

PL7620: 28dB Gain RF Amplifier

Features & Benefits:

- ❖ Covers the entire frequency of the Sat-Light/Platinum suite [10 – 3000 MHz]
- ❖ Adjustable gain [28dB maximum] via a local LCD or a SNMP card
- ❖ Embedded input/output RF power meter
- ❖ High output 1dB compression point +12dBm
- ❖ Powerful management capabilities via a front panel LCD and rack mounted SNMP



Product Description

The **PL7620** RF Amplifiers provide the capability to integrate a pre- or post-amplifier as a part of the IFL system. Using an RF Amplifier allows a full system solution with guaranteed overall system performance over long distances.

As a:

- Pre-amplifier the PL7620 ensures a high C/N by providing the optical transmitter with sufficient RF to optimally drive the laser.
- Post amplifier, the PL7620 assures a constant high signal level RF output

The PL7620 has an integral input/output RF power meter and is fully compatible with the **Sat-Light/Platinum** M&C SNMP system.

Specifications

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RF Specifications	Units	Typical	Minimum	Maximum
Frequency Range - Bandwidth	MHz	10 - 3000		3000
Amplitude Response 10 - 3000 MHz any 36 MHz	dB	±1.5 ±0.2		±1.75 ±0.25
Gain ¹¹	dB			28
Gain – Range of Adjustment ¹	dB		18	28
Gain Stability	dB/24hr	± 0.2		± 0.25
Gain Slope	dB	0		+1.0
Gain Variation over temperature	dB	± 0.2	-2	2
SFDR ²	dB/Hz ^{2/3}	113		
SFDR ³	dB/Hz ^{2/3}	111		
DR (Dynamic Range - single channel) ¹	dB			10
CNR [any 36 MHz] ⁴	dB	70		
Noise Figure (NF) max. gain ⁵	dB	5		5
Noise Figure (NF) min. gain ⁶	dB	5		5
Output IP3 (OIP3)	dBm	+25		
Group Delay Variation-linear 10 to 60 MHz 60 - 3000 MHz	ns	15 1.5		
Input/Output Impedance	Ohm	50 or 75		
Input 1dB Compression Point ³	dBm	16		-15
Input Signal Range - Total Power ⁷	dBm		None, LED limit -51dBm with 18dB Gain	-23dBm @ Max Gain -13dBm @ Min Gain
Maximum Input without Damage	dBm			10
RF Output Signal Range [Total power]	dB			5
Input/Output Return Loss 50 Ohm 75 Ohm ⁸	dB	-15 -13		-15 -13
RF Connector Input / Output	Type		F, SMA, BNC, N	
Electrical Specifications				
Supply Voltage	Vdc	12		

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Supply Current	9 Amps	0.5
EMI Rating	EMI Rating: FCC Class B CE Mark	
Physical Specifications		
Operating Temperature Range	°C	-10 +55
Storage Temperature Range	°C	-45 +85
Relative Humidity	95% non-condensing	
Altitude	ft / Km	10,000 [3.08] operating 14,000 [12.2] non-operating
Dimensions [DxWxH]	ins/cm	12x0.8x4 / 30.5x2x10.2
Weight	lbs./Kg	0.5 / 0.23
MTBF	Hours	TX: 309, 481 RX: 359, 057
MTTR	Hours	0.083
Shock & Vibration	Designed for normal transportation environment per section 514.4 MIL-STD-810E. Designed to withstand 20G at 11 ms [½ sine pulse] in non-operating configuration.	

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1. User adjustable
 2. -20 dBm RF input, gain = 28 dB, IMD=-40 dBc
 3. -55 dBm RF input, gain =28 dB, IMD=-100 dBc
 4. -25 dBm RF input, gain = 0 dB, IMD @ IMD=-40 dBc
 5. --55 dBm RF input, gain =20
 6. --55 dBm RF input, gain =30
 7. Max. gain, Alarm trip point: RED -22 dBm, AMBER -58 dBm
 8. -13dB @ 10 to 2500 MHz, -10 dB @ 2500 to 3000 MHz
 9. Under 10° add 120 mA [laser heating]
 10. With standard adiabatic derating at 2°C/1000ft. [0.3 Km.]
 11. 25dB Gain for F-Type version

All specifications are subject to change without notice.

Ordering Information

Example: PL7230T-50SMA-SC

L-band, high RF input transmitter, 1310 nm laser, 50-Ohm SMA RF connector and SC/APC optical connector

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2	3	0	T	Null	-	50SMA	-	SC
A	B	C	D	E		F		G

A Platinum Product

- 00 - MCP
- 01 - Chassis & PS
- 0 - 5 MHz Tx/Rx
- 1 - 10 MHz Tx/Rx
- 2 - L-Band Tx/Rx
- 3 - IF Tx/Rx
- 4 - Wideband Tx/Rx
- 5 - Data XVCR
- 6 - Accessories
- 7 - Non-chassis mount products

B Tx RF Input/ Rx RF output

- 2 - Low power input
- 3 - High power input

C Product Series

- Null - None [default]
- 1 - 1st series
- 2 - 2nd series
- Etc.

D Module Type

- T = Tx
- R = Rx
- S = Serial data
- E = Ethernet
- G = GigE

E Laser for TX & Optical budget for RX

- Tx: Null = 1310nm laser
- 1550 = 1550nm laser
- XXXX = ITU option
- Rx: 4= 4dB 16=16dB
- 10=10dB 25= 25dB

F RF Connector

- 75F = 75-Ohm F
- 75BNC = 75-Ohm BNC
- 50BNC = 50-Ohm BNC
- 50SMA = 50-Ohm SMA
- 50N = 50-Ohm N

G Optical Connector

- Null = FC/APC [default]
- SC = SC/APC
- E2 = E2000

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