



Description

The PSI-2800-60UT provides game-changing low loss and low noise figure wideband RF over fiber link performance. This high-performance microwave photonic transmitter enables wideband electrical to optical (E/O) conversion for RF input signals to > 60 GHz. Along with a PSI-2800-60UR receiver module, the PSI-2800-60UT provides a complete fiber optic link solution designed to replace coaxial cable or waveguide for applications in military systems, satellite communications, radio astronomy, optical delay lines, cellular/wireless base stations or other RF/Microwave related systems.

The PSI-2800-60UT does not include any RF amplifiers but can be provided with RF pre-amplifiers if lower link loss and lower noise figure are required. Rack mount packaging, custom packaging, different I/O connectors are also available. [Please contact PSI with your application needs.](#)

Features

- Low Noise Figure
- Low Link Loss
- Wide Operational and Instantaneous Bandwidth
- RF_{in} to RF_{out} Solution
- Complete TX and RX Modules
- High Dynamic Range
- Customization Available

Applications

- Replace High Loss Coax Cable
- Replace Bulky Waveguide
- Remote Antenna Sites
- Radio Over Fiber
- Radio Astronomy
- Phased Array Radar
- EW/ECM
- SATCOM
- Delay Lines

PHOTONIC SYSTEMS INC.

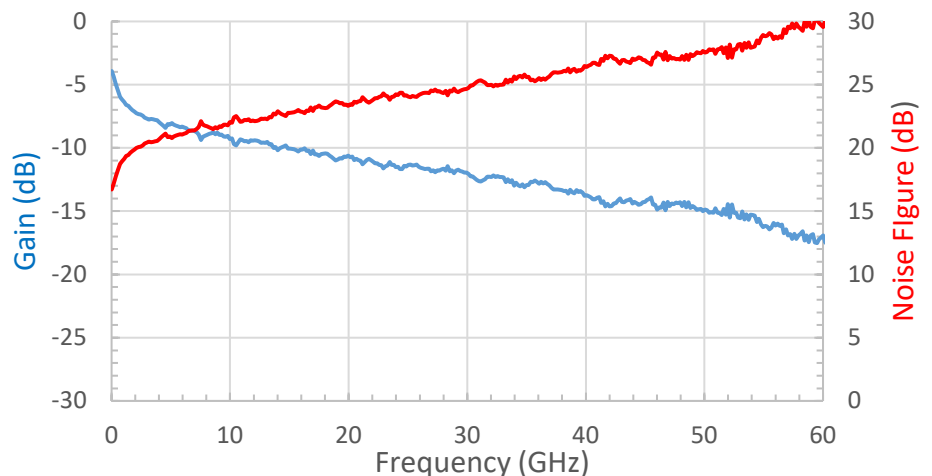
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RF Link Performance Summary

Parameter	Condition	Min	Typ	Max	Units
Operating Bandwidth		0.1		60	GHz
Link Gain	@ 10 GHz	-12	-10		dB
Noise Figure	@ 10GHz		22	25	dB
Input IP3	@ 10 GHz	7	10		dBm
Spur Free Dynamic Range	1 Hz band @ 10 GHz	104	108		dB/Hz ^{2/3}
Gain Flatness	1 - 60 GHz			±6	dB
	In any 100 MHz band			±1	dB

Note: RF link performance specifications with PSI-2800-60UR receiver module

Typical PSI-2801-60L Link Response



RF Characteristics

Parameter	Min	Typ	Max	Units
Maximum RF Input			+10	dBm
Input 1dB Compression	+0.5			dBm
RF Input Impedance		50		Ohm
RF Return Loss	9.5	15		dB
RF Input Connector	V-connector Female			

Optical Characteristics

Parameter	Min	Typ	Max	Units
Wavelength	1520	1550	1580	nm
Optical Power Out	1	6	10	mW
Optical Connector	FC/APC (see notes)			

Notes:

1. Contact PSI for other connector options
2. User supplied fiber optic interconnect cable should be singlemode Corning SMF-28 or equivalent
3. Optical cable return loss should be >55dB by using angled-polished optical connectors

DC Power & 9-pin D-Connector Pin Out

Pin	Description
1	+12 V _{DC} at 12mA nominal, 80mA max
2	Ground
3	+5 V _{DC} at 130mA nominal, 1.5A Max.
4	-5 V _{DC} at 270mA nominal, 1.5A Max.
5	-12 V _{DC} at 14mA nominal, 80mA max.
6	Laser Disable
7	Ground
8	Ground
9	NC

Note: Nominal values at room temperature

Environmental Characteristics

Parameter	Min	Typ	Max	Units
Operating Temperature	-10	25	60	°C
Storage Temperature	-20		70	°C

Ordering Information

Part Number	Description
PSI-2800-60UT	Transmitter Only
PSI-2801-20L	Link includes PSI-2800-60UT transmitter and PSI-2800-60UR receiver

Mechanical Dimensions

