



ALB110 Series

Compact 2W/5W
Ka-Band Block-Up Converter

This small and light weight new Ka-Band BUC is ideal for mobile and satellite uplink applications. Designed to be mounted on the feed horn, the BUC has excellent efficiency and consumes less than 80W for 5W Ka-Band BUC. The unit works on a wide range input DC power supply from 18V to 50V. Innovative and efficient thermal design makes this BUC one of the smallest, lightest and most reliable in the industry.

With redundancy-ready feature, the unit can be easily configured to work in 1:1 redundant mode.

Features

- Compact and lightweight
- Feed mountable
- Excellent linearity
- Extremely reliable
- High power efficiency
- Excellent phase noise characteristics
- Low spurious
- Forward power detection function
- Remote monitor & control through RS232/RS485 and Ethernet (SNMP & HTTP)
- Wide input DC voltage range
- Automatic fault identification & alarm generation
- Automatic temperature compensation feature
- Redundancy option
- Wide operating temperature range -40°C to +60°C
- RoHS compliant
- Waterproof
- LED indicator for BUC status

Quality Assurance

100% of all BUCs go through stringent quality checks in addition to well defined Electrical Stress Screening to ensure operation in harsh outdoor environments. The BUCs are also subjected to seal test for water ingress verification.

Reliability

Field proven under harsh environment conditions, Agilis ODU's can withstand temperature ranging from -40°C to +60°C with up to 100% humidity.

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Technical Specifications

RF Specifications

Transmit Frequency	29GHz to 30GHz
IF Frequency Range	950MHz to 1950MHz
L.O Frequency	28.05GHz
Output Power @ P1dB	33dBm (2W) / 37dBm (5W)
Small Signal Gain	58dB (min for 2W) 62dB (min for 5W)
Gain Flatness	±2dB over the O/P frequency band
Gain Variation	±2dB over the operating temperature range
Inter Modulation	-25dBc @ Relative to combine power of two carriers at 3dB total power backoff from Rated Output power
Phase Noise @ Offset	-75dBc/Hz max
1KHz	-85dBc/Hz max
10KHz	-95dBc/Hz max
100KHz	
I/P VSWR	1.5:1 max
O/P VSWR	2.0:1 max

DC Power

Prime Power	48VDC (range 18 to 50VDC)
Power Consumption	35W @ 48VDC input (max for 2W) 60W @ 48VDC input (max for 5W)

Interfaces

IF Input Interface	50Ohms N-type Female / 75Ohms F-type Female (optional)
Output Interface	WR28 grooved

External Reference

Frequency	50 MHz
Power	-5dBm to +5dBm
External reference phase noise requirement @ frequency offset	
1KHz	-150dBc/Hz
10KHz	-155dBc/Hz
100KHz	-160dBc/Hz

Monitor & Control

Monitor	BUC temperature LO unlocked alarm Status alarm RF Output Power detection LED indication
Control	Adjustable gain with 0.5dB step size RF output mute
Interface	RS232/RS485, Ethernet (SNMP & HTTP)
Tx Redundancy	Redundancy-ready (with external RCU)

Environmental

Operating Voltage	-40°C to +60°C
Power Supply Interface	Up to 100% Weather protection sealed to IP65

Mechanical

Size	185L x 100W x 51H mm / 7.3 x 3.9 x 2 in
Weight	1.5kg / 3.3lbs
Color	White Powder Coat

Compliance Standard

IEC 609501-2nd Edition	International Safety Standard for Information Technology Equipment
ETSI EN 301 489-12	Electromagnetic Compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) Standard for radio equipment and services; Part 12: Specific conditions for Very Small Aperture Terminal, Satellite Interactive Earth Stations operated in the frequency ranges between 4 GHz and 30 GHz in the fixed Satellite Service (FSS)
ETSI EN 301 489-1	Electromagnetic Compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility Standard for Radio Equipment and Services
FCC Part 15 Class B	Two levels of radiation and conducted emissions Limits for unintentional radiators (FCC Mark)

Note: All specifications are subject to change without notice.
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