

RF-over-Fiber RFoF12 – 6 GHz

Description

The RF-over-Fiber Module (RFoF12 – 6 GHz) converts analog RF signals into Fiber signals; and also converts Fiber signals to RF signals. The module offers a wide frequency range 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
- 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
RFoF12 (TX) – 6 GHz	85065394
RFoF12 (RX) – 6 GHz	85065395

Electrical Data

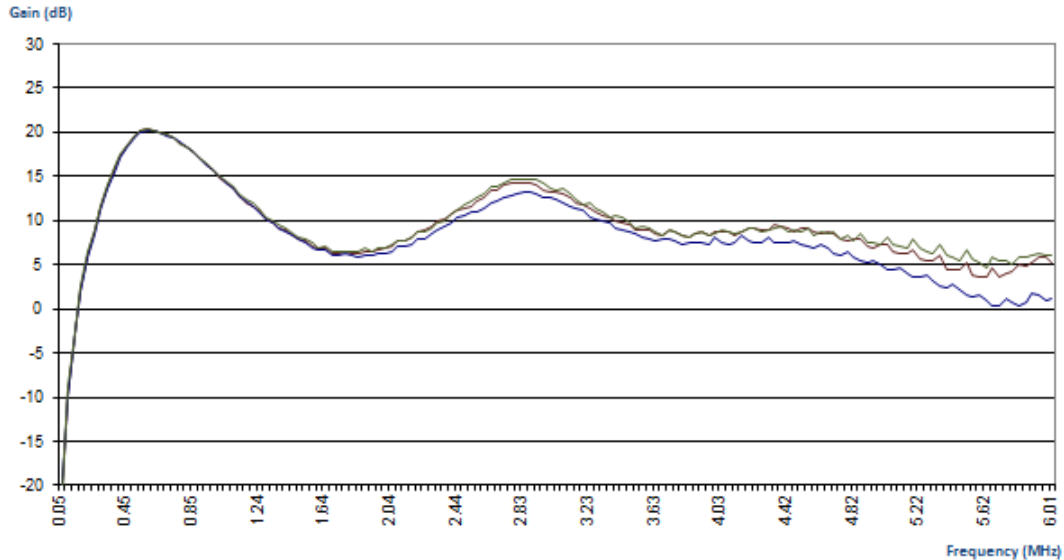
Parameters		Value			Remarks
		Min.	Typ.	Max.	
All specifications at 25°C case Temperature T _c , unless otherwise specified					
Frequency range	MHz	300		6000	
Gain	dB		7		
Gain flatness	dB/100MHz		< 1.5		< 5 @ < 1 GHz
Noise figure	dB		20		
Spurious-free dynamic range	dB Hz ^{2/3}		100		
Max. input at 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	1500 mA
Supply voltage Receiver	VDC	+11	+12	+16	1000 mA
Temperature range (OTR)	Operating °C	-40		+85	
	Storage °C	-40		+85	
RF input impedance	ohm	50			
Module mass	kg	2.5			Transmitter and Receiver
Module dimensions	mm	482.6 x 286 x 43.65			Transmitter and Receiver
RF connectors		QMA / SMA female			Alternative connectors possible.

Optical Data

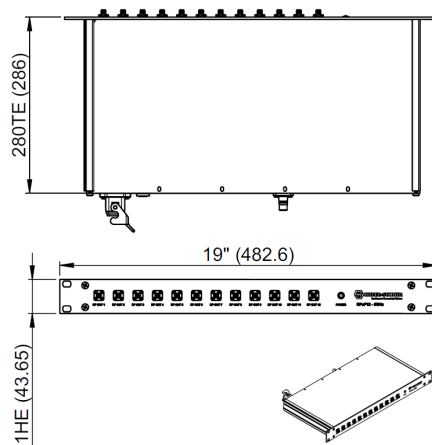
Parameters		Value			Remarks
		Min.	Typ.	Max.	
All specifications at 25°C case Temperature T _c , unless otherwise specified					
Fiber optic connectors		Q-ODC 12			Alternative connectors possible.
Fiber		Single mode fiber 9/125 um			
Fiber power loss	dB/km		0.4		
Optical power in fiber	mW	3	6	10	
Side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

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