

Linac Coaxial Magnetrons

Typical Operating Parameters

	VMX3095	VMX3045	VMX3100HP	VMC3109
Frequency	9.3 GHz± 20MHz	9.3 GHz± 30MHz	9.3 GHz± 30MHz	5.7 GHz± 10MHz
Peak Power Output	1.70 MW	400 kW	1.50 MW	2.50 MW
Average Power Output	1.70 kW	400 W	2.70 kW	2.50 kW
Pulse Voltage	34-37 kV	27-29.5 kV	34-37 kV	45-50 kV
Peak Anode Current	90 A	28 A	90 A	110 A
Average Anode Current	85 to 95 mA	28 mA	162 mA	110 mA
Pulse Width	4.5 μS,± 0.5 μS	3.5 μS,± 0.25 μS	3.5 μS,± 1.0 μS	4.0 μS,± 0.5 μS
Duty Cycle	0.001	0.001	0.0018	0.001
Maximum Filament Voltage	10 V	15 V	20 V	18 V
Maximum Filament Current	15 A	3.6 A	20 A	15 A
Minimum Warm-Up Time	300 S	150 S	300 S	300 S
Maximum Load VSWR	1.1:1	1.1:1	1.1:1	1.1:1
Weight	40 lbs.	11 lbs.	40 lbs.	35 lbs.



Linac Products

Coaxial Magnetrons

VMX3095
VMX3045
VMX3100HP
VMC3109

Power Supply Modulators

VZX3555

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The values listed above represent specified limits for the product and are subject to change. The data should be used for basic information only. Formal, controlled specifications may be obtained from CPI for use in equipment design.

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- Control Components • Transmitters • Amplifiers • Modulators • Magnetrons
- Crossed Field Amplifiers • Ring Loop Traveling Wave Tubes • Power Couplers



Coaxial Magnetrons

General Overview

A magnetron is a high power microwave oscillator in which the potential energy of an electron cloud near the cathode is converted into RF energy in a series of cavity resonators. Linac magnetrons can be used in medical linear accelerators to accelerate electrons to create X-rays used in radiation therapy and in cargo screening security systems.

The Linac magnetron produces pulsed high-frequency electromagnetic waves to accelerate electrons to high energies through a linear accelerator to create X-rays in targeting cancer cells or efficiently scanning freight for various security irregularities.

For more coaxial magnetrons products:
www.cpii.com/bmd

VMX3095 1.7 MW X - Band Coaxial Pulsed Magnetrons

- High frequency stability
- Tunable ± 20 MHz
- 1.70 MW peak output power
- 1.70 kW average output power
- .001 duty cycle
- Liquid cooled anode
- Long life (>5,000 hours)



VMX3045 400 kW X - Band Coaxial Pulsed Magnetrons

- High frequency stability
- Tunable ± 30 MHz
- 400 kW peak output power
- 400 W average output power
- Long life (>2,000 hours)

VZX3555 Power Supply Modulators

- Uses the CPI VMX3045 magnetron as the RF output device
- 400kW peak / 400 W average output power
- Excellent frequency stability
- Compact power supply design with excellent reliability
- Safe operation in any orientation
- Air cooled



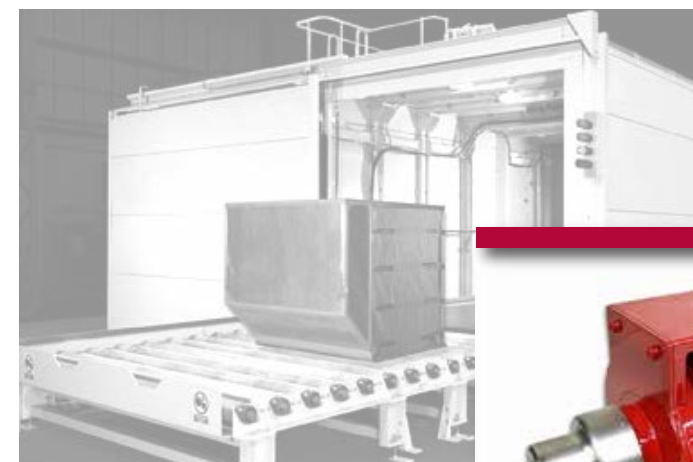
Applications:

- Cargo screening / security
- Medical linear accelerators



VMX3100HP 1.5 MW X - Band Coaxial Pulsed Magnetrons

- High frequency stability
- Tunable ± 30 MHz
- 1.50 MW peak output power
- 2.70 kW average output power
- .0018 duty cycle
- Liquid cooled anode
- Long life (>5,000 hours)



VMC3109 2.5 MW C - Band Coaxial Pulsed Magnetrons

- High frequency stability
- Tunable ± 10 MHz
- 2.50 MW peak output power
- 2.50 kW average output power
- Liquid cooled anode
- Long life (>20,000 hours)