



HIGH POWER GaN Ku SSPA

1.1kW/2kW/3.5kW

Outdoor/Indoor

NEW GENERATION OF GAN BASED SSPAS/BUCS FOR BROADCAST SATCOM

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

MULTICARRIER OPERATION

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

MODULARITY

A combination in phase of SSPAs 600 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.

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) 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

- * Ultra high output power
- * Highly efficient
- * Super high linear power
- * Multicarrier operation
- * Superior lifetime based on GaN-tech
- * High MTBF
- * Soft-fail redundancy
- * Hot-swappable amplification modules
- * OPEX savings
- * Weatherproof (outdoor)
- * Compact design
- * Simple operation & maintenance

**OTHER FEATURES**

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

OPTIONS

- * Extended temperature range: -40 °C, +55 °C
- * Receive reject filter (external)
- * Harmonic filter (external)
- * L to Ku band up-converters in 1:1 redundancy configuration (external)
- * SNMP
- * AC breaker box

ELECTRICAL

Operating frequency range	13.75 - 14.50 GHz / 12.75-13.25 GHz
Output power (P_{SAT} (typical))	1.1 kW / 2 kW / 3.5 kW 60.4 dBm / 63 dBm / 65.4 dBm
Linear output power (P_{LINEAR})	1.1 kW / 2 kW / 3.5 kW 59.4 dBm / 62 dBm / 64.4 dBm
Gain	>70 dB
Gain flatness	<4 dB p-p over full band; <1 dB p-p over any 40 MHz
Gain variation over temperature	<± 1.5 dB over full operating range
Attenuation adjustment range	30 dB in 0.25 dB step
Input VSWR	≤1.5:1
Output VSWR	≤1.3:1
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

Input voltage	90-264 VAC, 50-60 Hz
Power consumption @ P_{SAT}	1.1 kW / 2 kW / 3.5 kW <5 kW / <10 kW / <20 kW

INTERFACES & PHYSICAL

Dimensions (L x W x H)	
Outdoor	1370 x 1070 x 1000 mm (1.1 kW / 2 kW) / 1370 x 2000 x 1000 mm (3.5 kW)
Indoor	19" Rack cabinet 44 U (H), 1 m (D) Qty. x1 (1.1 kW / 2 kW) Qty. x2 (3.5 kW)
Interfaces	RF Input: N (f) RF Output: WR75 grooved / RF sample: SMA M&C: Ethernet or 19-pin MIL circular (outdoor) M&C: Ethernet or 15-pin D-Sub (indoor)

MONITOR & CONTROL

Remote control	RS-485 / Ethernet / Dry-Contacts / Web user interfaces
Monitor parameters	Forward & Reverse output power / Input power / Individual SSPAs output power / Temperature / Summary alarms
Internal self protection	Temperature (>85 °C) / Reflected power / High input-output power

ENVIRONMENTAL

Operating temperature	-30 °C to +55 °C (outdoor) / 0 °C to +50 °C (indoor)
Storage temperature	-40 °C to +85 °C
Humidity	100 % condensing (outdoor)

TTI CONTACT

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NOTICE

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

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