Data Sheet

GPS-over-Fiber
GPSoF1 – 1.5 GHz

Description

The GPS-over-Fiber Link (GPSoF1 – 1.5 GHz) offers a very high stability in addition to excellent performance in phase noise and frequency jitter in applications such as remote antenna connection in GPS receiving systems.

Features

- For GPS and Glonass (L1 and L2 bands)
- No external control circuits required
- Analog signal to optical convert and back

Applications

- Reference signal distribution (time and location)
- Antenna remoting
- Inter-facility links

Order Information

Item Description	Item Number
GPSoF1 - 1.5 GHz (TX) [L1 only]	85065409
GPSoF1 - 1.5 GHz (RX) [L1 only]	85065397
GPSoF1 - 1.5 GHz (TX) [L1+L2]	85072905
GPSoF1 - 1.5 GHz (RX) [L1+L2]	85072906

Electrical Data

Parameters			Value			Remarks
			Min.	Typ.	Max.	
All specifications at 25℃ case Temperature T_c, unless otherwise specified						
Frequency range		MHz	1218		1615	
Gain		dB	4	7	10	
Gain flatness		dB		< 2		
Noise figure		dB		14		
Spurious-free dynamic range		dB $Hz^{2/3}$		100		
Max. input at 1dB compression		dBm		-20		
Max. input power for no damage		dBm		+15		
VSWR (input and output)		dB		< 1.8		
OIP3		dBm		+ 7		
Time Delay		ns		55		
Supply voltage V_S	Transmitter	VDC	+ 12	+ 12	+ 15	Max. 170 mA
Supply voltage V_S	Receiver	VDC	+ 12	+ 12	+ 15	Max. 100 mA
Temperature range (OTR)	Operating	℃	- 40		+ 85	
	Storage	℃	- 40		+ 85	
RF input impendence		ohm	50			
Module weight		g	270			Transmitter and Receiver
Module dimensions		mm	90 x 95 x 23			Transmitter and Receiver
RF connectors			QMA / SMA female			

Optical Data

Parameters		Value			Remarks
		Min.	Typ.	Max.	
All specifications at 25℃ case Temperature T_c, unless otherwise specified					
Fiber optic connectors		FC/APC			
Fiber		Single mode fiber 9/125 um			
Optical power in fiber	mW	6	8	10	
Side mode suppression ratio	dB	30	40		

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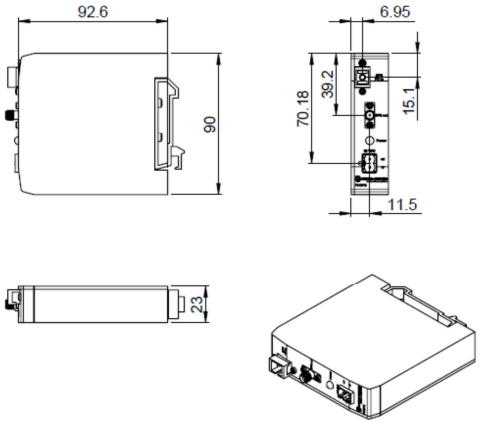
Dimensions (mm)



Additional Information

- 4 Port receiver available (Picture on the right)
- All modules are RoHS Compliant
- All modules are EMV protected
- DIN 35 brackets are delivered with each module.
- Other brackets available upon request
- MIL and other certifications are possible upon request
- Various racks and enclosures available
- All modules are single packaged

Important catalogue links

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

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

FO Standard Assemblies: http://literature.hubersuhner.com/Technologies/Fiberoptics/FOcableassembliesEN/

Application Notes

All of the products required for a GPS-over-Fiber solution are available at HUBER+SUHNER.

Potential Applications

- Single structures (e.g. buildings) requiring a point-to-point GPS solution
- Multiple facilities (fixed and mobile) requiring single and multiple-point GPS solutions (e.g. time synchronisation and antenna remoting)
- Mines requiring a multiple-point GPS solution for time / location signal distribution
- Subways requiring a multiple-point GPS solution for time / location signal distribution