



100 W S BAND POWER AMPLIFIER

- **100 W OUTPUT RF POWER**
- **STABLE OUTPUT POWER OVER TEMPERATURE**
- **LOW NOISE FIGURE**
- **ETHERNET M&C INTERFACE**
- **ROBUST CONSTRUCTION**

This solid state power amplifier is intended for use in S band satellite communications systems as uplink SSPA. It is to be installed directly to the antenna. The outdoor construction protects the amplifier against harsh environmental conditions. The SSPA can be fully remotely monitored and control via the built-in Ethernet interface.

Electrical parameters

Operation Frequency Band	2025 – 2120 MHz
RF Output Power	50 dBm @ P _{3dB} min
Gain	75 dB min.
Gain Slope	± 0.1 dB / 10 MHz max.
Gain Flatness	± 0.5 dB
Output Power Stability vs. Temp (ALC ON)	± 1 dB (-40°C to +60°C) max.
ALC Control	20 dB min
Input VSWR	< 1.3:1
Output VSWR	< 1.4:1
Output Noise in 2.2-2.3 GHz	< -125 dBm/Hz with filter
Gain adjustment range	min. 20 dB, typ. 25 dB
Gain adjustment step	0.1 dB typ
Harmonics @ P _{1dB-3dB}	< - 60 dBc
Spurious	< - 80 dBc
Noise Figure	< 3 dB
Intermodulation distortion @ P _{out} =47 dBm	< - 25 dBc typ.
Remote M&C interface	Ethernet
Operating Temperature Range	-40°C to +60°C
Power supply	110-240 V AC, 47-63 Hz

*Specifications are subject to change without notice



100 W S BAND POWER AMPLIFIER

Control SW screenshot:

The screenshot displays the BPBS Control Program interface. At the top, there are navigation tabs for Factory Settings, User Settings, and Remote Control. The Remote Control section is active, showing a 'Connect' button and 'Settings' options. The system status is 'Connected' with IP 192.168.16.115 and port 23.

The main interface is divided into several sections:

- Device Information:** Device Type: BPBS45, Serial Number: 005, Date of Manufacture: 21.11.2016, Firmware Version: 1.0.
- Control Panel:** ALC ON-OFF (ON), ALC Level (51.0 dBm), Attenuation (0.0 dB), Input Switch Off Level (-14 dBm).
- AMPLIFIER Status:** OPERATING, RF Out: ON.
- Monitoring Graphs:** Output Power (51.1 dBm) and Temperature (+27.57 °C).
- Monitor Table:**

Monitor	Current	History
Temperature	●	●
9V Supply Voltage	●	●
30V Supply Voltage	●	●
Output Return Loss	●	●
RF Input	●	●
9V Current	●	●
Driver FET Current	●	●
End FET(s) Current	●	●
Fan curr.	●	●

Additional controls include 'RF by User' (ON) and 'Operating Mode' (Standalone).

Summary statistics at the bottom:

- Output Return Loss = -21.10 dB
- RF Input Power = -21.5 dBm



100 W S BAND POWER AMPLIFIER

Outline drawing (mm):

