L500(Ka) series

Block Down Converters

Medium Grade Down Converter Products;

L5182 18.20-19.20GHz to L-Band (950-1950MHz)
L5192 19.20-20.20GHz to L-Band (950-1950MHz)
L5202 20.20-21.20GHz to L-Band (950-1950MHz)

For multi-channel units (dual, triple, quad), please contact the factory.
For higher grade applications please see IBD(Ka), IBDH(Ka), PBD(Ka) product ranges, or contact the factory.

The 19-inch 2U rack mounted **L500(Ka) series** of block frequency down converter units from Peak Communications are designed to take the incoming Ka-Band signal and produce an output at L-Band suitable for further conversion typically by a **P7000** converter.

The **L500(Ka) series** of units are mains powered and are constructed of robust components to give an adequate performance for most satellite communication purposes and where ultimate stability, ripple and phase noise performance are not so critical.

Peak Features

- High stability internal reference
- Full alarm monitoring
- Fully compatible with **RCU100** and **RCU200** series redundancy controllers
- External reference option available, with automatic internal reference back-up
- L-Band monitor ports available

L500(Ka) Series - Typical Specification

SHF Input

Frequency	
L5182	18.20-19.20GHz
L5192	19.20-20.20GHz
L5202	20.20-21.20GHz
Connector	K-Type (f), 50Ω or 2.92mm (f)
Return loss	>9dB

L-Band Output

Frequency	950 up to 1950MHz, model dependent
Spectrum sense	Non-inverting
Connector	SMA (f), 50Ω
Option 1b;	N-Type (f), 50Ω
Option 3;	BNC (f), 75Ω
Return loss	>15dB
1dB GCP	0dBm

Transfer Characteristics

Conversion gain	50dB
Gain stability	±2.5dB from 0 to 50°C
Gain flatness	±2dB full band
LO frequency	depends on model

RF Performance

LO phase noise	-65dBc/Hz at 100Hz
	-75dBc/Hz at 1kHz
	-80dBc/Hz at 10kHz
	-100dBc/Hz at 100kHz
3rd order intercept	>+10dBm
Noise figure	5dB

L-Band Monitor (Option 2)

Connection	Option 2a; SMA (f), 50Ω on rear panel
Connection	Option 2b; SMA (f), 50Ω on front panel
Level	-20dBc ±3dB

Internal Reference Stability

Allan deviation	$<5 \times 10^{-12}$ over 1s
Ageing	$<3 \times 10^{-10}$ per day, $<3 \times 10^{-8}$ per year
Temp stability	$<2 \times 10^{-9}$ over -10 to 50^{0}C

External Reference Input (Option 6) with automatic detection

Frequency	10MHz
Level	0dBm ±3dB, auto-locking
Connector	BNC (f), 50Ω
Locking delay	<2 minutes to stabilise from cold

Mechanical

Width	19” standard rack mountable
Height	2U (1.75”)
Depth	~400mm (15.7”), plus connectors
Construction	Aluminium chassis
Weight	4.5kgs (10lbs)

Control System Interface

Alarms	PSU fail

Environmental

Operating temp	0°C to +50°C
EMC	EN 55022-part B & EN 50082-1
Safety	EN 60950

Power Supply

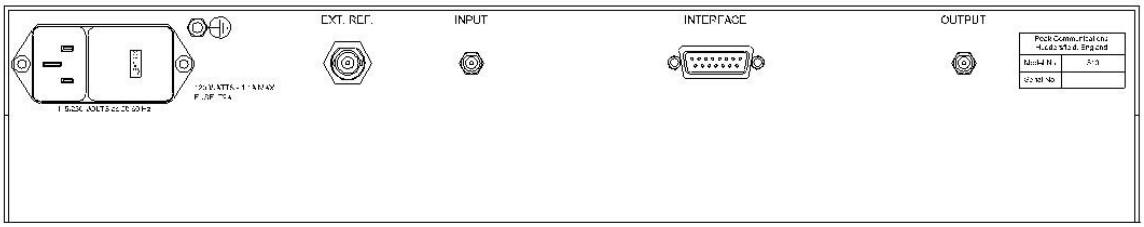
Voltage	90-264VAC
Frequency	47-63Hz
Power	50Watts max.

Options

1b) N-Type (f), 50Ω L-Band interface connection
2a) -20dBc L-band monitor on rear panel
2b) -20dBc L-band monitor on front panel
3) BNC, 75Ω interface at L-band (additional 6dB loss)
5) Fibre optic L-band output
6) External reference input

Notes; the addition of options can modify the typical specification, for details please consult the factory

Rear panel view (sample)



PEAK COMMUNICATIONS

Peak Communications reserves the right to alter the specifications of this equipment without prior notice. L500(Ka)series-070322.
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