



ELECTRONIC TUBE REFERENCE

YD1001

Power - Triode (over 1000V 100W) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Directly heated high-power transmitting triode for RF amplifier, oscillator, and modulator service to approximately 70 MHz. Rated for roughly 35 kW plate dissipation and 16 kV plate voltage for substantial radio-frequency power applications.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	12.6 V / 160 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
TRANSCONDUCTANCE	0.06 S
AMPLIFICATION FACTOR	58
MAXIMUM PLATE VOLTAGE	16000 V
MAXIMUM PLATE DISSIPATION	35000 W
MAXIMUM GRID DISSIPATION	1300 W
MAXIMUM CATHODE CURRENT	13 A
Maximum ratings promoted from published rating tables; additional condition-specific values preserved in parameters.	

Directly heated transmitting triode family for RF amplifier, oscillator, and modulator service up to about 70 MHz, offered in air-, water-, and vapor-cooled versions.

SOURCE OPERATING CONDITIONS

1963 Siemens

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

1963 SIEMENS

Section 1 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Amplification factor	58	—
Transconductance	60000 μ S	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
RS 2021 V	2021 V V	—
f <	10 10 30 30 MHz MHz	—
Ny~ =	85 110 85 110 kw 1) kw	—
Ua =	15 15 12 12 kv kv	—
Ug =	-260 -260 -210 -210 v v	—
Ugs =	520 600 520 650 v v	—
I, =	7,75 10,1 9,85 12,7 A A	—
Iy =	1,3 2 1,9 3 A A	—
Na =	116,3 151 118 153 kW kW	—
Ng _t =	610 1080 880 1770 w 1) w	—
Q, =	31,3 41 33 43 kW kW	—
Qg =	270 560 480 1140 w w	—
n =	73 73 72 72 7	—
R, =	1235 920 715 590 Q	—
f <	10 30 60 MHz MHz	—
u, =	15 12 8,5 KV KV	—
Uy =	-1000 -1000 -1000 v v	—
I =	18 18 18 A A	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
I _{xep} =	65 65 65 A A	—
Q, (RS2021L) =	35 35 35 kW kW	—
Q, (RS2021W) =	45 45 45 KW KW	—
Q, (RS2021 V) =	60 60 60 kW V	—
Q _g =	1,3 1,3 1,1 KW KW	—
f <	10 30 60 MHz MHz	—
N _~ =	85+3,1 2) 35+3,9 2) 5743,5 2) kw 1) kw	—
U, =	15 12 8 KV KV	—
U _g =	-260 -210 -130 v v	—
U _{gs} =	520 520 460 3) v v	—
I ₁ =	7,75 9,85 10 A A	—
I _y =	1,3 1,8 2,3 A A	—
N, =	116,3 118 80 kW kW	—
N _{gt} =	0,6143,12) 0,88x3,9 2) 0,93+3,5 2) kw 1) kw	—
Q, =	270 480 630 w w	—
R, =	1280 815 490 Q	—
f <	10 30 MHz MHz	—
U, =	15 12 kv kv	—
U, =	-1000 -1000 v v	—
I =	18 18 A A	—
I _{ksp} =	65 65 A A	—
Q. (RS 2021 L) =	35 35 kW kW	—
Q, (RS 2021 W) =	45 45 kW W	—
Q, (RS 2021 V) =	60 60 kW V	—
Q, =	1,3 1,3 kW kW	—
f <	10 30 30 30 MHz MHz	—
N _{a~} =	120 90 72 55 kw 1) kw	—
U _a =	15 12 10 8 KV KV	—
U _y =	-600 -550 -500 -450 v v	—
I, =	9,75 9,25 9,0 8,75 A A	—
I _y =	2,2 2,2 2,1 1,85 A A	—
N, =	146 111 90 70 XW	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Ng _t =	2,1 1,9 1,7 1,55 kw U kw	—
Q, =	26 21 18 15 kW kW	—
Q, =	780 690 650 605 w w	—
n =	82 81 80 78,5 %	—
R, =	850 710 600 485 Q	—
ROK 2253/1.4.62	5	—
f <	10 30 MHz MHz	—
U, =	-1000 -1000 v v	—



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.

1999 PHILIPS E-Z

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament voltage	12.6 V	Filament voltage 12.6 V
Filament current	160 A	Filament current 160 A
Amplification factor	58	Amplification factor 58
Mutual conductance	60 mA	Mutual conductance 60 mA/V
Frequency f	30 MHz	Frequency f = 10 30 30 30 MHz
Anode voltage V _a	8 kV	Anode voltage V _a = 15 12 10 8 kV
Grid voltage , V _g	-450 V	Grid voltage , V _g = -600 -550 -500 -450 V
Anode current I _y =975	8.75 A	Anode current I _y =975 9.25 9.0 8.75 A
Grid current I _g	1.85 A	Grid current I _g = 2.2 2.2 2.1 1.85 A
Peak grid driving voltage V _{gp}	810 V	Peak grid driving voltage V _{gp} = 1000 940 875 810 V
Anode input power W _i ,	70 kW	Anode input power W _i , = 146 111 90 70 kW
Anode dissipation w,	15 kW	Anode dissipation w, = 26 21 18 15 kW
Output power W,	55 kW	Output power W, = 120 90 72 55 kW

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Efficiency η	78.5	Efficiency $\eta = 82.81.80.78.5\%$
Frequency f	30 MHz	Frequency f 10 up to 30 MHz
Frequency f	30 MHz	Frequency f 10 10 30 30 MHz
Anode voltage V_a	12 kV	Anode voltage V_a 15 15 12 12 kV
Grid voltage V_g	-210 V	Grid voltage V_g -260 -260 -210 -210 V
Anode current I_a	9.85 A	Anode current I_a 10.1 7.75 12.7 9.85 A
Grid current I_g	1.9 A	Grid current I_g 2.0 1.3 3.0 1.9 A
Peak grid driving voltage V_{gp}	520 V	Peak grid driving voltage V_{gp} 600 520 650 520 V
Anode input power W_{ia}	118 kW	Anode input power W_{ia} 151 116.3 153 118 kW
Anode dissipation W_y	33 kW	Anode dissipation W_y 41 31.3 43 33 kW
Output power W_o	85 kW	Output power W_o 110 85 110 85 kW
Efficiency η	72	Efficiency η 73 73 72 72 %

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode voltage $V_a = \max$	12.5 kV	Anode voltage $V_a = \max$. 16 max. 12,5 kV
Anode dissipation $W_y = \max$	35 kW	Anode dissipation $W_y = \max$. 35 max. 35 kW
Negative grid voltage $-V_g = \max$	1000 V	Negative grid voltage $-V_g = \max$. 1000 max. 1000 V
Grid dissipation $W_g = \max$	1.3 kW	Grid dissipation $W_g = \max$. 1.3 max. 1.3 kW
Anode current $I_g = \max$	13	Anode current $I_g = \max$. 13 max. 13
Grid current. $I_g = \max$	3.3	Grid current. $I_g = \max$. 3.3 max. 3.3
Anode voltage A	12.5 kV	Anode voltage A 16 max. 12.5 kV
Anode dissipation A	35 kW	Anode dissipation A 35 max. 35 kW
Negative grid voltage $-V_g$	1000 V	Negative grid voltage $-V_g$ 1000 max. 1000 V
Grid dissipation $W_g \max$	1.3 kW	Grid dissipation $W_g \max$. 1.3 max. 1.3 kW
Anode current $I \max$	13 A	Anode current $I \max$. 13 max. 13 A
Grid current $I_g \max$	3.3 A	Grid current $I_g \max$. 3.3 max. 3.3 A
Anode voltage $vV, = \max$	11.5 kV	Anode voltage $vV, = \max$. 11.5 kV
Anode dissipation $W_y = \max$	30 kW	Anode dissipation $W_y = \max$. 30 kW
Negative grid voltage $-V_g = \max$	1000 V	Negative grid voltage $-V_g = \max$. 1000 V



TUBE TINKER

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