Av-Comm
SATELLITE BROADCAST INFRASTRUCTURE

ALB290 Series

Compact 150W/200W
C-Band High Power Block-Up Converter

This small and lightweight BUC is ideal for mobile and satellite uplink applications.

The BUC has excellent efficiency and consumes less than 1300W for 200W RF power. Innovative and efficient thermal design makes this BUC one of the smallest in the industry.

Built-in redundancy-ready feature eliminates the use of an external controller for 1:1 redundancy operation. This eliminates messy cabling at the antenna making this a very elegant solution.

Extensive M/C interface with RS232/485, Ethernet (SNMP & HTTP), Bluetooth and Wifi.

Features

- Compact and lightweight
- Available for all C-Band frequencies
- Forward & reverse power detection facility
- Input power detection facility
- Intuitive monitoring & control through RS232/485, Ethernet (SNMP & HTTP) & Bluetooth
- Automatic fault identification & alarm generation
- Temperature compensation facility
- Built-in redundancy facility
- Built-in 10MHz reference with auto-detection
- Built-in harmonics reject filter
- Sample port for output monitoring
- Wide operating temperature range -40ºC to +60ºC
- RoHS Compliant
- Waterproof

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.

Frequency Band

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

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

PALAPA / ST1
LO : 7900MHz / 5275MHZ
IF : 1150 to 1450MHz
Tx : 6.425 to 6.725GHz

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

Table 1

Agilis

ALB290 Series

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Technical Specifications

RF Specifications

Transmit Frequency	Intelsat / Full C/ Insat/ Palapa C
IF Frequency Range	Refer to Table 1
Output Power @ Psat	51.8dBm (150W) / 53dBm (200W)
Small Signal Gain	80dB nominal
Gain Flatness	±2dB over the O/P frequency band
Gain Variation	±2dB over the operating temperature range
Gain Control	30dB in step of 0.1dB
Inter Modulation	-25dBc @ 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	-80dBc/Hz
10KHz	-90dBc/Hz
100KHz	-100dBc/Hz
I/P VSWR	1.5.1
O/P VSWR	1.5.1
Noise Power Density Tx BD	70dBm/ 4KHz
Rx BD	142dBm/ 4KHz

DC Power Requirement

Prime Power	90 – 264VAC, 50 – 60Hz
Power Consumption	1000W (Typical for 200W)

Interfaces

IF Input Interface	50Ohms N-type Female
Output Interface	CPRG 137G

External Reference Requirement

Frequency	10MHz
Power	-5dBm to +5dBm
Internal 10MHz Ref	Built-in (auto-detection)
External reference phase noise requirement @frequency offset	
1kHz	-150dBc/Hz
10kHz	-155dBc/Hz
100kHz	-160dBc/Hz

Monitor & Control

Monitor	BUC Temperature Status Alarm RF Output Power/RF Input Power RF Reflected Output Power LED Status Indication
Control	Attenuation RF output mute
Interface	RS232/485, Ethernet (SNMP & HTTP) & Bluetooth / Wifi (Optional)
Tx Redundancy	Built-in

Environmental

Operating Temperature	-40°C to +60ºC
Humidity	Up to 100% Weather protection sealed to IP65

Mechanical

Size	284L x 209W x 164H (150W - 200W)
Weight	9kg (150W - 200W)
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 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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