



Dual GaN Ka BUC

40W

New Generation of GaN based BUCs/SSPAs for Satcom

High Efficiency and Reliability

Based on GaN technology are intended for outdoor operation. Highest performance in a compact packaging. Built-in lineariser, output isolator and switchable local oscillator. Signal up conversion from a Modem's L band output into Ka band frequency. Electronically switchable between 29-30 GHz and 30-31 GHz.

Optimized Consumption

In addition to the superior efficiency achieved at maximum load, it provides the capability to adapt the BUC configuration to the required output power, optimizing the consumption while keeping the same electrical specifications, in particular the linearity.

Monitoring and Control

Full M&C capability provided via RS-485 (ASCII commands), Ethernet (Telnet, HTTP with embedded web page) and USB. SNMP optional. Discrete lines for mute and turn on/off functionalities and summary alarm (Form C relay and discrete) are used for a quick operation.



Key Features

- Electronically switchable: 29-30 GHz / 30-31 GHz
- High linear power
- High MTBF
- Compact size
- Redundant configurations (1:1, 2:1, N:1)
- Weatherproof



TECHNICAL SPECIFICATIONS

ELECTRICAL

OPTIONS:

- High stability internal reference
- Extended temperature range:
T1 (-40°C, +55°C)
T2 (-40°C, +60°C)
- Redundancy systems
(1:1, 2:1, N:1)
- SSPA version

ADDITIONAL FEATURES:

- Automatic Control Mode (AGC, ALC)
- Pressure window
- Output RF calibrated sample port

Input frequency range	1-2 GHz
Output frequency range	29-30 GHz / 30-31 GHz (electronically switchable)
Output Power ($P_{SAT(ypical)}$)	46 dBm (40 W) from 29 to 30 GHz, 45 dBm (32 W) from 30 to 31 GHz
Linear Output Power (P_{LINEAR})	43 dBm (20 W) from 29 to 30 GHz, 42 dBm (16 W) from 30 to 31 GHz
Gain	>70 dB
Gain flatness	4 dB p-p max over full band; 1dB p-p max over any 40 MHz
Gain variation over temperature	±1.5 dB over full operating range
Attenuation Adjustment Range	20 dB in 0.1 dB step
Input impedance and VSWR	50 Ω , ≤1.5:1
Output VSWR	≤1.3:1
Phase noise	-63 dBc/Hz at 100 Hz, -73 dBc/Hz at 1 kHz, -83 dBc/Hz at 10 kHz, -93 dBc/Hz at 100 kHz
External reference frequency and phase noise	10 MHz, 0 dBm ±5 dB (TX IF port multiplexed) -135 dBc/Hz at 100 Hz, -155 dBc/Hz at 1 kHz, -160 dBc/Hz at 10 kHz
Spectral regrowth	-30 dBc @ P_{LINEAR}^*
Spurious	-60 dBc max @ P_{LINEAR}

* For single carrier with modulation DVB-S, 4MBaud, Roll-off: 0.25, ModCod QPSK-3/4, Occupied Bandwidth 5MHz, Measured @1.0x symbol rate

POWER SUPPLY

Input voltage	90-264 VAC, 50-60 Hz
Power consumption @ P_{SAT}	350 W @ P_{SAT}

MECHANICAL & INTERFACES

Dimensions (L x W x H)	340 x 210 x 170 mm
Weight	<15 kg
Interfaces	RF Input (L-Band + Ref Signal): N-type (f) RF Output: WR28 AC Line: 3-pin Military Circular (MS3102R10SL-3P) M&C: RS-485: 19-pin (MS3112E14-19S) Ethernet: 17-150214 USB: 17-200781

MONITOR & CONTROL PARAMETERS

Remote control	RS-485 / Ethernet / USB
Monitor parameters	Forward & Reverse output power, Input power, Temperature, Summary alarms
Internal self protection	Temperature (>85°C), Reflected power

ENVIRONMENTAL

Operating Temperature	-30 °C to +55 °C
Storage Temperature	-40 °C to +85 °C
Humidity	100 % condensing

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Information contained in this document is subject to change without notice.
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