



GaN DBS SSPA/BUC

200W

Outdoor

## 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 outdoor operations

### MULTICARRIER OPERATION

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

### 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.

**Advanced packaging** and cooling techniques enable the equipment to be operated in the toughest environments.

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
- \* Redundant configurations (1:1, 2:1)
- \* OPEX savings
- \* Weatherproof
- \* Compact design
- \* Simple operation & maintenance



### OTHER FEATURES

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

### OPTIONS

- \* Ethernet port
- \* Extended temperature range: -40 °C, +55 °C
- \* Redundant systems 1:1, 2:1, N:1
- \* Indoor controller
- \* Receive reject filter (external)
- \* Harmonic filter (external)
- \* SNMP
- \* High stability internal reference

### ACCESSORIES & SPARES

- \* Set of fans

## 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))	53 dBm
Linear output power ( $P_{LINEAR}$ )	52 dBm
Gain	>65 dB
Gain flatness	4 dB p-p, max over full band, 1 dB p-p dB /40 Mhz
Gain variation over temperature	± 1.5 dB over full operating range
Attenuation adjustment range	20 dB in 0.25 dB step
Input impedance & 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 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 ± 3dB 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, 4 Mbaud, Roll-off: 0.25 / ModCod QPSK-3/4, Occupied Bandwidth 5 MHz, Measured @1.0 x symbol rate*

## POWER SUPPLY

Input voltage	90-264 VAC, 50-60 Hz
Power consumption @ $P_{SAT}$	850 W

## INTERFACES & PHYSICAL

Dimensions (L x W x H)	400 x 250 x 268 mm
Weight	<34 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 MIL Circular M&C: 19-pin MIL Circular

## 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	-30 °C to +55 °C
Storage temperature	-40 °C to +85 °C
Humidity	100 % condensing

### 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.