

## RF-over-Fiber RFoF1 (TRM) – 3 GHz

### Description

The RF-over-Fiber Transceiver Module enables bi-directional communication over a single channel RF-over-Fiber system. The modules offer 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 10 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

- SATCOM applications
- Defence applications
- Test environments



### Order Information

Item Description	Item Number
RFoF1 (TRM) – 3 GHz	85073883

### Electrical Data

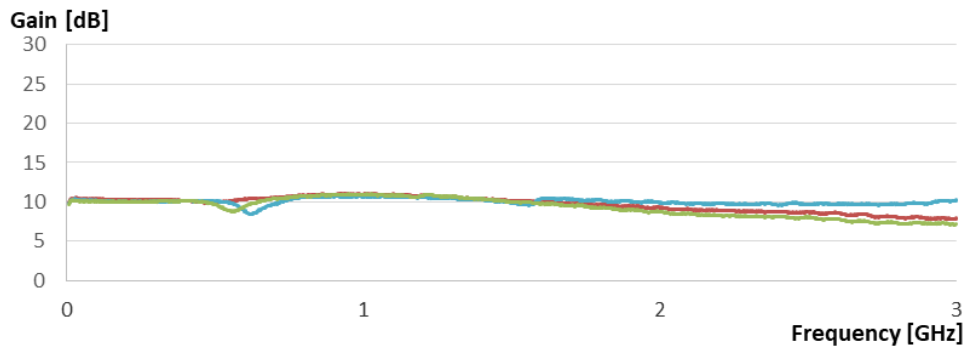
Parameters		Value			Remarks
		Min.	Typ.	Max.	
All specifications at 25°C case Temperature T <sub>c</sub> , unless otherwise specified					
Frequency range	MHz	10		3000	
Gain	dB	6	10	14	
Gain flatness	dB/100MHz		< 1.5		
Noise figure	dB	12	15	25	
Spurious-free dynamic range	dB Hz <sup>2/3</sup>		100		
1dB compression point	dBm		+ 0		
Max. input power for no damage	dBm		+15		
VSWR (input and output)			< 1.8		
OIP3	dBm		+ 20		
Time delay	ns		12		
Supply voltage	VDC	+11	+12	+16	Max. 210 mA
Temperature range	Operating °C	-40		+85	
	Storage °C	-40		+85	
RF input impedance	ohm	50			
Module weight	kg	1.1			
Module dimensions	mm	220x100x34			
RF connectors		SMA female			other connectors available

### Optical Data

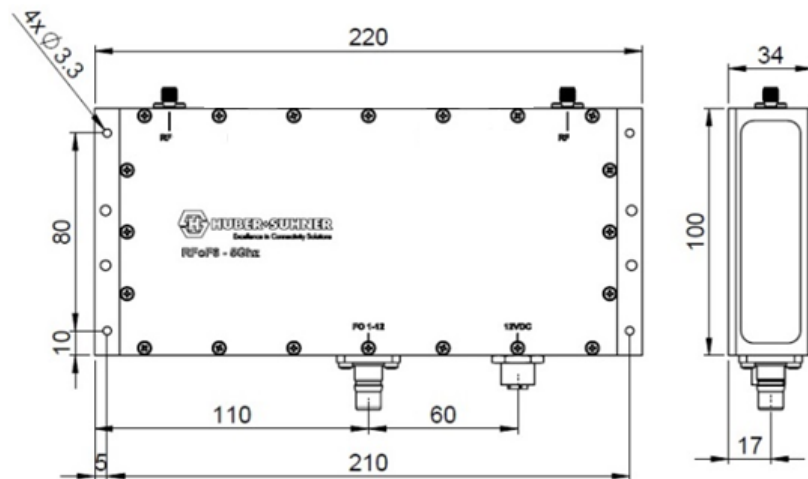
Parameters		Value			Remarks
		Min.	Typ.	Max.	
All specifications at 25°C case Temperature T <sub>c</sub> , unless otherwise specified					
Fiber optic connectors		Q-ODC 12			other connectors available
Fiber		Standard single mode 9/125 um			
Fiber power loss	dB/km		0.4		
Optical power in fiber	mW	3	6	10	
Side mode suppression ratio	dB	30	40		

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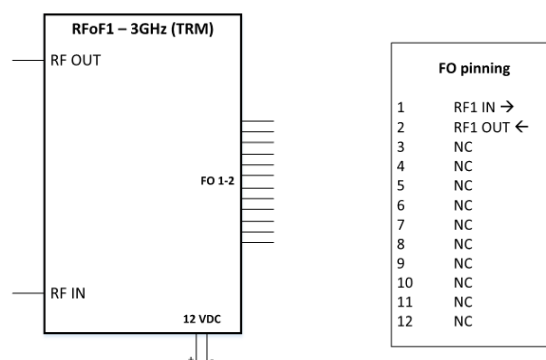
### Typical Frequency Response (based on 3 random samples)



### Dimensions (mm)



### Interface Definition



Connection: To establish a link two modules have to be connected with a pairwise crossed Q-ODC-12 cable assembly (Type C) of type MC12\_QOP2\_QOP2\_A270L\_xxxx\_BB (xxxx=length)

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### Additional Information

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- 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 upon request.
- Various racks and enclosures available.

### Important catalogue links

RF Cables: <http://literature.hubersuhner.com/Technologies/Radiofrequency/RFCablesEN/>

RF Connectors: <http://literature.hubersuhner.com/Technologies/Radiofrequency/RFConnectorsEN/>

FO harsh environment Assemblies: <https://literature.hubersuhner.com/Technologies/Fiberoptics/FOconnectorsharshenvironmentEN/>

### Application Notes

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#### Potential Applications

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