ALB150 Series

Compact 20W/25W/40W/50W X-Band Block-Up Converter

This small and lightweight 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 250W for 50W X-Band BUC. The unit works on a wide range DC power supply of 38V to 60V. The BUC is able to work up to 60ºC. 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
- Wide operating temperature range -40ºC to +60ºC
- Wide input DC voltage range 38V to 60V
- Standard remote monitor & control through RS485, optional Ethernet (SNMP & HTTP)
- Excellent linearity
- Extremely reliable
- High power efficiency
- Available for all X-Band frequency ranges
- Excellent phase noise characteristics
- Low spurious
- Forward power detection facility
- Automatic fault identification & alarm generation
- Automatic temperature compensation feature
- Redundancy ready
- RoHS compliant
- Waterproof with IP65 standard
- 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 ODUs can withstand temperature ranging from -40ºC to +60ºC with up to 100% humidity.

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Agilis

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Technical Specifications

RF Specifications

Transmit Frequency	7900MHz to 8400MHz
IF Frequency Range	950MHz to 1450MHz
L.O Frequency	6.95GHz
Output Power @ P1dB	43dBm (20W) / 44dBm (25W) 46dBm (40W) / 47dBm (50W)
Small Signal Gain	70dB (nominal for 20W / 25W) 73dB (nominal for 40W / 50W)
Gain Flatness	±2dB over the O/P frequency band
Gain Variation	±2dB over the operating temperature range
Gain Control	15dB in steps of 0.5dB
Inter Modulation	-27dBc @ Relative to combine power of two carriers at 3dB total power backoff from Rated Output power (for 20W / 25W) -25dBc @ Relative to combine power of two carriers at 3dB total power backoff from Rated Output power (for 40W/50W/60W)
Phase Noise @ Offset	
1KHz	-73dBc/Hz max
10KHz	-83dBc/Hz max
100KHz	-93dBc/Hz max
I/P VSWR	2.0:1 max
O/P VSWR	2.0:1 max

DC Power

Prime Power	48VDC (range 38 to 60VDC)
Power Consumption	130W @ 48VDC input (Typical for 20W) 150W @ 48VDC input (Typical for 25W) 220W @ 48VDC input (Typical for 40W) 250W @ 48VDC input (Typical for 50W)
Power Supply Interface	Separate connector (for 20W/25W/40W/50W)

Interfaces

IF Input Interface	50Ohms N-type Female / 75Ohms F-type Female (optional)
Output Interface	WR 112G

External Reference

Frequency	10MHz
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 Input and RF Output Power LED status indicator Reverse RF output power detection
Control	Adjustable gain with 0.5dB step size RF output mute
Interface	RS232/RS485 (Standard) Ethernet (SNMP & HTTP) (Optional)
Tx Redundancy	1:1 Redundancy-ready

Environmental

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

Mechanical

Size	203L x 171W x 88H mm / 7.9 x 6.7 x 3.5 in (For 20W / 25W) 234L x 171W x 87H mm / 9.2 x 6.7 x 3.4 in (For 40W / 50W)
Weight	3.3kg / 6.6lbs for 20W / 25W 4.0kg / 8.6lbs for 40W / 50W
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 4GHz and 30GHz 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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