

PL7630: 55dB Gain RF Amplifier

Features & Benefits:

- Covers the entire frequency of the Sat-Light/Platinum suite [10 – 3000 MHz]
- Adjustable gain [55dB 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 PL7630 RF Amplifiers provide the capability to integrate a pre- or post-amplifier as a part of the IFL system.

The RF Amplifier guarantees a full system solution with overall system performances over long distances.

As a:

- Pre-amplifier the PL7630 helps ensure a high C/N by providing the optical transmitter with sufficient RF to optimally drive the laser.
- Post-amplifier, the PL7630 ensures a constant high signal level RF output.

The PL7630 has an integral input/output RF power meter and is fully compatible with the **Sat-ight/Platinum** M&C SNMP system.

Specifications

55dB Gain RF Amplifier: PL7630

RF Specifications	Units	Typical	Minimum	Maximum
Frequency Range - Bandwidth	MHz	10 - 3000		3000
Amplitude Response 10 - 3000 MHz any 36 MHz	dB	±1.5 ±0.25		±2 ±0.3
Gain	dB			55
Gain – Range of Adjustment ¹	dB		25	55
Gain Stability	dB/24hr	± 0.2		± 0.25
Gain Slope	dB			+1.0
Gain Variation over temperature	dB	± 1.5	-2	2

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SFDR ₂	dB/Hz ^{2/3}	98	
DR (Dynamic Range - single channel) ¹	dB		30
CNR [any 36 MHz] ²	dB	70	
Noise Figure (NF) max. gain ³	dB	5	5
Noise Figure (NF)min. gain ⁴	dB	5	5
Output IP ₃ (OIP ₃)	dBm		
Group Delay Variation-linear 10 to 60 MHz 60 - 3000 MHz	ns	20 2	
Input/Output Impedance	Ohm	50 or 75	
Input 1dB Compression Point ⁵	dBm	-43	-42
Input Signal Range - Total Power ⁶	dBm		None, LED limit -61dBm with 25dB Gain -50dBm @ Max Gain -20dBm @ Min Gain
Maximum Input without Damage ⁵	dBm		-20
RF Output Signal Range [Total power]	dB		5
Input/Output Return Loss 50 Ohm 75 Ohm ⁷	dB	-15 -13	-15 -13
RF Connector Input / Output	Type	F, SMA, BNC, N	
Electrical Specifications			
Supply Voltage	Vdc	12	
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 ¹⁰ 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. -55 dBm RF input, gain = 55 dB, IMD=-55 dBc
 3. -55 dBm RF input, gain =55 dB
 4. -55 dBm RF input, gain =30 dB
 5. @ Max. gain
 6. @ Max. gain, Alarm trip point: Red -40 dBm, Amber -58 dBm
 7. -13 dB @ 10 to 2500 MHz, -10 dB @ 2500 to 3000 MHz
 8. With standard adiabatic derating at 2°C/1000ft. [0.3 Km.]

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

PL7

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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