



GaN DBS BUC/SSPA

300W/550W

New Generation of GaN based BUCs/SSPAs for broadcast and satellite communications

Using GaN technology, our new GaN DBS BUC/SSPA deliver outstanding performance in compact packaging and is intended for operation outdoors.

High Efficiency and Reliability

We have incorporated a built-in lineariser to provide maximum linear power and an output isolator for protection against reflected power. As well as built-in up converter plus internal reference (option) for BUC version.

Multicarrier Operation & Modularity

In addition to high reliability and MTBF, this product allows Multicarrier Operation with no memory effects and limited back off. A sophisticated combination of SSPAs realises power outputs up to a few kW.

Monitoring and Control

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



Key Features

- Super High linear power
- Multicarrier operation
- High MTBF
- Detachable power supply module
- Redundant configurations (1:1, 2:1, N:1)
- Significant savings in electric power usage (low OPEX)
- Weatherproof

TECHNICAL SPECIFICATIONS

ELECTRICAL

OPTIONS:

- High stability internal reference
- Ethernet port
- Extended temperature range: T1(-40°C, +55°C), T2(-40°C, +60°C)
- Redundant systems (1:1,2:1,N:1)
- Remote M&C Panel
- Indoor version

Output Power ($P_{SAT(ypical)}$)	300W / 550W	54.8 dBm / 57.4 dBm
Linear Power	300W / 550W	53.8 dBm / 56.4 dBm
Input frequency range		950 MHz - 2050 MHz (BUC) / 17.3 - 18.4 GHz (SSPA)
Output frequency range		17.3 - 18.4 GHz
Gain		> 75 dB
Gain Flatness		4 dB p-p, max over full band, 1 dB p-p dB/40Mhz
Gain variation over temperature		± 1.5 dB over full operating range
Attenuation Adjustment Range		20dB in 0,25dB step
Input VSWR		≤1.5:1
Output VSWR		≤1.3:1
Phase noise (BUC)		-65 dBc/Hz at 100Hz, -75 dBc/Hz at 1kHz -85 dBc at 10kHz, -95 dBc at 100kHz
External reference frequency and phase noise (BUC)		10 MHz, -135dBc/Hz at 100Hz, -155 dBc/Hz at 1 kHz, -160 dBc/Hz at 10 kHz, 0 dBm ± 3dB supplied via input L-band cable
Spectral Regrowth		-26 dBc @ P_{LINEAR}
Spurious		-60dBc max @ P_{LINEAR}

ADDITIONAL FEATURES:

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

POWER SUPPLY

Input Voltage	90-264 VAC, 50-60 Hz	
Power Consumption @ Psat	300W / 550W	< 1.700W / 2.700W

MECHANICAL & INTERFACES

Dimensions (L x W x H)	300W / 550W	550 x 450 x 285 mm
Weight	300W / 550W	45 Kg / 60 Kg
Interfaces		RF Input (L-Band + Ref Signal): N-type (f) (BUC) / SMA (f) (SSPA) RF Output: WR62 Grooved RF Sample: SMA AC Line: 3-pin Military Circular M&C: 19-pin Military Circular

MONITOR & CONTROL PARAMETERS

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

ENVIRONMENTAL CHARACTERISTICS

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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