



ELECTRONIC TUBE REFERENCE

EM1114

Specialized - Klystron electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
KLYSTRON

Eimac reflex klystron oscillator set near 13.9 GHz, producing approximately 200 mW microwave output with reflector tuning and modulation capability.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6.3 V / 1.3 A	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Klystron

No fixed ratings recorded.

Promoted fields populated only where the published value maps directly to the schema; device-specific values retained as parameters.

Frequency Setting - - - - 13.90 Gec Power Output - - - = ~ - 200 mw (3 db bandwidth) - ~ - 25 Mc min
Resonator Voltage ~ - - 400 Vdc Cathode Current - - - - 40 mA Repeller Voltage - - ~ - - —280 Vdc
Modulation Sensitivity - - 0.8 Mc/v max

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1962 Eimac

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

1962 EIMAC

Section 1 · Klystron

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Frequency Setting	13.9	Frequency Setting - - - - 13.90 Gec
Power Output - - - =~	200 mW	Power Output - - - =~ - 200 mw
([1]	3 MHz	(3 db bandwidth) - - ~ - 25 Mc min
([2]	25 MHz	(3 db bandwidth) - - ~ - 25 Mc min
Resonator Voltage - ~	400 V	Resonator Voltage - ~ - 400 Vdc
Cathode Current	40 mA	Cathode Current - - - - 40 mA
Repeller Voltage - - - ~	-280 V	Repeller Voltage - - - ~ - —280 Vdc
Modulation Sensitivity	0.8 MHz	Modulation Sensitivity - - 0.8 Mc/v max
Heater Voltage [1]	6.3	Heater Voltage - - - - 6.3 V(ac or dc)x 5%
Heater Voltage [2]	5	Heater Voltage - - - - 6.3 V(ac or dc)x 5%
Heater Current	1.3	Heater Current - - - - 1.3 A max
VSWR of Load - ~ [1]	-1.1	VSWR of Load - ~ - - - -1.10:1
VSWR of Load - ~ [2]	1	VSWR of Load - ~ - - - -1.10:1
Temperature Coefficient	-130	Temperature Coefficient - —130 Kc/°C
Warm-up Time	30 s	Warm-up Time - - - - 30 seconds
Resonator Voltage	500 V	Resonator Voltage - - - 500 Vdc
Cathode Current - - - - ~	55 mA	Cathode Current - - - - ~ 55 mA
RF Output Coupling - - - RG	91	RF Output Coupling - - - RG-91/U waveguide
Temperature Range (Max Ambient)	150	Temperature Range (Max Ambient) 150°C
Published value [1]	20 W	20 watts resonator dissipation and an ambient temperature of less than 150°C., The waveguide
Published value [2]	150 W	20 watts resonator dissipation and an ambient temperature of less than 150°C., The waveguide

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
tube is operated at a resonator dissipation of greater than	20 W	tube is operated at a resonator dissipation of greater than 20 watts or if an insulator is used
tain the body temperature below the maximum rating of	175	tain the body temperature below the maximum rating of 175° Centigrade.
CATHODE: The heater voltage should be maintained within + [1]	5 V	CATHODE: The heater voltage should be maintained within +5% of the rated value of 6.3 volts
CATHODE: The heater voltage should be maintained within + [2]	6.3 V	CATHODE: The heater voltage should be maintained within +5% of the rated value of 6.3 volts