

**25 W 1:1 REDUNDANT S BAND
POWER AMPLIFIER**

- **25 W OUTPUT RF POWER**
- **STABLE OUTPUT POWER OVER TEMPERATURE**
- **1:1 HOT REDUNDANT ARRANGEMENT**
- **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. 1:1 hot redundant arrangement increases the reliability of the system.

Electrical parameters

Operation Frequency Band	2025 – 2120 MHz
RF Output Power	44 dBm @ P _{3dB} min
Gain	50 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 2.025-2.12 GHz band	< -115 dBm/Hz
Output Noise in 2.2-2.3 GHz	< -140 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
Phase Noise	10 Hz : -60 dBc/Hz 100 Hz : -65 dBc/Hz 1 KHz : -75 dBc/Hz 10 KHz : -85 dBc/Hz 100 KHz : -95 dBc/Hz
Noise Figure	< 8 dB
Intermodulation distortion @ P _{out} =41 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



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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 IP address is 192.168.16.134 and the port is 40000. The system status is 'Connected' with 1 connection.

The main interface is divided into several sections:

- Master Summary:** Shows device details for BPBS44, including serial number 002, date of manufacture 21.11.2016, and firmware version 1.0.
- PAM A and PAM B Status:** Both are active, with connection and communication states indicated by green circles.
- Selected PAM Settings:** Includes ALC ON-OFF (ON), ALC Level (50.0 dBm), Attenuation (0.0 dB), Input Switch Off Level (-10 dBm), and RF by User (ON). Output Power is 50.1 dBm, RF Input is -15.6 dBm, and Output Return Loss is -18.60 dB.
- Monitor:** Shows current and history for Temperature, 9V, 30V, and 5V supply voltages, all with green status indicators.
- Switch Settings:** Shows Selection Mode (Auto Mode selected) and Active/Preferred PAM (PAM A selected).
- RF Load:** Shows Dummy Load (unselected) and Antenna (selected).

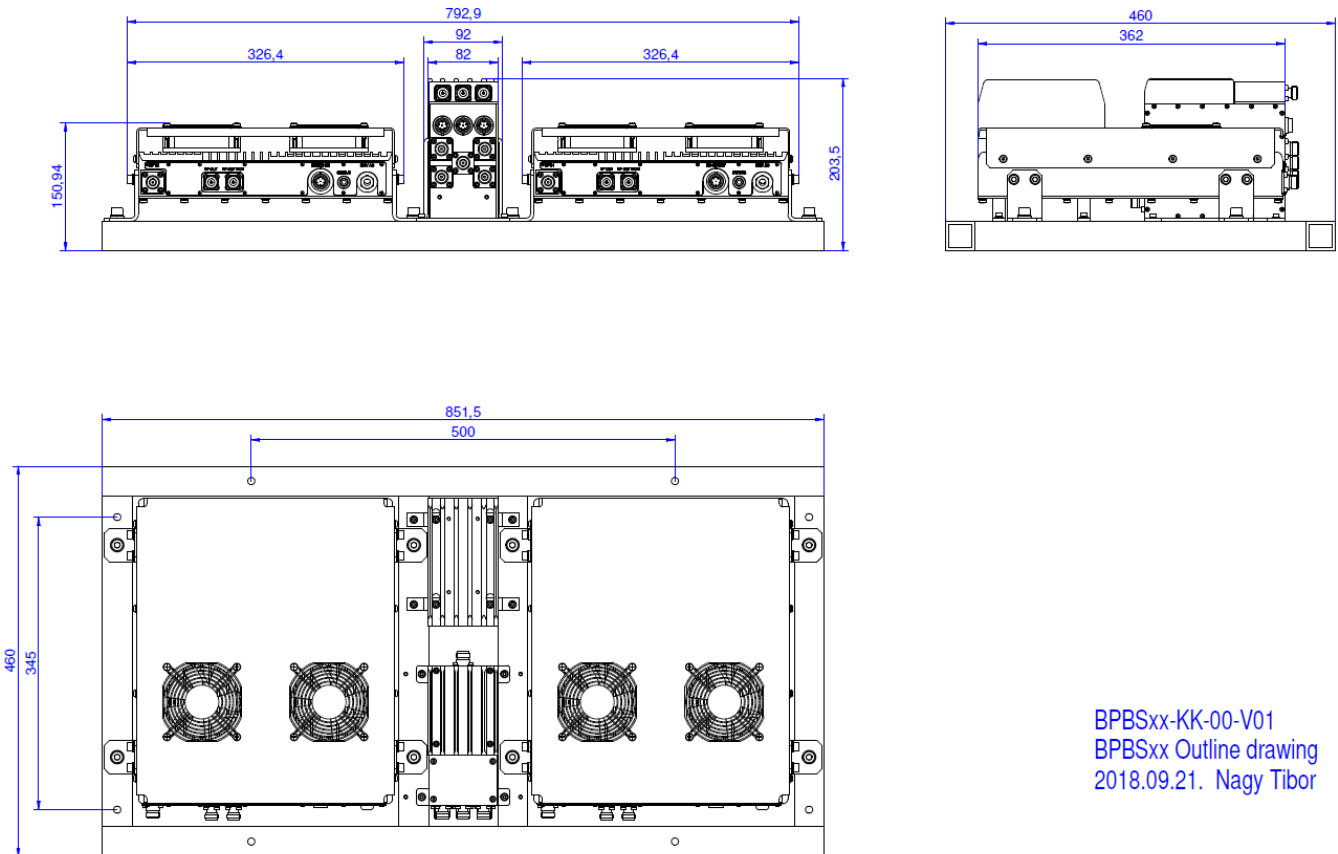
The BHE logo is visible in the bottom right corner of the interface.





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Outline drawing (mm):



BPBSxx-KK-00-V01
BPBSxx Outline drawing
2018.09.21. Nagy Tibor

