GaN Ku BUCs
100W / 200W

New Generation of GaN based BUCs for broadcast satellite communications

High Efficiency and Reliability

Based on GaN technology are intended for outdoor operation. Highest performance in a compact packaging. Built-in lineariser, power amplifier with receive reject waveguide filtering, output isolator and switchable local oscillator included. Signal up conversion from a Modem's L band output into Ku band frequency in order to perform a terrestrial or satellite communication link.

Optimized Consumption

In addition to the superior efficiency achieved at maximum load, these products provide 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-232/RS-485 (ASCII commands) and optionally via Ethernet port (Telnet, HTTP with embedded web page or SNMP). 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

- High linearity
- Low size and weight
- Low power consumption
- Easy to maintain
- Redundant systems available
- Weatherproof

TECHNICAL SPECIFICATIONS

OPTIONS:

- Internal 10MHz Reference
- Remove Lineariser
- Ethernet interface
- Extended temperature range (from -40ºC to +60ºC)
- Handheld
- Redundant systems
- Remote M&C panel
- Automatic Control Mode (AGC, ALC)
- Forward and reverse output power monitoring

ELECTRICAL

Input frequency range	950 - 1700 MHz
Output frequency range (electronically switchable LO)	13.75 - 14.50 GHz, LO 12.80 GHz 14.00 - 14.50 GHz, LO 13.05 GHz
Saturated Output Power (P_{SAT}) 100W / 200W	50 dBm / 53 dBm
Linear Output Power (P_{LINEAR}) * 100W / 200W	48 dBm / 51 dBm
Gain	> 65 dB
Gain flatness	3 dB p-p max over full band; 1dB p-p max over any 40MHz
Gain variation over temperature	± 1.5 dB over full operating range
Attenuation Adjustment Range	20dB in 0.25dB step
Input impedance and VSWR	50Ω, ≤1.5:1
Output VSWR	≤1.3:1
Phase noise	-65 dBc/Hz at 100 Hz, -85 dBc/Hz at 1 kHz, -90 dBc/Hz at 10 kHz, -95 dBc/Hz at 100 kHz
External reference frequency and phase noise	10 MHz, 0 dBm ±5 dB (TX IF port multiplexed) -130 dBc/Hz at 100 Hz, -140 dBc/Hz at 1 kHz, -150 dBc/Hz at 10 kHz, -155 dBc/Hz at 100 kHz
Third order IMD (two tones)	-25 dBc two signal 5 MHz apart @ P_{LINEAR}
Spectral regrowth	-30 dBc @ P_{LINEAR}
Noise power density	Transmit band: -80 dBm/Hz Receive band: -150 dBm/Hz (10.70 – 12.75 GHz)
Spurious	-60 dBc max @ P_{LINEAR}

* Linear Output Power, defined as per MIL-STD-188-164B, is the power at which the IMD = -25 dBc for two CW signals 5 MHz apart and the spectral regrowth is < -30 dBc @ 1.0 x symbol rate for a single QPSK/OQPSK/8PSK signal.

POWER SUPPLY

Input voltage	90-264 VAC, 50-60 Hz
Power consumption @ P_{SAT} 100W / 200W	675W / 1350W
Power consumption @ P_{LINEAR} 100W / 200W	520W / 1050W

INTERFACES & PHYSICAL

Dimensions (L x W x H) 100W / 200W	350 x 200 x 170 mm / 400 x 230 x 200 mm (13.7" x 7.8" x 6.7") (15.7" x 9" x 7.8")
Weight 100W / 200W	< 10.5 kg (< 23.5 lbs) / < 12.5 kg (< 27.5 lbs)
Interfaces	RF Input (L-Band + Ref Signal): N-type (f) RF Output: WR75 Grooved RF Sample: N-type (f) AC Line: 3-pin Military Circular (MS3102R10SL-3P) M&C: 19-pin Military Circular (MS3112E14-19S)

ENVIRONMENTAL

Operating temperature	-30ºC to +55 ºC
Storage temperature	-40ºC to +85ºC
Humidity	100% Condensing

Information contained in this document is subject to change without notice. For more detailed information, please contact **comercial@ttinorte.es**

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