



ELECTRONIC TUBE REFERENCE

2K25

Specialized - Klystron electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

KLYSTRON

Reflex klystron designed for microwave oscillator service, with manufacturer-published tuning range and RF output characteristics.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6.3 V / 440 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Klystron

No fixed ratings recorded.

Published maximum ratings and characteristics audited; remaining numeric data retained densely in parameter table.

X-band reflex klystron covering approximately 8.5 to 9.66 GHz with about 25 mW output.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

194X Western Electric Random

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

194X WESTERN ELECTRIC RANDOM

Section 1 · Klystron

CHARACTERISTICS

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage	5.8 V	—
Heater/filament current	440 mA	—



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 · Klystron

CHARACTERISTIC

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Frequency minimum	8500 MHz	ModeA
Frequency maximum	9660 MHz	ModeA

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Resonator voltage	300 V	ModeA
Repeller voltage minimum	-200 V	ModeA
Repeller voltage maximum	-85 V	ModeA
Resonator current	25 mA	ModeA

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Electronic tuning range at half power	35 MHz	ModeA
Power output	25 mW	ModeA
Resonator voltage maximum	300 V	Section1
Repeller negative voltage maximum	400 V	Section1
Repeller positive voltage maximum	0 V	Section1
Resonator current maximum	37 mA	Section1
Coaxial output-line temperature maximum	70 °C	Section1
Heater-to-cathode voltage maximum	50 V	Section1



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1971 NEC

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

1971 NEC

Section 1 · Klystron

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
frequency range of [1]	8500 W	frequency range of 8500 to 9,660 Mc and delivering a power
frequency range of [2]	9660 W	frequency range of 8500 to 9,660 Mc and delivering a power
output of [1]	20	output of 20 mW (min.) at 9,370 Mc, 300 Volts on resonator.
output of [2]	9370	output of 20 mW (min.) at 9,370 Mc, 300 Volts on resonator.
output of [3]	300	output of 20 mW (min.) at 9,370 Mc, 300 Volts on resonator.
Frequency Range ----- ceeevveeniniiniin.e [1]	8500	Frequency Range -----ceeevveeniniiniin.e. 8,500 to 9,660 Mc

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Frequency Range ----- ceeevveeniniiniiniin.e [2]	9660	Frequency Range -----ceeevveeniniiniiniin.e. 8,500 to 9,660 Mc
Heater Voltage	6.3 V	Heater Voltage 6.3 Volts
Heater GUTTEE: i e el	0.44	Heater GUTTEE: i e el 0.44 Amperes
Resonator Voltage	330 V	Resonator Voltage 330 Volts
Resonator Current - i oo	37 A	Resonator Current - i oo 37 Milliamperes
Heater Voltage: - ooooooooemiiiiie, [1]	5.8 V	Heater Voltage: - oooooooooemiiiiie, 5.8~6.8 Volts
Heater Voltage: - ooooooooemiiiiie, [2]	6.8 V	Heater Voltage: - oooooooooemiiiiie, 5.8~6.8 Volts
Heater to Cathode Voltage «- -+-coseeevemreneennnnns +	50 V	Heater to Cathode Voltage «-+- coseeevemreneennnnns +50 Volts ‘
Reflector Voltage [1]	0 V	Reflector Voltage 0 to — 400 Volts
Reflector Voltage [2]	-400 V	Reflector Voltage 0 to — 400 Volts
Frequency	937	Frequency 9,370Mc
Resonator Voltage «««- wweeeeeremriniiniiniin	300 V	Resonator Voltage «««- wweeeeeremriniiniiniin... 300 Volts Note: Coaxial Output Line passes through
Reflector Voltage -- -«:ooooooooeeeeeenienies [1]	-130 V	Reflector Voltage ---«:ooooooooeeeeeenienies — 130 to —180 Volts
Reflector Voltage -- -«:ooooooooeeeeeenienies [2]	-180 V	Reflector Voltage ---«:ooooooooeeeeeenienies — 130 to —180 Volts
Reflector Current - -:oecoeoveeeee Less than	1 A	Reflector Current -:oecoeoveeeee Less than 1 Microampere
Power Output	35 W	Power Output 35 Milliwatts
Published value	1 V	1. The heater voltage must be applied one minute before resonator ; T
Published value [1]	2 V	2. The reflector voltage must always be applied before resonator 3
Published value [2]	3 V	2. The reflector voltage must always be applied before resonator 3
frequency range of [1]	6250 W	frequency range of 6,250 to 7,060 Mc and delivering a power

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
frequency range of [2]	7060 W	frequency range of 6,250 to 7,060 Mc and delivering a power
output of [1]	80	output of 80 mW (min.) at 6,660 Mc, 300 Volts on resonator.
output of [2]	6660	output of 80 mW (min.) at 6,660 Mc, 300 Volts on resonator.
output of [3]	300	output of 80 mW (min.) at 6,660 Mc, 300 Volts on resonator.
Frequency Range [1]	6250	Frequency Range 6,250 to 7,060 MC
Frequency Range [2]	7060	Frequency Range 6,250 to 7,060 MC
Heater Voltage [1]	6 V	Heater Voltage 6_3 Volts
Heater Voltage [2]	3 V	Heater Voltage 6_3 Volts
Resonator Voltage	330 V	Resonator Voltage 330 Volts
Resonator Current :-«-.- occoceeeeeeeeniines	35 A	Resonator Current :-«-.-occoceeeeeeeeniines 35 Milliamperes
Heater Voltage [1]	5.8 V	Heater Voltage 5.8 to 6.8 Volt
Heater Voltage [2]	6.8 V	Heater Voltage 5.8 to 6.8 Volt
Heater to Cathode Voltage -- -----coveeeennennne +	50 V	Heater to Cathode Voltage -----coveeeennennne +50 Volts
Frequency	6660	Frequency 6,660 MC
Resonator Voltage	300 V	Resonator Voltage 300 Volts
Resonator Current --.-.- occoceceeeecene	25 A	Resonator Current --.-.-occoceceeeecene.. 25 Milliamperes
Reflector Voltage --:-:-c- cooeereeeennens [1]	-70 V	Reflector Voltage --:-:-c-cooeereeeennens —70 to —115 Volts Bottom View
Reflector Voltage --:-:-c- cooeereeeennens [2]	-115 V	Reflector Voltage --:-:-c-cooeereeeennens —70 to —115 Volts Bottom View
Reflector Current --- ceeeveeee Less than	1 A	Reflector Current ---ceeeveeee Less than 1 Microampere e e

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Power Output	100 W	Power Output 100 MllhWattS Note: Coaxial Output Line passes through
Published value	1 V	1. The heater voltage must be applied one minute before resonator
Published value	2 V	2. The reflector voltage must always be applied before the resonator



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1999 Philips 0-D

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

1999 PHILIPS 0-D

Section 1 · Klystron

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
and	723 A	and 723 AIB. tions due to temperature changes, part of
Heater current . I = o0	44 A	Heater current . I = o0.44 A
D.C. resonator voltage V	300 V	D.C. resonator voltage V== 300 V
D.C. repeller voltage range V,p= -85to-	200 V	D.C. repeller voltage range V,p= -85to-200V 1)
D.C. resonator current I,	25 mA	D.C. resonator current I, = 25 mA
Power output T e	25 mW	Power output T e 25 mW
Heater voltage V	63 V	Heater voltage V= 63V 8%
Heater carrent I; = o0	44 A	Heater carrent I; = o044 A
D.C. repeller voltage range V,,=-I30to-	185 V	D.C. repeller voltage range V,,=-I30to-185 V 1)
D.C. resonator current R	25 mA	D.C. resonator current R 25 mA
Power output e W,	30 mW	Power output e W, = 30 mW

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
D.C. resonator voltage $V_s =$ max	330 V	D.C. resonator voltage $V_s =$ max. 330 V
D.C. repeller voltage neg. — $V_{ep} =$ max	400 V	D.C. repeller voltage neg. — $V_{ep} =$ max. 400 V
D.C. resonator current . $I_{es} =$ max	37 mA	D.C. resonator current . $I_{es} =$ max. 37 mA
Temperature of coaxial output line . . T = max	70 °C	Temperature of coaxial output line . . T = max. 70 °C
D.C. resonator voltage . V $V_{4yes} =$ max	330 V	D.C. resonator voltage . V $V_{4yes} =$ max. 330 V
D.C. repeller voltage neg. . . . - $V_{,,} =$ max	400 V	D.C. repeller voltage neg. . . . - $V_{,,} =$ max 400 V
D.C. resonator current [I , — max	37 mA	D.C. resonator current [I , — max 37 mA
Temperature of coaxial output line . . 7 — max	70 °C	Temperature of coaxial output line . . 7 — max. 70 °C