Photonics On Crystals

POC-OC-120219-Variable Frequency RF Drivers Datasheet

1 Key Features

- Supports a wide frequency range, from 20 MHz to 300 MHz, for versatile applications.
- Precise frequency control with options for PC control and analog control.
- High maximum power output, up to 20 W, for demanding applications.
- Compact design with conduction and water-cooling options for effective thermal management.
- Customizable configurations to meet specific operational needs.

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2. General Description

The Variable Frequency RF Driver from Photonics of Crystals (POC) is a robust and multifunctional solution tailored for applications such as frequency shifters, deflectors, and tunable filters. Designed for precision, this device outputs RF signals with a broad frequency range and supports digital and analog controls. With integrated PC software, users can fine-tune frequency, power, and other parameters to match specific application requirements.

The TA series features frequency sweeping and advanced functions, while the TB series is optimized for high-speed frequency conversion applications. For high-power demands, amplifier products with different power levels are also available. This flexibility and high-performance design make it an essential tool in optical communication, research, and industrial processing.

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3. Applications

- **Frequency Shifting:** Ensures precise and rapid adjustments in optical communication systems.
  Example: Used in laser communication to adapt signal frequencies for optimal transmission.

- **Optical Deflectors:** Enables accurate beam steering in laser scanning applications.
  Example: Utilized in precision laser cutting where dynamic beam positioning is required.
- **Tunable Filters:** Achieves high-accuracy wavelength selection in hyperspectral imaging systems.
  Example: Supports research in spectroscopy where specific wavelength control is necessary.

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4. Our Standard Product and Model Numbers

Variable Frequency RF Driver Series

Series	RF Signal Frequency (f)	Power Supply Voltage (v)	Max Output Power (p)	Cooling (t)	Channel (b)	Frequency Output Mode (m)	Application (c)
A	20-300 MHz	24D (24 VDC)	4 W	1	PC Control	Frequency Shifter	
C	20-220 MHz	24D (24 VDC), 28D (28 VDC)	4 W	C (Conduction)	1	Pre-stored Data Mode	Deflector
F	20-200 MHz	24D (24 VDC)	2 W	PC Control, 2 Modes	Multi-Frequency Output	Filter	
E	70-120 MHz	24D (24 VDC)	2 W	1	Analog Control	Scanning Deflector	

Amplifier Series Products

Series	RF Signal Frequency (f)	Power Supply Voltage (v)	Max Output Power (p)	Channel (b)
A	20-300 MHz	24D (24 VDC), 28D (28 VDC)	5 W / 10 W / 20 W	1

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5. Typical Specifications

Variable Frequency RF Driver

Parameter	Value
Frequency Range	20 MHz to 300 MHz
Cooling Options	Conduction and Water-Cooling
Power Range	Up to 20 W

Control Options	PC Control and Analog Voltage

Amplifier Series

Parameter	Value
Amplification Power	5 W / 10 W / 20 W
Frequency Range	20 MHz to 300 MHz
Power Supply Voltage	24 VDC / 28 VDC

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6. Housing Dimensions

- **Variable Frequency Driver:** Compact design with dimensions optimized for installation in tight spaces.
- **Amplifiers:** Customizable sizes available upon request.

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7. POC Strength and Capabilities

Photonics of Crystals (POC) offers industry-leading expertise in the design and production of RF drivers tailored for advanced photonics applications. Our state-of-the-art facilities and dedicated R&D team ensure high-quality solutions that meet the demanding needs of research, industrial processing, and laser systems.

Why Choose POC?

- **Customization:** Drivers and amplifiers designed to meet unique client requirements.
- **Reliability:** High-quality materials and precision manufacturing ensure durability.
- **Innovation:** Advanced frequency control features to support next-generation technologies.
- **Global Reach:** Trusted by clients worldwide for exceptional performance.