

# Data Sheet

## RF-over-Fiber RFoF3 (TRM) – 3 GHz

### Description

The RF-over-Fiber Transceiver Module enables bi-directional communication of 3 RF channels within a single 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 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

- SATCOM applications
- Defence applications
- Test environments



### Order Information

Item Description	Item Number
RFoF3 (TRM) – 3 GHz	85071065

### Electrical Data

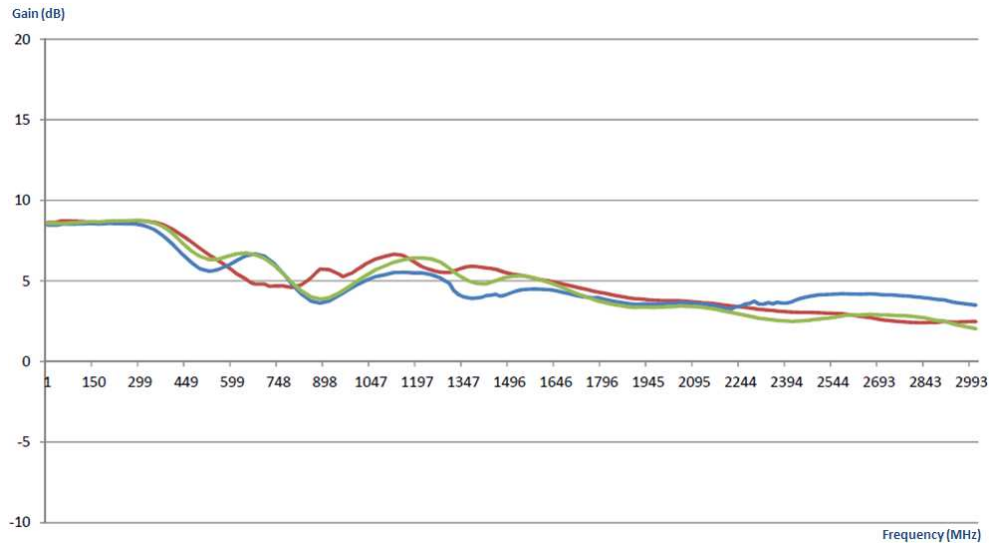
Parameters		Value			Remarks
		Min.	Typ.	Max.	
All specifications at 25°C case Temperature T <sub>c</sub> , unless otherwise specified					
Frequency range	MHz	1		3000	3 dB Bandwidth
Gain	dB	6	10	14	
Gain flatness	dB/100MHz		< 1.5		
Noise figure	dB	12	15	25	
Spurious-free dynamic range	dB Hz <sup>2/3</sup>		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	kg	1.1			
Module dimensions	mm	220x100x34			
RF connectors		QMA / SMA female			3x input ports & 3x output ports

### Optical Data

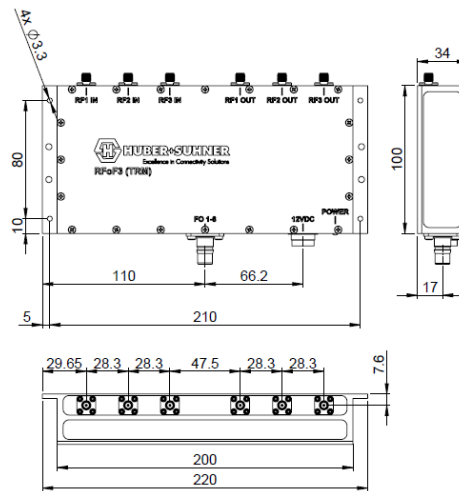
Parameters		Value			Remarks
		Min.	Typ.	Max.	
All specifications at 25°C case Temperature T <sub>c</sub> , unless otherwise specified					
Fiber optic connectors		Q-ODC 12			Alternative connectors possible.
Fiber		Single mode fiber 9/125 um			
Fiber power loss	dB/km		0.4		
Optical power in fiber	mW	3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

## RF-over-Fiber RFoF3 (TRM) – 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.
- No MIL Standard with standard module. 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.
- SATCOM applications.
- Specialised test environments.
- Offshore applications such as communications systems on oil rigs.

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