



AAA11 Series

Compact 20W/25W/40W/50W
C-Band SSPA

This small and lightweight SSPA is ideal for mobile & satellite uplink applications. Designed to be mounted on the feed horn, the SSPA has excellent efficiency & consumes less than 250W for 50W C-Band BUC. The unit works on a wide range DC power supply of 38V to 60V. The SSPA is able to work up to 60°C. Innovative and efficient thermal design makes this SSPA one of the smallest, lightest and most reliable in the industry.

With redundancy-ready feature, the unit can be easily configured to work in 1:1 redundant mode.

Features

- Compact and lightweight
- Can be powered directly from iDirect X7 modem
- Wide operating temperature range -40°C to +60°C
- Wide input DC Voltage range 38V to 60V
- Optional input AC Voltage
- Standard remote monitor & control through RS485, optional Ethernet (SNMP & HTTP)
- Excellent linearity
- Extremely reliable
- High power efficiency
- Available for all C-Band frequency ranges
- Excellent phase noise characteristics
- Low spurious
- Forward power detection facility
- Automatic fault identification & alarm generation
- Automatic temperature compensation feature
- Redundancy ready
- RoHS compliant
- Waterproof with IP65 standard
- LED indicator for SSPA status

Quality Assurance

100% of all SSPAs go through stringent quality checks in addition to well defined Electrical Stress Screening to ensure operation in harsh outdoor environments. The BUCs are also subjected to seal test for water ingress verification.

Reliability

Field proven under harsh environment conditions, Agilis ODUs can withstand temperature ranging from -40°C to +60°C with up to 100% humidity.

Frequency Band

INTELSAT

Tx : 5.850 to 6.425GHz

INSAT

Tx : 6.725 to 7.025GHz

PALAPA / ST1

Tx : 6.425 to 6.725GHz

FULL C

Tx : 5.850 to 6.725GHz

Table 1

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C-Band SSPA



Technical Specifications

RF Specifications

Transmit Frequency	Intelsat / Full C / Insat / Palapa C
Output Power @ P1dB	43dBm (20W) / 44dBm (25W) 46dBm (40W) / 47dBm (50W)
Small Signal Gain	50dB (typical for 20W / 25W) 53dB (typical for 40W / 50W / 60W)
Gain Flatness	±0.75dB over the O/P frequency band
Gain Variation	±0.75dB over the operating temperature range
Gain Control	20dB in step of 0.5dB (optional 0.1dB step size)
O/P spurious	According to EN301443
Phase Noise @ Offset	
1 KHz	-73dBc/Hz max
10 KHz	-83dBc/Hz max
100 KHz	-93dBc/Hz max
I/P VSWR	1.3:1 max
O/P VSWR	1.3:1 max (with external isolator)

Power Requirement

Prime Power	48VDC (range 38 to 60VDC) Can be powered via iDirect X7 modem Optional 230VAC (range 90 to 264VAC)
Power Consumption	144W @ 48VDC input (Typical for 20W) 153.6W @ 48VDC input (Typical for 25W) 300W @ 48VDC input (Typical for 40W) 300W @ 48VDC input (Typical for 50W)
Power Supply Interface	3 pins Connector (optional common input via IFL)

Interfaces

IF Input Interface	50Ohms N-type Female / 75Ohms F-type Female (optional)
Output Interface	WR 137G / 50Ohms N-type Female (optional)

Monitor & Control

Monitor	SSPA Temperature LO unlocked alarm Status alarm RF Output Power LED status indicator
Control	Adjustable gain with 0.5dB step size RF output mute
Interface	RS232/RS485 (Standard) Ethernet (SNMP & HTTP) (Optional)
Tx Redundancy	1:1 Redundancy-ready (with external RCU)

Environmental

Operating Temperature	-40°C to +60°C Optional (-40°C to +70°C for 40W)
Humidity	Up to 100% Weather protection sealed to IP65

Mechanical

Size	235L x 175W x 90H mm 235L x 175W x 150H mm / (AC option)
Weight	3.9kg / 8.6lbs 5.7kg / 12.6lbs (AC option)
Color	White Powder Coat

Compliance Standard

IEC 609501-2nd Edition	International Safety Standard for Information Technology Equipment
ETSI EN 301 489-12	Electromagnetic Compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) Standard for radio equipment and services; Part 12: Specific conditions for Very Small Aperture Terminal, Satellite Interactive Earth Stations operated in the frequency ranges between 4 GHz and 30 GHz in the fixed Satellite Service (FSS)
ETSI EN 301 489-1	Electromagnetic Compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility Standard for Radio Equipment and Services
FCC Part 15 Class B	Two levels of radiation and conducted emissions Limits for unintentional radiators (FCC Mark)

Note: All specifications are subject to change without notice.
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