



ELECTRONIC TUBE REFERENCE

Y503

Power - Triode electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Eimac high-reliability rugged planar power triode for airborne pulsed RF service to approximately 3 GHz. Substantial plate dissipation and multi-kilovolt capability support demanding military microwave equipment.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6 V / 1 A	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
TRANSCONDUCTANCE	0.03 S
AMPLIFICATION FACTOR	80
MAXIMUM PLATE VOLTAGE	2500 V
MAXIMUM PLATE DISSIPATION	100 W
MAXIMUM GRID DISSIPATION	2 W
MAXIMUM CATHODE CURRENT	3 A
Promoted from printed planar-triode general characteristics and pulsed/CW maximum ratings.	

The EIMAC Y503 is a high-reliability rugged planar triode for airborne pulsed rf service to 3 ghz.



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 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Amplification factor	80	—
Transconductance	30000 μ S	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	2500 V	—
Maximum plate dissipation	100 W	—
Maximum grid dissipation	2 W	—
Maximum pulse cathode current	3 A	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1975 Eimac Tube Manual

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

1975 EIMAC TUBE MANUAL

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage nominal	6 V	—
Heater current nominal	1 A	—
Transconductance	25000 μ S	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Amplification factor	80	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input/grid-cathode capacitance	6.8 pF	—
Output/plate-cathode capacitance	0.04 pF	—
Grid-plate/feedback capacitance	2.5 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	3500 V	—
Maximum plate dissipation	100 W	—
Maximum grid dissipation	2 W	—
Maximum cathode or pulse plate current	3 A	—
Maximum rated frequency	3 GHz	—
Grid-pulsed DC plate voltage	2500 V	GridPulsed
Plate-pulsed peak plate voltage	3500 V	PlatePulsed
Pulse plate current	3 A	—
Pulse grid current	1.5 A	—
Conduction/convection plate dissipation	10 W	—
Plate dissipation with adequate cooling	100 W	—
Pulse duration	6 us	—
Duty factor	0.0033	—
Representative plate voltage	2000 V	GridPulsedOscillator
Representative useful output	750 W	GridPulsedOscillator
Representative frequency	1.09 GHz	GridPulsedOscillator



SOURCE DATA APPENDIX

1976 Eimac Tube Manual

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

1976 EIMAC TUBE MANUAL

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage nominal	6 V	—
Heater current nominal	1 A	—
Transconductance	25000 μ S	—
Amplification factor	80	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input/grid-cathode capacitance	6.8 pF	—
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Representative plate voltage	2000 V	GridPulsedOscillator
Representative useful output	750 W	GridPulsedOscillator
Representative frequency	1.09 GHz	GridPulsedOscillator

TUBE TINKER

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