



MODULAR S-BAND 1600 & 800W

Solid State Power Amplifier System



RADIO FREQUENCY EQUIPMENT

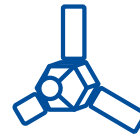
This Solid State Power Amplifier, designed for S-band Uplink, is available in 1600W and 800W output power configuration, according to the quantity of modules integrated in the cabinet.

The standard version contains 8 plug-in modules racked in a 36U standard cabinet. This SSPA provides many advantages. Thanks to solid state technology, **this amplifier has a very high intrinsic reliability and better electrical characteristics.** The modular architecture and the excellent operating reliability eliminate redundant equipment. Each module can be removed during operation; thus facilitating maintenance operations.

Monitoring and control is performed through the 1+1 preamplifier unit on the front panel in local mode and via RS485/Ethernet link in remote mode.



EGSE/SCOE
& testbeds



Earth
Observation
Satellites



Scientific
Missions

MAIN APPLICATIONS

S-Band Uplink
Civil and military
High reliability data link

MAIN BENEFITS

High linearity
Excellent reliability
Self redundancy
Easy maintainability

MAIN FEATURES

- 1 + 1 redundant preamplifier
- Built-in redundant output power stages
- Hot swappable plug-in RF modules
- Pout and Preflect measurements :
Local Control & Remote Control
- Local Control on preamplifier or Remote
Control via RS 485/ Ethernet link
- Display and alarms monitoring
Modules alarms (Gain /T° /PSU...)
- Forced air blow
- Output power monitoring of each module

OPTIONS

Rx rejection filter
Switch & Dummy Load Unit
WR 430 output

THE FUTURE,
OFF-THE-SHELF

SOLID STATE POWER AMPLIFIER SYSTEM

MODULAR S-BAND 1600 & 800W

CONFIGURATION

- **Basic features**
 - 1x 36U rack cabinet
 - 1x 1+1 pre-amplifier unit
 - 8x RF modules (Standard version)
 - Front panel Pout & Preflected Power Test
- **Options**
 - Rx rejection filter
 - WR430 output
 - Switch & Dummy Load Unit SM01013790B

TECHNICAL SPECIFICATIONS

Electrical specifications (@ 25°C)

Frequency range	2025-2120 MHz
Output power	@Psat 1.6 kW typ (1.4 kW min)
	@PS1 1.2 kW typ
	Nominal gain > 65 dB (70 dB typ)
Input power	-10 dBm nominal
Gain adjust	0 to 20 dB by 0.1 dB step
Gain flatness	@ PS1 < ±1.25 dB
Gain slope	per 10 MHz < ±0.3 dB
IM3	@ 3 dB OBO/PS1 > 26 dB
AM/PM conversion	@ PS1 5°/dB
Noise figure	@ nom. gain 12 dB max
Harmonics	@ PS1 < -70 dBc
Spurious	@ PS1 < -60 dBc
Input VSWR	< 1.35
Output VSWR	< 1.5
EMI / RFI	CE approved

Interfaces

RF input connector	N female
RF output connector	1"5/8 or waveguide WR430 in option

Mechanical characteristics

Dimensions (WxHxD)	19"x36Ux900mm
Weight	1100lb (500kg)

Environmental specifications

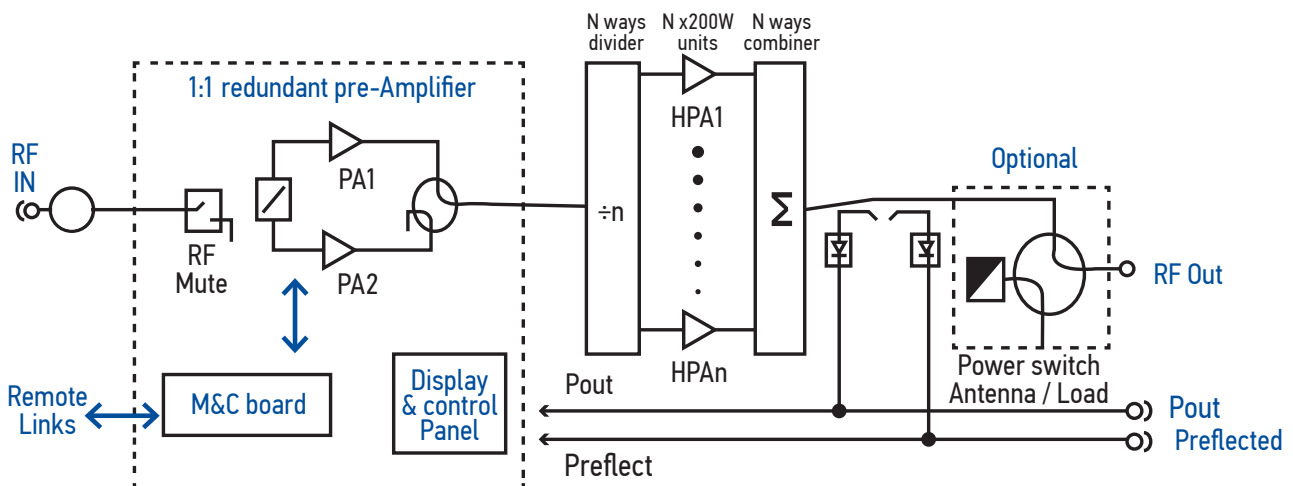
- **Operating conditions**
 - Temperature range +5 to +35°C
 - Relative humidity 93%, non condensing
- **Storage conditions**
 - Temperature range -30°C to +70°C

MODEL TABLE

• SSPA	
1600W Standard version	SM01001453D
800 W version	SM01001452B
• Options	
Rx rejection filter	SM01014212A
WR430 output	SM01015255B
Switch & Dummy Load Unit	SM01043848A
• Spare	
200W module	SM01013790B

PRIMARY POWER

Voltage	230VAC ±10% (2 or 4 wires)
Frequency	47/63 Hz
Consumption max	7000W
@ Pout = 1kW	4500W



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