

MAIN FEATURES

- ❖ 100W RF power
- ❖ Full remote M&C
- ❖ High reliability



DESCRIPTION

This solid state power amplifier is intended for use in X-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 controlled via the built-in RS-485 or Ethernet port.

SPECIFICATIONS

Frequency Band	7145 – 7235 MHz	
RF Output Power	50 dBm @ P3dB	
Power Gain	60 dB min. 65dB typ.	
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	< 6 dB	
AM/PM Conversion @ P1dB	4°/dB max.	
AM/PM Conversion @ 3dB backoff	1°/dB max.	
Two Tone Intermodulation Distortion (1MHz spacing)	< -25 dBc @ P1-3dB	
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 optional)	

Specifications are subject to change without notice.



BPBC20 X-band Outdoor Single Solid State Power Amplifier

CONTROL SOFTWARE SUMMARY SCREEN (FOR REFERENCE ONLY)

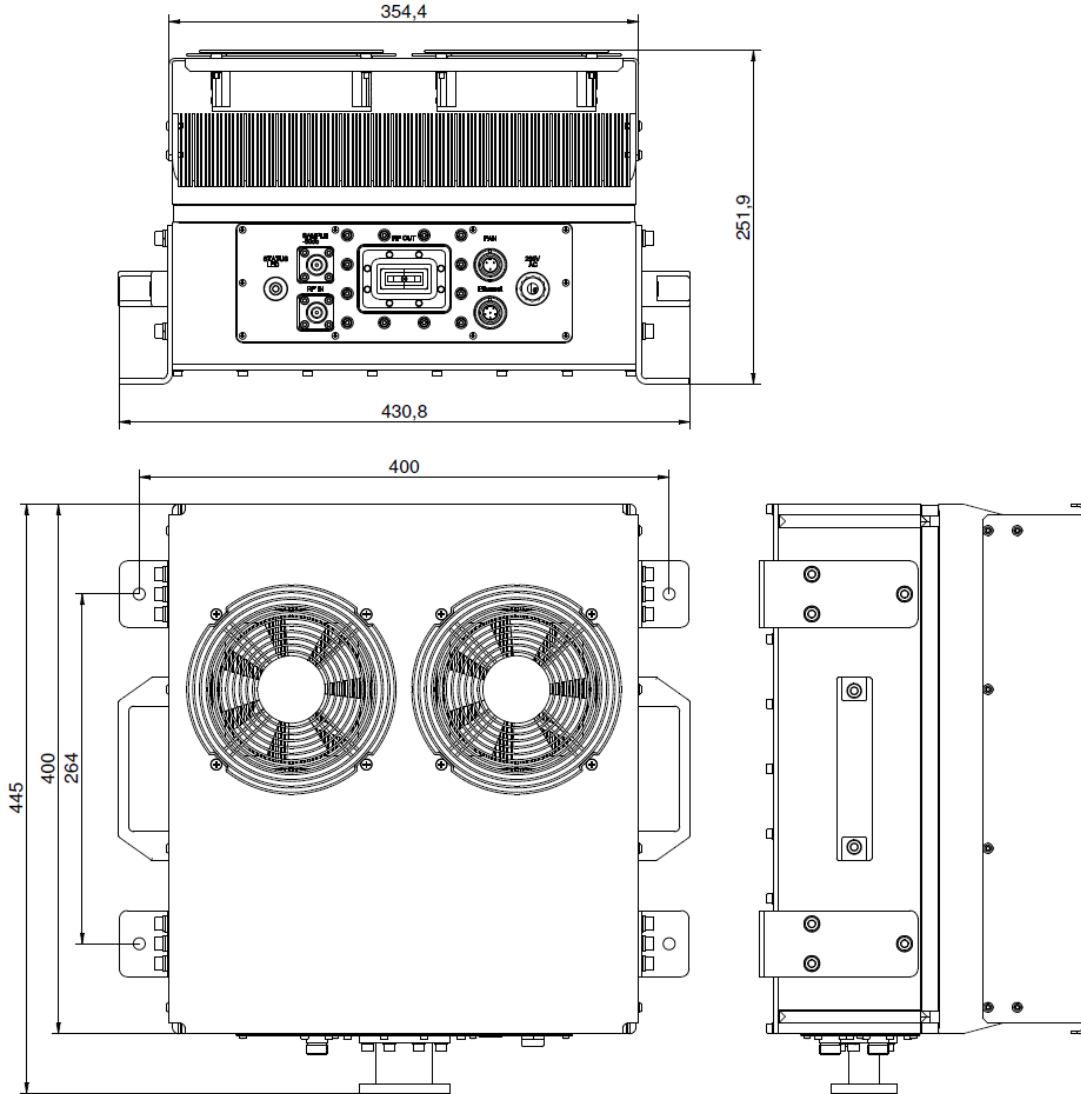
The screenshot displays the 'BPBS Control Program' interface. At the top, there are navigation tabs for 'Factory Settings', 'User Settings', and 'Remote Control'. The 'User Settings' tab is active, showing 'Recall', 'Save', 'Connect', and 'Settings' buttons. The 'Connect' button is highlighted in green. The IP address is 192.168.16.115 and the port is 23. The system status is 'Connected'.

The main area is divided into several sections:

- Device Information:** Device Type: BPBS45, Serial Number: 005, Date of Manufacture: 21.11.2016, Firmware Version: 1.0.
- Control Elements:** ALC ON-OFF (ON), ALC Level (51.0 dBm), Attenuation (0.0 dB), Input Switch Off Level (-14 dBm).
- AMPLIFIER OPERATING:** A large green area with a status indicator 'OPERATING' and 'RF Out: ON'. It features two vertical bar graphs: 'Output Power' at 51.1 dBm (with a scale from 0 to 53) and 'Temperature' at +27.57 °C (with a scale from -40 to 85).
- 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.	●	●
- Clear Alarm History:** A button labeled 'CLEAR'.
- RF by User:** A toggle switch set to 'ON'.
- Operating Mode:** Two buttons: 'Redundant' (grey) and 'Standalone' (red).
- Summary Metrics:** Output Return Loss = -21.10 dB, RF Input Power = -21.5 dBm.

OUTLINE DRAWING (mm)



ORDERING INFORMATION

MODEL NUMBER	DESCRIPTION
BPBC20K10922	BPBC20 100 W, C-band, 7145-7235 MHz, G 60 dB, single outdoor SSPA, N-female, WR-137, Ethernet control

DOCUMENT REVISION

DOCUMENT NAME	REVISION	DATE
BPBC20-LM-K10922	V01	19/11/2021