

ELECTRONIC TUBE REFERENCE

EM779

Specialized - Traveling Wave electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRAVELINGWAVE

Traveling-wave microwave amplifier for broadband RF power or intermediate amplification, using electron-beam interaction with a slow-wave structure.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6.3 V / 600 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1	TravelingWave
No fixed ratings recorded. Promoted fields populated only where the published value maps directly to the schema; device-specific values retained as parameters.	

TENTATIVE DATA FOR EIMAC EM-779 TRAVELING WAVE TUBE The Eimac EM-779 is a ruggedized, ceramic and metal, periodic permanent magnet focused, power-amplifier traveling wave tube. It is capable of delivering a minimum CW output power of one waftt throughout the frequency range of 5.0 to 11.0 Gigacycles with a nominal small signal gain of 30 decibels. The EM-779 is designed to operate under severe environmental extremes of shock, vibration,

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 · TravelingWave

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Published value	30 dB	30 db Gain
throughout the frequency range of [1]	5 GHz	throughout the frequency range of 5.0 to 11.0 Gigacycles with a
throughout the frequency range of [2]	11 GHz	throughout the frequency range of 5.0 to 11.0 Gigacycles with a
nominal small signal gain of [1]	30 dB	nominal small signal gain of 30 decibels. The EM-779 is designed to
nominal small signal gain of [2]	779 dB	nominal small signal gain of 30 decibels. The EM-779 is designed to
The use of temperature compensated permanent magnets allows the EM	779	The use of temperature compensated permanent magnets allows the EM-779 to be
Minimum Heating Time	60 s	Minimum Heating Time 60 seconds
Heater: Voltage	6.3 V	Heater: Voltage 6.3 volts
Current	600 mA	Current 0.6 amperes
Noise Figure . e [1]	25 dB	Noise Figure . e 25 to 34 decibels
Noise Figure . e [2]	34 dB	Noise Figure . e 25 to 34 decibels
Minimum Saturated Ou'rput Power e	1 W	Minimum Saturated Ou'rput Power e 1 watt
Frequency Range . e [1]	5 GHz	Frequency Range . e 5.0 to 11.0 gigacycles
Frequency Range . e [2]	11 GHz	Frequency Range . e 5.0 to 11.0 gigacycles
Input and Output Impedonce e	50 ohm	Input and Output Impedonce e 50 ohms nominal
D-C BEAM VOLTAGE* . e	3000 V	D-C BEAM VOLTAGE* . e 3000 VOLTS
D-C CATHODE CURRENT	25 mA	D-C CATHODE CURRENT 25 MILLIAMPERES
Frequency [1]	5 GHz	Frequency 5.0 to 11.0 gigacycles

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Frequency [2]	11 GHz	Frequency 5.0 to 11.0 gigacycles
Minimum Output Power	1 W	Minimum Output Power . . . 1.0 watts
Small Signal Gain	30 dB	Small Signal Gain 30 decibels
D-C Beam Voltage* e	2950 V	D-C Beam Voltage* e 2950 volts
D-C Cathode Current	23 mA	D-C Cathode Current 23 milliamperes
D-C Focus Electrode Voltage*	-30 V	D-C Focus Electrode Voltage* -30 volts
D-C Focus Electrode Current	0 mA	D-C Focus Electrode Current 0 milliamperes
Cathode: The heater voltage should be maintained within =+	5	Cathode: The heater voltage should be maintained within =+ 5 per cent of the rated value
Focus Electrode: The focus electrode power supply must be regulated within ==	2	Focus Electrode: The focus electrode power supply must be regulated within == 2 per cent
Temperature [1]	-54	Temperature: —54°C to + 85°C
Temperature [2]	85	Temperature: —54°C to + 85°C
ANODE VOLTAGE _ [1]	2950 V	ANODE VOLTAGE _2950 Vdc FOCUS VOLTAGE =30 Vdc
ANODE VOLTAGE _ [2]	30 V	ANODE VOLTAGE _2950 Vdc FOCUS VOLTAGE =30 Vdc
CATHODE CURRENT [1]	23	CATHODE CURRENT 23 mAdc FILAMENT VOLTAGE 6.3 Vac
CATHODE CURRENT [2]	6.3	CATHODE CURRENT 23 mAdc FILAMENT VOLTAGE 6.3 Vac
Published value	50	50 BROADBAND TANGENTIAL SENSITIVITY

TUBE TINKER

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