

**X-BAND INDOOR SINGLE SOLID STATE POWER AMPLIFIER**

- **200W RF POWER**
- **FULL REMOTE M&C**
- **HIGH RELIABILITY**

This solid state power amplifier is intended for use in X-band satellite communications systems as uplink SSPA. The SSPA can be fully remotely monitored and controlled via the built-in RS-485 or Ethernet port. For higher flexibility the output VSWR alarm and shut down threshold can be adjusted for fitting the local conditions better.

Electrical characteristics:

Frequency Band	7145 – 7235 MHz	
RF Output Power	53 dBm @ P3dB typ.	
Power Gain	60 dB min. @ P1dB	
Gain Flatness	± 1 dB @ full band ± 0.5 dB @ any 10MHz	
In/Out Impedance Nominally	50 Ohms	
RF Input Interface	N-female	
RF Output Interface	WR-137 (sealed)	
Input VSWR	< 1.5 : 1	
Output VSWR	< 1.5 : 1	
Gain Adjustment Range	min. 20 dB	
Gain Adjustment Step	0.5 dB typ.	
Harmonics @ P1dB	< -60 dBc	
Spurious @ P1dB	< -60 dBc	
Noise Figure	< 5 dB	
AM/PM Conversion @ P1dB	3°/dB max.	
AM/PM Conversion @ 3dB backoff	1°/dB max.	
Two Tone Intermodulation Distortion (1MHz spacing)	< -25 dBc @ 50dBm	
Group Delay	Linear	0.01ns/MHz
	Parabolic	0.003ns/MHz ²
	Ripple	1ns (peak to peak)
Power supply	200-260 VAC; 45-55 Hz	
Remote Control	RS485 or Ethernet	
Cooling	Forced Air	
Operating temperature range	0 to +55 °C	
	-20 to +60 °C (option)	

Datasheet Ver. 1.4 / 20210601



X-BAND INDOOR SINGLE SOLID STATE POWER AMPLIFIER

Control software summary screen (for reference only):

The screenshot displays the BPBS Control Program v1.4.0.2 interface. At the top, there are three main control panels: Factory Settings (with Recall and Boot Mode buttons), User Settings (with Recall and Save buttons), and Remote Control (with Restart Device and Settings buttons). To the right, network information is shown: IP: 192.168.16.164, Port: 23, and a green Connect button. The System Status is 'Connected' with 1 connection.

The main interface is divided into several sections:

- Summary:** Device Type: BPBC16, Serial Number: 005, Date of Manufacture: 07.01.2019, Firmware Version: 0.4, Hardware Version: 1.0.
- ALC ON-OFF:** A toggle switch set to ON.
- ALC Level:** A numeric input field set to 53.0 dBm.
- Attenuation:** A numeric input field set to 20.0 dB.
- AMPLIFIER OPERATING:** A central green panel with 'RF Out: ON' and two bar graphs. The left graph shows Output Power at 05.7 dBm (scale 0 to 54). The right graph shows End FETs Temp. at 34 °C (scale -40 to 100).
- Monitor Table:** A table with columns 'Current' and 'History' for various parameters: End FETs Temp., End FETs Current, End FETs Voltage, 24V Supp. Volt. 1, 24V Supp. Volt. 2, Output Return Loss, Driver, Fan curr., and Preamp. All are shown with green indicator lights.
- Clear Alarm History:** A button labeled CLEAR.
- RF by User:** A toggle switch set to ON.
- Operating Mode:** Displayed as Standalone.
- Output Return Loss:** Displayed as -1.30 dB.

The BHE logo is visible in the bottom left corner of the software window.

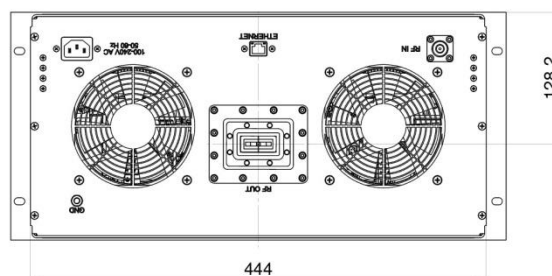
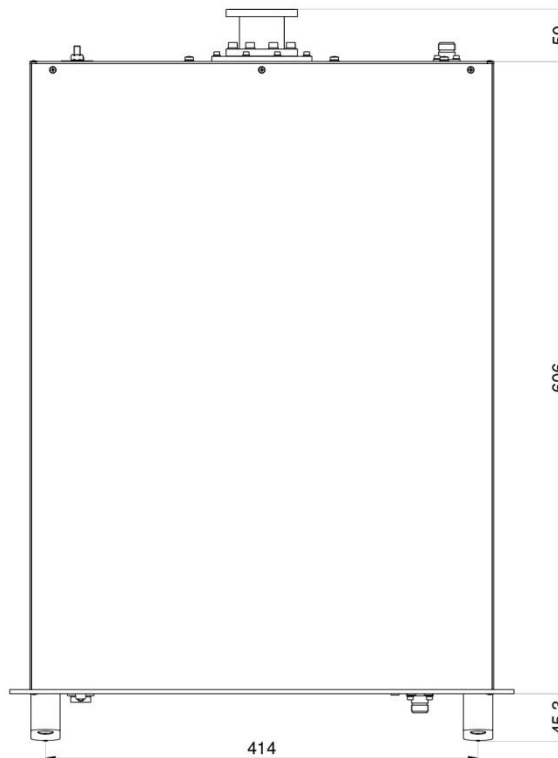
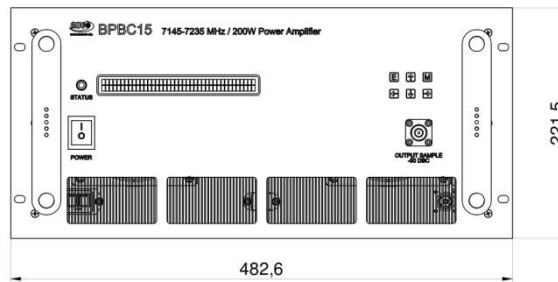
Datasheet Ver. 1.4 / 20210601





X-BAND INDOOR SINGLE SOLID STATE POWER AMPLIFIER

Outline dimensions (mm):



Datasheet Ver. 1.4 / 20210601



BPBC15

**X-BAND INDOOR SINGLE SOLID
STATE POWER AMPLIFIER**

Picture:



Datasheet Ver. 1.4 / 20210601