

PLA Series

Remote Mounted, IF (70/140MHz), L-Band & SHF Line Amplifiers.



The **PLA series** remote mounted line amplifier units from Peak Communications are designed to be used to overcome the losses associated with cross-site installations.

The **PLA series** units are DC powered and are constructed of high-grade components to give the ultimate gain flatness and stability performance.

The **PLA series** units utilise a sealed chassis and are designed for mounting in outdoor, exposed locations and are fully weatherproof.

High Grade Line Amplifier Products;

PLA70	IF 70±20MHz & 140±40MHz frequencies
PLAU240	UHF 240-323MHz frequencies
PLAL1450	L-Band 950-1450MHz frequencies
PLAL1750	L-Band 950-1750MHz frequencies
PLAL2150	L-Band 950-2150MHz frequencies
PLAL2450	Extended L-Band 950-2450MHz frequencies
PLAS2400	S-Band 2.0-2.4GHz frequencies
PLAC4200	C-Band 3.4-4.2GHz receive frequencies
PLAC6725	C-Band 5.85-6.725GHz transmit frequencies
PLAKu1275	Ku-Band 10.7-12.75GHz receive frequencies
PLAKu1450	Ku-Band 13.75-14.5GHz transmit frequencies
PLAKu1450B	Ku-Band 12.75-14.5GHz transmit frequencies
PLAKu1480	Ku-Band 13.75-14.8GHz transmit frequencies
PLAD1840	DBS-Band 17.3-18.4GHz transmit frequencies

For other 'non-standard' frequency requirements, please contact the factory.

For multi-channel units in larger chassis, please consult the factory.

For equivalent rack mountable units, please see ILA, ILAH & DLA series datasheet.

Peak Features

-  High gain flatness and stability performance
-  Amplifier low current alarm monitoring
-  Slope compensation options
-  Rugged weatherproof housing
-  Multi-channel units available in larger chassis
-  Temperature compensated for thermal stability and fast warm-up
-  Fully compatible with **RCU50** 1+1 redundancy controllers and remote switch units



PLA series - Typical Specification

Input

Frequency

PLA70	50-200MHz
PLAU240;	240-323MHz
PLAL1450	950-1450MHz
PLAL1750	950-1750MHz
PLAL2150	950-2150MHz
PLAL2450	950-2450MHz
PLAS2400	2.0-2.4GHz
PLAC4200	3.4-4.2GHz
PLAC6725	5.85-6.725GHz
PLAKu1275	10.7-12.75GHz
PLAKu1450	13.75-14.5GHz
PLAKu1450B	12.75-14.5GHz
PLAKu1480	13.75-14.8GHz
PLAD1840	17.3-18.4GHz

Connector 50Ω, N-Type (f)

Return loss 16dB

Output

Connector 50Ω, N-Type (f)

Return loss 18 to 22dB (frequency dependent)

RF Performance

Gain 20dB min

Option 4a; 30dB nom

Option 4b; 40dB nom

Note: For other gain requirements please contact the factory

Gain flatness ± 0.25 dB (bandwidths <500MHz)

± 0.5 dB (bandwidths <800MHz)

± 1 dB (bandwidths <1200MHz)

Active directivity 22dB

20dB min

RF input power -10dBm max (no load, no damage)

TOIP +25dBm (+20dBm >2150MHz)

1dB output GCP +13dBm (+8dBm >2150MHz)

Note: For higher GCP options please contact the factory.

Noise figure 7 to 9dB (frequency dependent)

S-Band <1.7dB (degrades input return loss to 12dB)

Note: For improved S-Band RL configurations (with higher NF), please contact factory.

Fail-safe Bypass Switching (Option 3)

Fail-safe bypass switching triggered by DC power alarm, connects input to output with minimal loss.

Insertion loss 1dB nom

L-Band Linear Slope compensation (Option 15)

Provides positive slope compensation of nominally 5dB, to compensate for internal circuitry & external primarily across-site L-Band cables.

Note: Unit options chosen will determine 'surplus' available for external compensation (for details contact factory).

Mechanical

Width 123mm (4.85")

Height 172mm (6.8"), plus connections & mounting flanges

Depth 48mm (1.89")

Construction Die-cast Aluminium, IP66 rated

Weight 1.4kgs (3lbs) approx.

Environmental

Operating temp -25°C to +55°C (less solar gain)

Option 12; -40°C to +55°C (less solar gain), with extended warm-up time for cold start operation & higher current

Humidity 0-100% condensing

EMC EN 55022, part B & EN 50082-1

Safety EN 60950

Power Supply

Voltage +16.5 to +35VDC

Current 500mA max

Connection Fed in on 5-pin control interface connection

Option 2a; Fed in on L-Band cable

Option 2b; Fed in on the 5-pin control interface connection as well as the L-Band cable

Control System Interface

Alarms Summary alarm contacts

Connection 5-pin circular weatherproof (mating part supplied)

Options

- 1) 10MHz reference pass-through on the L-Band connection.
- 1a) 10MHz reference & DC (2A max.) pass-through on the L-Band connection.
- 2a) DC input connection multiplexed onto the L-Band cable replacing the wired connection to the 5-pin control interface connector.
- 2b) DC input connection multiplexed onto the L-Band cable as well as the 5-pin control interface connector.
- 3) Fail-safe by-pass switching to overcome DC PSU failure.
- 4a) Increased gain to 30dB nom.
- 4b) Increased gain to 40dB nom.
- 12) Low temperature operation to -40°C
- 15) 5dB passive, fixed, slope compensation (L-Band only)

Note: The addition of options can modify the typical specification, for details please consult the factory

Connector panel view (sample)

