

RF-over-Fiber RFoF1 – 3 GHz

Description

The RF-over-Fiber Module (RFoF1 – 3 GHz) converts an analog RF signal into a fiber signal; and also converts the fiber signal back to an RF signal. The module offers a wide frequency range of up to 3 GHz, with excellent stability, frequency jitter and phase noise performance. Rapidly growing use in within communications systems, defence systems, test environments and other high-tech niches.

Features

- Wide bandwidth from 1 MHz to 3 GHz
- Single Mode with a max. distance of >100 km
- No external control circuits required
- Analog Signal to Optical convert and back

Applications

- Within communication systems
- Radar applications
- Test environments



Order Information

Item Description	Item Number
RFoF1 (TX) – 3 GHz	85073881
RFoF1 (RX) – 3 GHz	85073882

Electrical Data

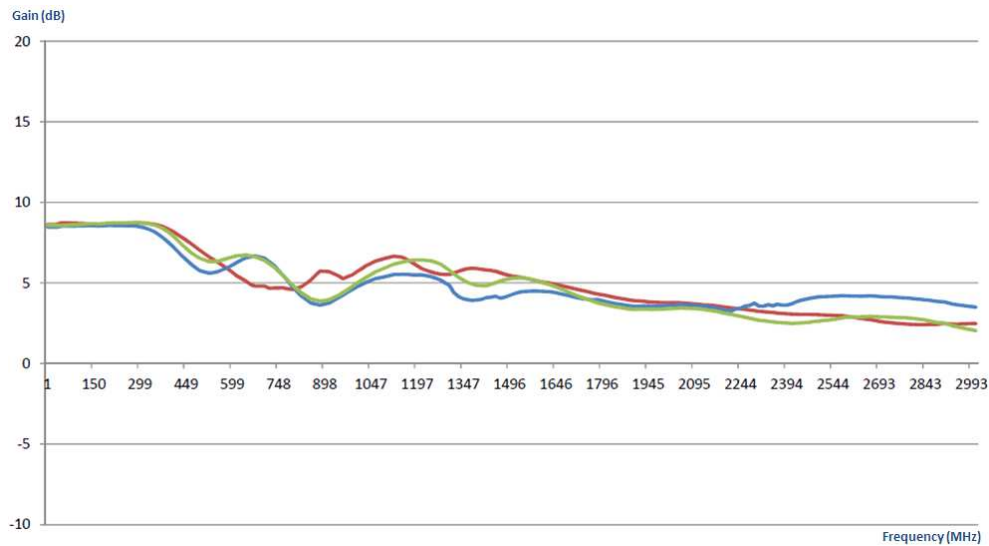
Parameters		Value			Remarks
		Min.	Typ.	Max.	
All specifications at 25°C case Temperature T _c , unless otherwise specified					
Frequency range	MHz	1		3000	3 dB Bandwidth
Gain	dB	6	10	14	
Gain flatness	dB/100MHz		< 1.5		
Noise figure	dB	12	15	25	
Spurious-free dynamic range	dB Hz ^{2/3}		100		
Max. input at 1dB compression	dBm		+ 0		
Max. input power for no damage	dBm		+15		
VSWR (input and output)	dB		< 1.8		
OIP3	dBm		+ 20		
Time Delay	ns		12		
Supply voltage Transmitter	VDC	+11	+12	+16	Max. 750 mA
Supply voltage Receiver	VDC	+11	+12	+16	Max. 500 mA
Temperature range (OTR)	Operating °C		-40	+85	
	Storage °C		-40	+85	
RF input impedance	ohm	50			
Module weight	g	270			Transmitter and Receiver
Module dimensions	mm	90 x 95 x 23			Transmitter and Receiver
RF connectors		QMA / SMA female			Alternative connectors possible

Optical Data

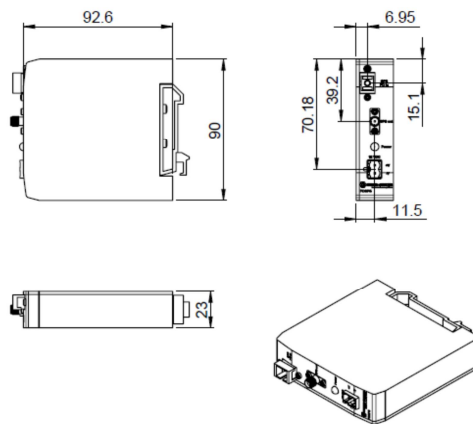
Parameters		Value			Remarks
		Min.	Typ.	Max.	
All specifications at 25°C case Temperature T _c , unless otherwise specified					
Fiber optic connectors		FC/APC			
Fiber		Single mode fiber 9/125 um			
Fiber power loss	dB/km		0.4		
Optical power in fiber	mW	6	8	10	
Side mode suppression ratio	dB	30	40		

RF-over-Fiber RFoF1 – 3 GHz

Typical Frequency Response (based on 3 random samples)



Dimensions (mm)



Additional Information

- All modules are RoHS Compliant.
- All modules are EMC protected.
- DIN 35 brackets are delivered with each module. Other brackets available upon request.
- MIL and other certifications are possible upon request.
- Various racks and enclosures available.

Application Notes

Potential Applications

- Aerospace+Defense applications such as radar systems, naval systems, UAV's and airframe cable systems for aircraft and helicopters.
- Specialised test environments.
- Offshore applications such as communications systems on rigs.