ALB190 Series

Fanless Compact 20W C-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 enjoys excellent efficiency and consumes less than 130W. The unit works on a wide range of DC power supply of 38V to 60V. The BUC is able to work up to 55°C. 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 -40°C to 55°C.
- Wide input DC voltage range 38V to 60V
- Optional input AV voltage
- Standard remote monitor & control through
- RS485/RS232 and Ethernet (SNMP & HTTP)
- Excellent linearity
- Extremely reliable
- High power efficiency
- Available for all C-band frequency range
- Excellent phase noise characteristics
- Low spurious
- Forward power detection facility
- Automatic fault identification & alarm generation
- Automatic temperature compensation feature
- Redundancy-ready feature
- 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 +55ºC with up to 100% humidity.

Frequency Band

INTELSAT
Tx : 5.850 to 6.425GHz
IF : 950 to 1525MHz
LO : 7375 MHz / 4900 MHz

INSAT
Tx : 6.725 to 7.025GHz
IF : 1100 to 1400MHz
LO : 8125 MHz / 5625 MHz

PALAPA / ST1
Tx : 6.425 to 6.725GHz
IF : 1150 to 1450MHz
LO : 7875 MHz / 5275 MHz

FULL C
Tx : 5.850 to 6.725GHz
IF : 950 to 1825MHz
LO : 7675 MHz / 4900 MHz

Agilis

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Technical Specifications

RF Specifications

Transmit Frequency	Intelsat / Full C / Insat / Palapa C
IF Frequency Range	Refer to Table 1 on Page 1
Output Power @ P1dB	43dBm
Small Signal Gain	70dB
Gain Flatness	±2dB over the O/P frequency band
Gain Variation	±2dB over the operating temperature range
Gain Control	20dB in step of 0.5dB temperature range
Inter Modulation	-27dBC @ relative to combine power of two carriers at 3dB total power backoff from Rated Output Power
O/P spurious	According to EN301443
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	1.5: 1 max with external isolator
Noise Power Density Tx BD	70dBm/ 4KHz
Rx BD	142dBm/ 4KHz

DC Power Requirement

Prime Power	48VDC (range 38 to 60DVC) Optional 230VAC (range 90 to 264VAC)
Power Consumption	130W @ 48VDC input

Interfaces

IF Input Interface	50 Ohms N-type Female 75 Ohms F-type Female (optional)
Output interface	WR 137G / 50 Ohms N-type Female (optional)

External Reference Requirement

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 Output Power, LED status Indicator
Control	Adjustable gain with 0.5dB step size RF output mute
Interface	RS232 / RS485 (Standard) & Ethernet (SNMP & HTTP)
Tx Redundancy	1:1 Redundancy-ready (with external RCU)

Environmental

Operating Temperature	-40 °C to +55 °C
Humidity	Up to 100% Weather protection sealed to IP65

Mechanical

Size	235L x 175W x 90H mm 235L x 175W x 150H mm (AC option)
Weight	3.6kg, 5.4kg (AC option)
Color	White Powder Coat

Compliance Standard

IEC 609501-2nd Edition	International Safety Standard for IT Equipment
ETSI EN 301 489-12	Electromagnetic Compatibility & Radio Spectrum Matters (ERM), ElectroMagnetic Compatibility (EMC) Standard for radio equipment & services; Part 12: Specific conditions for VSAT, Satellite Interactive Earth Stations operated in the frequency ranges between 4GHz and 30GHz in Fixed Satellite Service (FSS) .
ETSI EN 301 489-1	Electromagnetic Compatibility & Radio Spectrum Matters (ERM), ElectroMagnetic Compatibility (EMC) Standard for radio equipment & services.
FCC Class A	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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