

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 °Ca

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

RF performance

Input frequency range	950 MHz - 2050 MHz (BUC) / 17.3 - 18.4 GHz (SSPA)
Operating frequency range	17.3 - 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 274 x 220 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