode
Tension de chauffage	63 V	Triode
0 0mn ec u0000 Vao	500 V	Triode
Tension de l'anode	300 V	Triode
Puissance dissipee sur l'anode	30 W	Triode
Puissance d'entree (f	2 W	Triode
Puissance dissipee sur la grille	350 mW	Triode
Courant cathodique	170 mA	Triode
Courant de la grille	25 mA	Triode
Tension negative de la grille	50 V	Triode

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Tension positive de la grille	10 V	Triode
Tension entre cathode et filament	50 V	Triode
filament	20 kohm	Triode
Temperature du scellement anodique. θ_a	0 a	Triode
Tension negative de la grille (crete). . -Vgp	100 V	Triode
Tension positive de la grille (crete)	30 V	Triode
(4 000 MHz)	0 MHz	Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Indirect (cathode isolee du filament) (Vf	6.3 V	Triode
Alimentation en parallele. 1If	900 mA	Triode
(3) Valeur minimale Ps min	45 W	Triode
(4 000 MHz)	0 MHz	Triode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Capacite anode-cathode	36 mpF	Triode
Capacite grille-cathode	35 pF	Triode
Capacite anode-grille	1.7 pF	Triode
(4000 MHz)	4000 MHz	Triode
Tension de l'alimentation anodique	200 V	Triode
Tension d'alimentation de la grille	20 V	Triode
Courant anodique	140 mA	Triode
Largeur de bande (a – 0,1 dB)	50 MHz	Triode
puissance de 6 dB	53 W	Triode
Gain de puissance (P entree	10 mW	Triode

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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	850 mA	Published heater rating
Amplification factor	30	MicrowaveTriode
Transconductance	25000 μ S	MicrowaveTriode
Power gain	8 dB	At 4000 MHz
Power gain	12 dB	At 4000 MHz

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate dissipation	30 W	MicrowaveTriode
Plate voltage	180 V	MicrowaveTriode
Plate current	140 mA	MicrowaveTriode
Power output	5 W	At 4000 MHz
Power output	2 W	At 4000 MHz

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode voltage	180 V	MicrowaveAmplifier
Anode current	60 mA	MicrowaveAmplifier
Grid bias	-3.5 V	MicrowaveAmplifier
Operating frequency	4200 MHz	GroundedGrid;Broadband
Anode supply voltage	200 V	GroundedGrid;Broadband
Grid supply voltage	20 V	GroundedGrid;Broadband
Anode current	140 mA	GroundedGrid;Broadband
Bandwidth	50 MHz	GroundedGrid;Broadband
Output power at 6 dB gain	5.3 W	GroundedGrid;Broadband
Gain at 10 mW driving power	11.5 dB	GroundedGrid;Broadband
Grid current maximum	25 mA	Section1
Grid dissipation maximum	0.35 W	Section1
Driving power maximum	2 W	GroundedGrid;4200MHz

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	22000 μ S	Section1
Amplification factor	30	Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode-to-grid capacitance	1.7 pF	Section1
Anode-to-cathode capacitance	0.036 pF	Section1
Grid-to-cathode capacitance	3.5 pF	Section1



SOURCE DATA APPENDIX

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.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical anode voltage	180 V	—
Typical anode current	60 mA	—
Grid dissipation maximum	0.35 W	—

TUBE TINKER

An independent reference for electronic tubes, vacuum tubes,
and their source documents.

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