Data Sheet

RF-over-Fiber
RFoF3 (TRM) – 6 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 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 300 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
RFoF3 (TRM) – 3 GHz	85071630

Electrical Data

Parameters			Value			Remarks
			Min.	Typ.	Max.	
All specifications at 25℃ case Temperature T_c , unless otherwise specified						
Frequency range		MHz	300		6000	
Gain		dB		7		
Gain flatness		dB/100MHz		< 1.5		< 5 @ < 1 GHz
Noise figure		dB		20		
Spurious-free dynamic range		dB $Hz^{2/3}$		100		
Max. input at 1dB compression		dBm		-8		
Max. input power for no damage		dBm		+17		
VSWR (input and output)		dB		1.9		
OIP3		dBm		10		
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	℃	-40		+85	
	Storage	℃	-40		+85	
RF input impendence		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℃ case Temperature T_c , 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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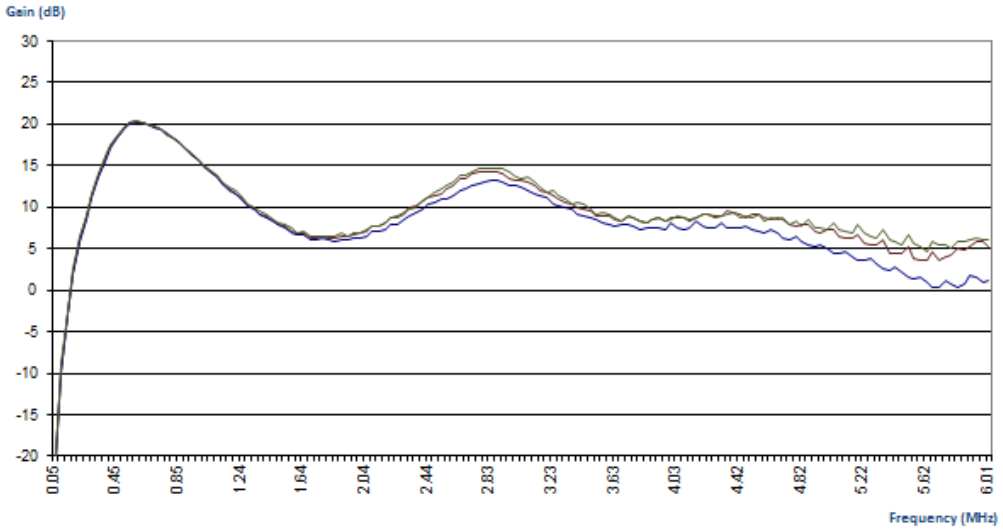
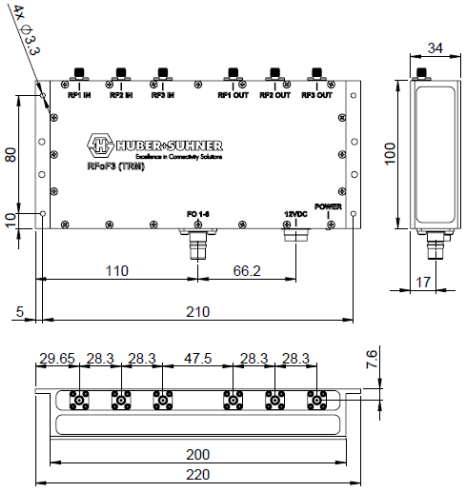
Typical Frequency Response (based on 3 random samples)



Dimensions (mm)



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.