ELECTRONIC TUBE REFERENCE

2J31

Specialized - Magnetron electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
MAGNETRON

Pulsed magnetron oscillator centered near 2.84 GHz for radar and microwave-generator service.

General characteristics

BASE DESIGNATION	—	**BASE PINS**	—
NOMINAL HEATER	6.3 V / 15 A	**PARALLEL HEATER**	— / —
HEATING	Indirect	**SERIES OPERATION**	Not specified
CATHODE ARRANGEMENT	Separate cathodes	**SECTION CONSTRUCTION**	Similar

Section ratings

SECTION1 Magnetron	
MAXIMUM PLATE VOLTAGE	20000 V
MAXIMUM PLATE DISSIPATION	350 W
MAXIMUM CATHODE CURRENT	30 A

Published maximum ratings and characteristics promoted from approved source.

Pulsed magnetron oscillator centered near 2.84 GHz for radar and microwave-generator service.

SOURCE OPERATING CONDITIONS

1938 Raytheon

SOURCE PDF

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

1938 RAYTHEON

Section 1 · Magnetron

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	6.3 V	Nominal
HeaterCurrentNominal	1.5 A	Nominal
Maximum Plate Voltage	22000 V	—
Maximum Plate Dissipation	350 W	—
Maximum Cathode Current	30 A	—
MaximumDutyCycle	0.002	Pulse

CHARACTERISTIC

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
OperatingFrequency	2.84 GHz	Nominal
PeakRFOutputPower	240 W	0.001 duty cycle

SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

1971 English Electric Valve

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

1971 ENGLISH ELECTRIC VALVE

Section 1 · Magnetron

CHARACTERISTIC

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Frequency range	2820–2860 MHz	—

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Typical peak output power	**300 kW**	Pulse
Typical peak anode voltage	**20 kV**	Pulse
Typical peak anode current	**30 A**	Pulse
Duty cycle	**0.001**	Pulse
Heater voltage	**6.3 V**	—
Heater current	**15 A**	—
Minimum cathode heating time	**2 min**	—
Magnetic field	**1900 gauss**	—

Tube Tinker

An independent reference for electronic tubes, vacuum tubes, and their source documents.

Catalog Tube types Full books Blog Feedback & corrections

© 2026 Tube Tinker