RFoF-TX (30MHz & 5KHz~12GHz)

Wideband RF over Fiber Transmitter Module

PRODUCT DESCRIPTION

The RFoF series delivers high-performance, cost-effective solutions for Wideband RF signal transmission over fiber. Designed to meet the demands of diverse application scenarios, these modules enable low-loss, high-linearity analog transport across extended distances.Leveraging expertise in microwave photonics, the company is committed to close collaboration with telecom operators, system integrators, and solution partners to jointly develop advanced RFoF products and customized solutions for evolving industry needs.

RFoF TX is a Wideband RF fiber optic transmission module with a maximum cutoff frequency of 12GHz. The product uses a high linearity DFB laser for direct modulation. Due to avoiding the limitations of coaxial cables, the transmission quality and reliability of signals have been greatly improved. It can be widely used insatellite communication, Beidou/GPS signal transmission, remote antennas, and long-distance analog fiber optic communication.

PRODUCT FEATURES

- Multiple CWDM wavelengths to choose from
- Analog signal, direct modulation
- Ultra small and low-power consumption
- The transmitting module adopts a high linearity DFB laser
- The highest frequency can be selected as 12GHz or higher at 20GHz
- Excellent cost price advantage

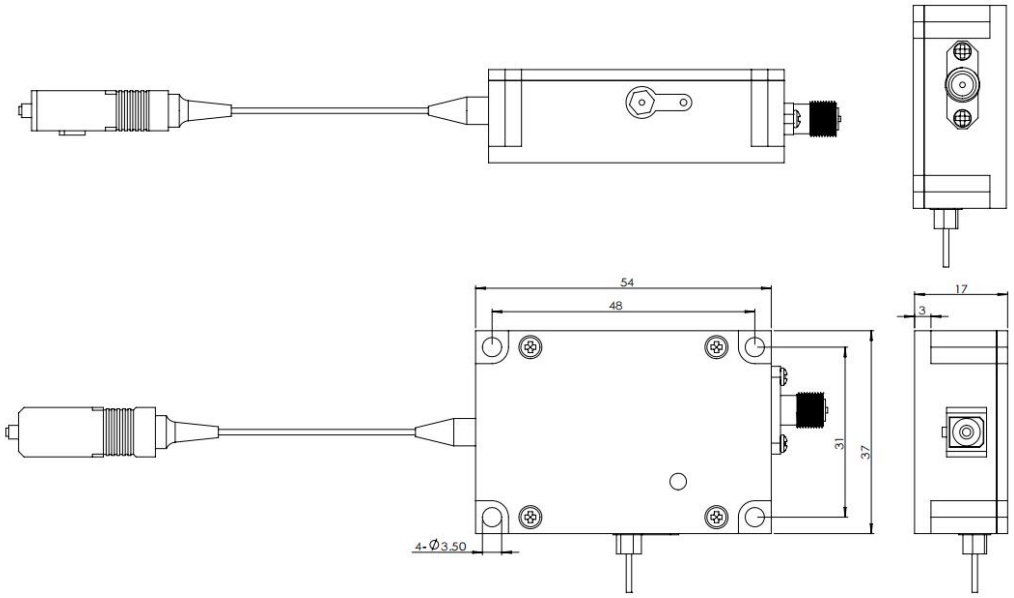
MAIN APPLICATION

- Remote antenna, distributed antenna system
- Long distance analog fiber optic communication
- 4G/5G/WiMAX fiber optic repeater (tunnel, tunnel)
- Secure and encrypted RF communication
- GNSS（Global Navigation Satellite System）
- OFDM fiber optic transmission system
- Microwave optoelectronics
- Analog RF-over-Fiber links in satellite uplink/downlink chains
- Wideband optical repeater systems for tunnels, remote sites
- Telecom-grade DAS (Distributed Antenna System) front haul

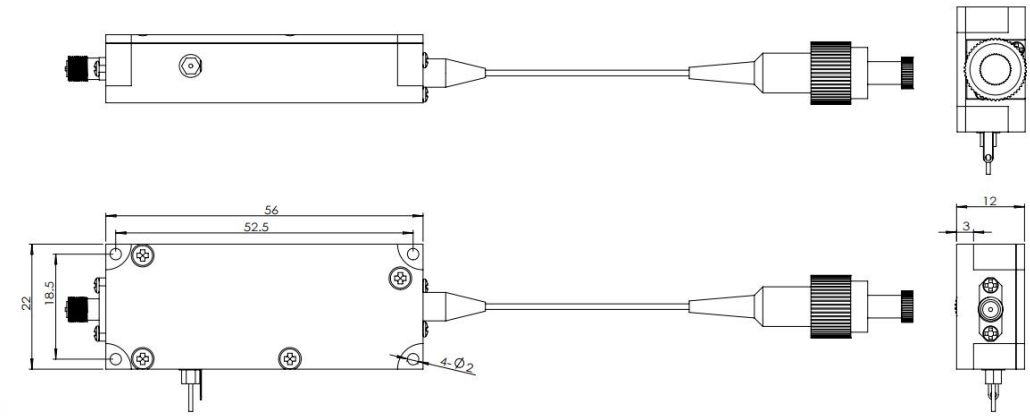
TECHNICAL INDEX

Performance			Index			Supplement
			Min.	Typ.	Max.	
Optical Feature	Working Wavelength	(nm)		1310		O-Band
				1550		C-Band
			1270	xxxx	1610	CWDM
	Output Optical Power	(dBm)		6		Optional 10 dBm
	Edge touch inhibition ratio SMSR	(dB)		45		
	Output optical isolation ISO	(dB)	30			
	Light reflection loss	(dB)		55		APC
	Fiber Connector		SC/APC			LC/APC，FC/APC Optional
	High wavelength stability	(pm)			1	T-Type
RF Feature	-3dB Minimum Cutoff Frequency	(MHz)	30			General
		(KHz)		5		Customized
	-3dB Maximum Cut-Off Frequency	(GHz)		1.0		TX01
				3.0		TX03
				6.0		TX06
				10.0		TX10
				12.0		TX12
	In-Band Flatness (FL)	(dB)		±0.5	±0.75	TX01
				±1.0	±1.5	TX03
				±1.5	±2.2	TX06
				±2.2	±2.8	TX10~12
	RF Return Loss	(dB)		-16	-12	TX01
				-12	-10	TX03
				-10	-7	TX06
				-10	-5	TX10~12
	SFDR			110@6GHz		
	RF Output Power ()	(dBm)	-5		+3	
	RF Working Impedance	(Ω)		50		
	RF Connector		SMA-F			
General Feature	Supply Voltage（DC）	(V)		+12		
	Working Current	(mA)		500		
	Operation Temperature	(℃)	-20		+65	
	Storage Temperature	(℃)	-40		+85	
	Relative Humidity	(%)	5		95	
	Dimensions（WxDxH)	(mm)	37x54x17			Type-A
			22x56x12			Type-B

DIMENSION



Type-A



Type-B

MODEL EXPLANATION

RFoF - TX □□ /□ - □□□□ - □□ - □ - □□ □

Product Series	Product Type		Maximum Frequency		Minimum Frequency		Transmitting Wavelength		Output Optical Power		Application Scenarios		Fiber Connector		Module Appearance	
RF Fiber Optic Link Products	TX	Optical transmitter	01	1GH	G	30MHz	1550	1550nm	06	6dBm	O	General	LA	LC/APC	A	Type-A
	RX	Optical receiver	03	3GH	M	1MHz	1310	1310nm	10	10dBm	T	Special applications with high wavelength stability	SA	SC/APC	B	Type-B
	TR	Integrated receiver and transmitter	06	6GH	L	5KHz	XXXX	CWDM					FA	FC/APC		
	RT	Optical amplifier and wavelength conversion	10	10GH												
			12	12GH												