

New generation of GaN based SSPAs/BUCs for commercial, government & defence satcom



USING CUTTING-EDGE GAN TECHNOLOGY, THE NEW KA SSPA/BUC FAMILY OFFERS OUTSTANDING PERFORMANCE IN OUTDOOR OPERATIONS



Innovative technology

State-of-the-art technology offering outstanding performance in a compact packaging. **High reliability** solutions for harsh environmental and operational conditions.

Options to increase the number of power stages and achieve **higher output powers**.

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.

Monitoring & Control

Full M&C capability through RS-485/USB (ASCII commands) and 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, N:1)
- * Weatherproof
- * Compact design
- * Simple operation & maintenance



OTHER FEATURES

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

OPTIONS

- * High stability internal reference
- * Extended temperature range: -40 °C to +60 °C
- * Redundant systems
- * Remote M&C Panel
- * SNMP

ACCESSORIES & SPARES

- * Set of fans

RF performance

Input frequency range	1-2 GHz
Operating frequency range	29-30 GHz / 30-31 GHz (electronically switchable)
Output power ($P_{SAT (typical)}$)	46 dBm @ 29-30 GHz / 45 dBm @ 30-31 GHz
Linear output power (P_{LINEAR})	43 dBm @ 29-30 GHz / 42 dBm @ 30-31 GHz
Gain	>70 dB
Gain flatness	4 dB p-p max over full band, 1 dB p-p max over any 40 MHz
Gain stability over 24 hours	±0.25 dB @constant temperature
Gain variation over temperature	±1.5 dB over full operating range
Attenuation adjustment range	20 dB in 0.1 dB step
Input VSWR	≤1.5:1
Output VSWR	≤1.3:1
Phase noise (BUC)	-63 dBc/Hz at 100 Hz (BUC), -73 dBc/Hz at 1 kHz, -83 dBc/Hz at 10 kHz (BUC), -93 dBc/Hz at 100 kHz
External ref. freq. & phase noise (BUC)	10 MHz, 0 dBm ±5 dB (TX IF port multiplexed), -135 dBc/Hz at 100 Hz, -155 dBc/Hz at 1 kHz, -160 dBc/Hz at 10 kHz
Spectral regrowth	-30 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 5 MHz, Measured @1.0x symbol rate

Power Supply

Input voltage	90-264 VAC, 50-60 Hz
Power consumption @ P_{SAT}	350 W

Interfaces & Physical

Dimensions (L x W x H)	340 x 210 x 170 mm
Weight	<15 kg
Interfaces	RF Input (L-Band + Ref Signal): N-type (f) RF Output: WR28 AC Line: 3-pin MIL Circular (MS3102R10SL-3P) M&C: RS-485: 19-pin (MS3112E14-19S) Ethernet (17-150214) USB (17-200781)

Monitor & Control

Remote control	RS-485 / USB / Ethernet
Monitor parameters	Forward & Reverse output power / Reflected power / Input power / Temperature / Summary alarms
Internal self protection	Temperature (>75 °C) / Input level / Reflected power

Environmental

Operating temperature	-30 °C to +55 °C
Storage temperature	-40 °C to +85 °C