



# GaN DBS SSPA/BUC

## 200W/300W/550W

### Indoor

## NEW GENERATION OF GAN BASED SSPAS/BUCS FOR BROADCAST SATCOM

Using cutting-edge **GaN technology**, the new DBS SSPA/BUC family offers outstanding performance in indoor operations

### MULTICARRIER OPERATION

No memory effects and limited back off guaranteeing **unlimited carriers**.

### MODULARITY

A combination in phase of SSPAs 550 W delivers **output powers up to a few kW**s on a built-in redundancy and hot swappable amplification modules.

### EFFICIENCY & RELIABILITY

**Super linearity** for maximum useable output power to provide customised linearisation independent of the modulation method used.

**Robust performance** guaranteed through individual unit testing over temperature at factory. Built-in output isolator for protection against reflected power.

Built-in up converter plus **high stability internal reference** for BUC.

### MONITORING & CONTROL

**Full M&C capability** through RS-485/USB (ASCII commands) or with the option of an Ethernet port (Telnet, HTTP with embedded user-friendly web page or SNMP).

Discrete lines for mute and turn on/off functions and a summary alarm (Form C relay and discrete) for speedy operation.



## KEY FEATURES

- \* Highly efficient
- \* Super high linear power
- \* Multicarrier operation
- \* Superior lifetime based on GaN-tech
- \* High MTBF
- \* External AC/DC power supply: 1RU 19" subrack
- \* Redundant AC/DC converters (hot swappable)
- \* Redundant configurations (1:1, 2:1, N:1)
- \* OPEX savings
- \* Rack mounting (6RU)
- \* Simple operation & maintenance



### OTHER FEATURES

- \* Automatic Control Mode: AGC, ALC
- \* Pressure window
- \* Output RF calibrated sample port

### OPTIONS

- \* Ethernet port
- \* Redundant systems 1:1, 2:1, N:1
- \* Indoor controller
- \* Receive reject filter (external)
- \* Harmonic filter (external)
- \* SNMP
- \* High stability internal reference
- \* Air exhaust MEC interface
- \* Breaker panel

### ACCESSORIES & SPARES

- \* Set of fans
- \* Power supply module

## ELECTRICAL

Input frequency range	950 MHz - 2050 MHz (BUC) / 173 - 18.4 GHz (SSPA)
Operating frequency range	173 - 18.4 GHz
Output power ( $P_{SAT}$ (typical))	200 W / 300 W / 550 W
53 dBm / 54.8 dBm / 57.4 dBm	
Linear output power ( $P_{LINEAR}$ )	200 W / 300 W / 550 W
52 dBm / 53.8 dBm / 56.4 dBm	
Gain	>75 dB
Gain flatness	4 dB p-p max over full band; 1 dB p-p max over any 40 MHz
Gain variation over temperature	± 1 dB over full operating range
Attenuation adjustment range	20 dB in 0.25 dB step (BUC) 15 dB in 0.50 dB step (SSPA)
Input VSWR	≤1.5:1
Output VSWR	≤1.3:1
Phase noise (BUC)	-65 dBc/Hz at 100 Hz, -75 dBc/Hz at 1kHz -85 dBc at 10 kHz, -95 dBc at 100 kHz
External ref. freq. & phase noise (BUC)	10 MHz, -135 dBc/Hz at 100 Hz, -155 dBc/Hz at 1 kHz, -160 dBc/Hz at 10 kHz, 0 dBm ± 3 dB supplied via input L-band cable
Spectral regrowth	-25 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

Power supply module	1RU 19" subrack: AC/DC converters (Qty. 2) hot-swappable working in redundancy
Input voltage	90-264 VAC, 50-60 Hz
Power consumption @ $P_{SAT}$	300 W / 550 W
<1700W / 2700W	

## INTERFACES & PHYSICAL

Dimensions (W x H x D)	483 x 270 x 560 mm RF unit 6RU panel height. Power supply 1RU panel height
Weight	48 Kg
Interfaces	RF Input: N-type (f) (BUC) / SMA (f) (SSPA) RF Output: WR62 grooved RF Sample: SMA AC Line: IEC320 M&C: DB15 (m) Inhibit switch signal: DB9 (f)

## MONITOR & CONTROL

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

## ENVIRONMENTAL

Operating temperature	0 °C to +50 °C
Storage temperature	-40 °C to +85 °C

### TTI CONTACT

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### NOTICE

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

Unless otherwise specifications, tests have been done at 23 °C.