



High Power GaN C-band SSPA

5 kW

TTI-SSPA-C-0505-5KW-A

New Generation of GaN based SSPAs for high power uplink stations

Modular Architecture

The combination in phase of individual SSPA modules allows to achieve outstanding output power levels in C band.

Soft-Fail redundancy allows the system to operate even when two individual SSPA modules fail. Hot swappable of SSPA modules. Field removable power supplies.

Monitoring & Control

Full M&C capability is provided via: RS-485, Ethernet and Dry contacts.
Web user interface

Key Features

- Space Surveillance and Tracking (SST) application
- Indoor operation
- Super High linear power
- Highest availability
- Hot swappable of SSPA modules
- CAPEX and OPEX savings



TECHNICAL SPECIFICATIONS

ELECTRICAL

Output Frequency Range	5.80-5.85 GHz
Output Power (P_{SAT})	5 kW (67 dBm)
Linear Output Power (P_{LINEAR})*	2.5 W (64 dBm)
Gain	42-67 dB Defined for ALC mode Input Power Range: 0-5 dBm (Maximum safety +10 dBm) Output Power Range: 47-67 dBm
Gain Flatness	± 0.15 dB p-p max
Gain Slope	± 0.15 dB per 20 MHz
Gain Variation over Temperature	± 0.2 dB over +20 °C to 30 °C
Output Power Level Range	47-67 dBm (0.1 dB step)
Input Impedance and VSWR	50 Ω , $\leq 1.30:1$
Output VSWR	$\leq 2.00:1$
Phase Noise	-110 dBc/Hz at 1 kHz, -120 dBc/Hz at 10 kHz, -125 dBc/Hz at 100kHz, -130 dBc/Hz at 1 MHz
Noise Power Density	-88 dBm/Hz (Transmission) -90 dBm/Hz (Inhibit)
Spectral regrowth	-25 dBc @ P_{LINEAR} *
Spurious (@ P_{LINEAR})	-65 dBc max @ P_{LINEAR}
Harmonics (@ P_{LINEAR})	-50 dBc

* 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	380-400 VAC, 50 Hz
Power consumption @ P_{SAT}	25 kW

MECHANICAL & INTERFACES

Dimensions	Two 19" Rack Cabinet 44U (H), 1 m (D)
Interfaces	RF Input (C-band): N (f) / 50 Ω RF Output: CPR-137-G Grooved / RF Sample: SMA Mute: BWC (f) / 50 Ω AC Line: AC Supply 3-phase, 63A 3P+N+E 6 h M&C (RS-485): D-sub (9-pin) Ethernet RJ45 USB A Dry contact: D-sub (15-pin)

MONITOR & CONTROL PARAMETERS

Remote control	RS-45 / Ethernet
Local Control	USB
Monitor Parameters	Forward & Reverse output power, Input power, Temperature, Alarms
Internal Self Protection	Temperature (>85 °C), Reflected power, Overcurrent, Overvoltage

ENVIRONMENTAL

Operating Temperature	20 °C to 30 °C
Operating Temperature (Degraded mode)	0 °C to 20 °C / 30 °C to 50 °C
Humidity	95 %

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