

Crystal Oscillators for Optical Transceiver Modules: Compliant with SFP-type Optical Module Requirements

Sub 90fs Jitter – UFX3F620xZ UFX2F620xZ

Diodes Incorporated's crystal oscillators are being used at the forefront of the optical module industry in the most advanced optical transceivers in production.

The UFXxF620xZ family of ultra-low jitter crystal oscillators support the latest SFP-type optical modules. Having jitter specifications of < 60fs typical and 90fs max, they enable faster synchronization and error-free performance.

Diodes Incorporated combines decades of proprietary design and manufacturing expertise with vertical supply chain integration to provide performance, reliability, and delivery value not available from any other manufacturer.

This product line is an ideal clock solution for the industry's growing demand for optical communications in data centers, servers, storage, and network applications.



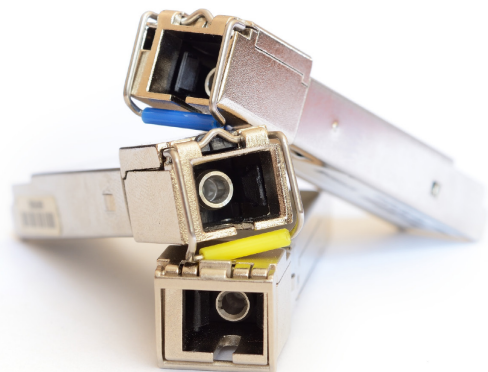
THE **DIODES** ADVANTAGE

Optical Transceiver Compliant Crystal Oscillator Family

- **Frequency range: 125MHz-170MHz**
Supports various system design requirements and data rates
- **Power supply voltages: 2.5V to 3.3V**
Provides flexible support for system supply design
- **Low RMS jitter: < 60fs typical, 90fs max**
Enables faster synchronization and error-free performance
- **Various packages: 3.2mm x 2.5mm, 2.5mm x 2.0mm**
Supports PCB layout flexibility and miniaturization
- **Low power consumption: 50mA for LVPECL, 25mA for LVDS**
Meets different chipset interface requirements with minimum current

APPLICATIONS

- Optical transceiver modules
- Fiber optic networking equipment
- Silicon photonics
- 112G serial applications



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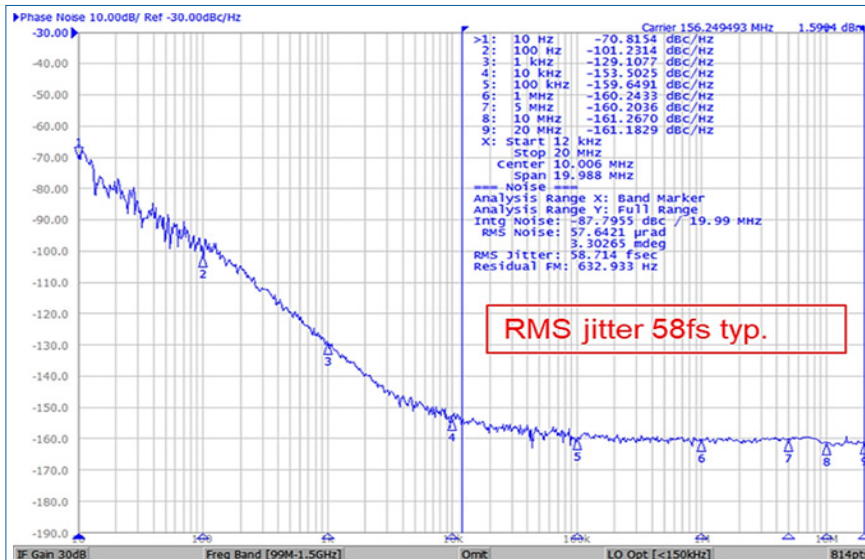
Sub 90fs Jitter – UFx3F620xZ UFx2F620xZ

Product Portfolio

[View here for more information](#)

Part Number	Output Logic	Output Freq. (MHz)	Idd (mA)	Vdd (V)	Integrated Phase Jitter	Package Size (mm)
UF33F6202Z	LVDS	156.25MHz	25	2.5-3.3	0.09ps max	3.2 x 2.5
UF23F6203Z	LVDS	156.25MHz	25	2.5-3.3	0.09ps max	2.5 x 2.0
UF32F6204Z	LVPECL	156.25MHz	50	2.5-3.3	0.09ps max	3.2 x 2.5
UF22F6201Z	LVPECL	156.25MHz	50	2.5-3.3	0.09ps max	2.5 x 2.0

Jitter Performance



Ordering Information*

Family	MPN	MOQ	Lead Time**
Ultra Low Jitter Crystal Oscillator – UF family	UF33F6202Z	3000	32 weeks
	UF23F6203Z	3000	32 weeks
	UF32F6204Z	3000	32 weeks
	UF22F6201Z	3000	32 weeks

* The UF family includes other offerings such as larger sizes, HCSSL output logic, as well as higher operating temperature, up to 125°C.
** Lead is time is subject to change without notice which is dependent on market conditions.

For information or literature, please visit:
www.diodes.com/contact-us