

## RF-over-Fiber RFoF6 (TRM) – 6 GHz

### Description

The RF-over-Fiber Transceiver Module enables bi-directional communication of 6 RF channels within a single RF-over-Fiber system. The modules offer a wide frequency range of up to 6 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 100 MHz to 6 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
RFoF6 (TRM) – 6 GHz	85071631

### Electrical Data

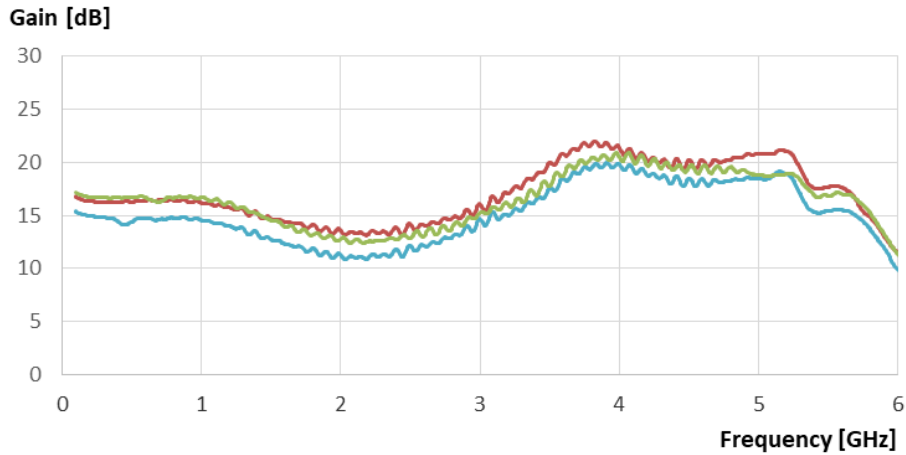
Parameters		Value			Remarks
		Min.	Typ.	Max.	
All specifications at 25°C case Temperature T <sub>c</sub> , unless otherwise specified					
Frequency range	MHz	100		6000	
Gain	dB	10	15	20	
Gain flatness	dB/100MHz		< 1.5		
Noise figure	dB		20		
Spurious-free dynamic range	dB Hz <sup>2/3</sup>		100		
1dB compression point	dBm		-8		
Max. input power for no damage	dBm		+17		
VSWR (input and output)			1.9		
OIP3	dBm		10		
Time delay	ns		12		
Supply voltage	VDC	+11	+12	+16	Max. 1200 mA
Temperature range	Operating °C	-40		+85	
	Storage °C	-40		+85	
RF input impedance	ohm	50			
Module weight	kg	2.5			
Module dimensions	mm	220x100x34			
RF connectors		SMA female			other connectors available

### Optical Data

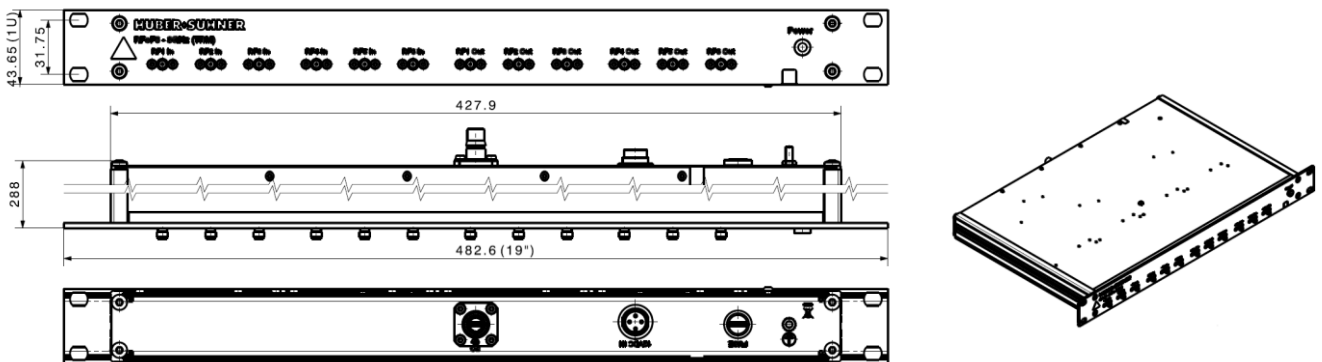
Parameters		Value			Remarks
		Min.	Typ.	Max.	
All specifications at 25°C case Temperature T <sub>c</sub> , unless otherwise specified					
Fiber optic connectors		Q-ODC 12			Alternative connectors possible.
Fiber		Single mode fiber 9/125 um			
Fiber power loss	dB/km		0.4		
Optical power in fiber	mW	3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

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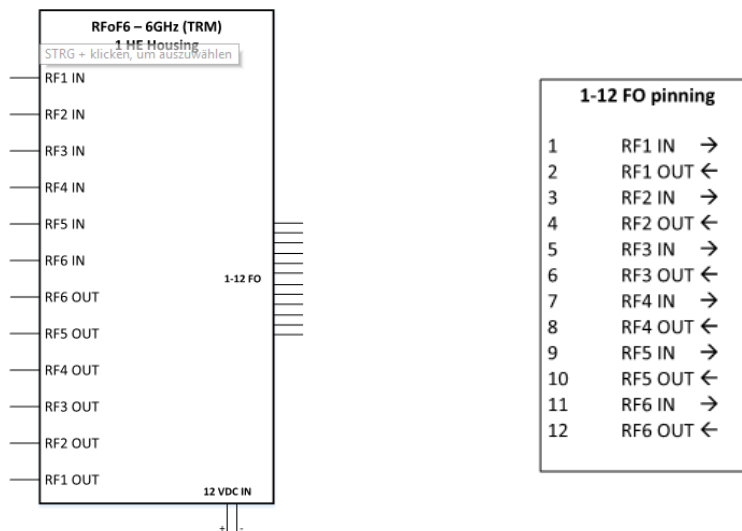
### Typical Frequency Response (based on 3 random samples)



### 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/RFCconnectorsEN/>

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

### Application Notes

#### 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.
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