

MAIN FEATURES

- ❖ 200W output RF power
- ❖ Stable output power over temperature
- ❖ Ethernet or RS485 M&C interface
- ❖ 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. Optional 1:1 hot redundant arrangement increases the reliability of the system.

SPECIFICATIONS

ELECTRICAL PARAMETERS	
Operation Frequency Band	7145 – 7235 MHz
RF Output Power	53 dBm @ P3dB
Power Gain	60 dB min. 65dB typ.
Gain Flatness	± 0.5 dB in full band ±0.1 dB / 10 MHz max.
AM/PM Conversion @ P3dB	< 4 °/dB
ALC Control Range	20 dB min. with 0.5dB step
In/Out Impedance Nominally	50 Ohms
Input VSWR	< 1.4:1
Output VSWR	< 1.4:1
Out-of-Band Gain Reduction	35dB @ F > 7.4 GHz and F < 7.0 GHz
Group delay variation (with filter)	Linear: 0.02ns/MHz Parabolic: 0.001ns/MHz ² Ripple: 1ns pk-pk
Gain adjustment range	20 dB
Gain adjustment step	0.5 dB typ.
Noise Figure (standalone system)	< 8 dB (@max. gain)
Harmonics @ P3dB	< -60 dBc
Spurious @ P3dB	< -60 dBc
Output sample port	-50 dBc typ.
Intermodulation distortion @ Pout=50 dBm (two tone, 47dBm/tone, 1MHz spacing)	< -25 dBc
MTBF	> 65 000 hours
Remote M&C interface	Ethernet (Option: RS485)
Power supply voltage	110-240 V AC, 47-63 Hz
AC Power Consumption (230 VAC) @ Pout= 53 dBm	<1100 VA



BPBC16 200W X-band Outdoor Power Amplifier

MECHANICAL PARAMETERS	
Connectors	AC: MS3102E18-10P ETHERNET: Amphenol MS3112E12-10S RF IN: N-Female SAMPLE: N-Female RF OUT: WR137 (CPRG flange)
Weight	43 kg
Dimensions (L x W x H)	430 x 445 x 255 mm
ENVIRONMENTAL PARAMETERS	
Operating Temperature Range	-40°C to +60°C
Degree of protection	IP67
Cooling	Forced air
Shock & Vibration	Transportation
SOFTWARE PARAMETERS	
Remote M&C interface	Ethernet (TCP/IP); Optional: RS-485

Specifications are subject to change without notice.

SOFTWARE SCREENSHOT

BPBS Control Program v1.4.0.1

Factory Settings: Recall, Boot Mode

User Settings: Recall, Save

Remote Control: Restart Device, Settings

IP: 192.168.16.211, Port: 23, Connect

System Status: Connected, Connections: 1

Summary | Details | End FET Summary | Preamp, Driver Details | Factory | Debug

Device Type: BPBC16
Serial Number: 003
Date of Manufacture: 07.01.2019
Firmware Version: 0.2
Hardware Version: 1.0

ALC ON-OFF: ON OFF

ALC Level: 53.0 dBm

Attenuation: 00.0 dB

AMPLIFIER OPERATING
RF Out: ON

Output Power: 05.8 dBm (Scale: 0 to 54)

End FETs Temp.: 48 °C (Scale: -40 to 85)

Monitor:

Parameter	Current	History
End FETs Temp.	●	●
End FETs Current	●	●
End FETs Voltage	●	●
24V Supp. Volt. 1	●	●
24V Supp. Volt. 2	●	●
Output Return Loss	●	●
Driver Current	●	●
Fan curr.	●	●
Preamp. Alarm	●	●

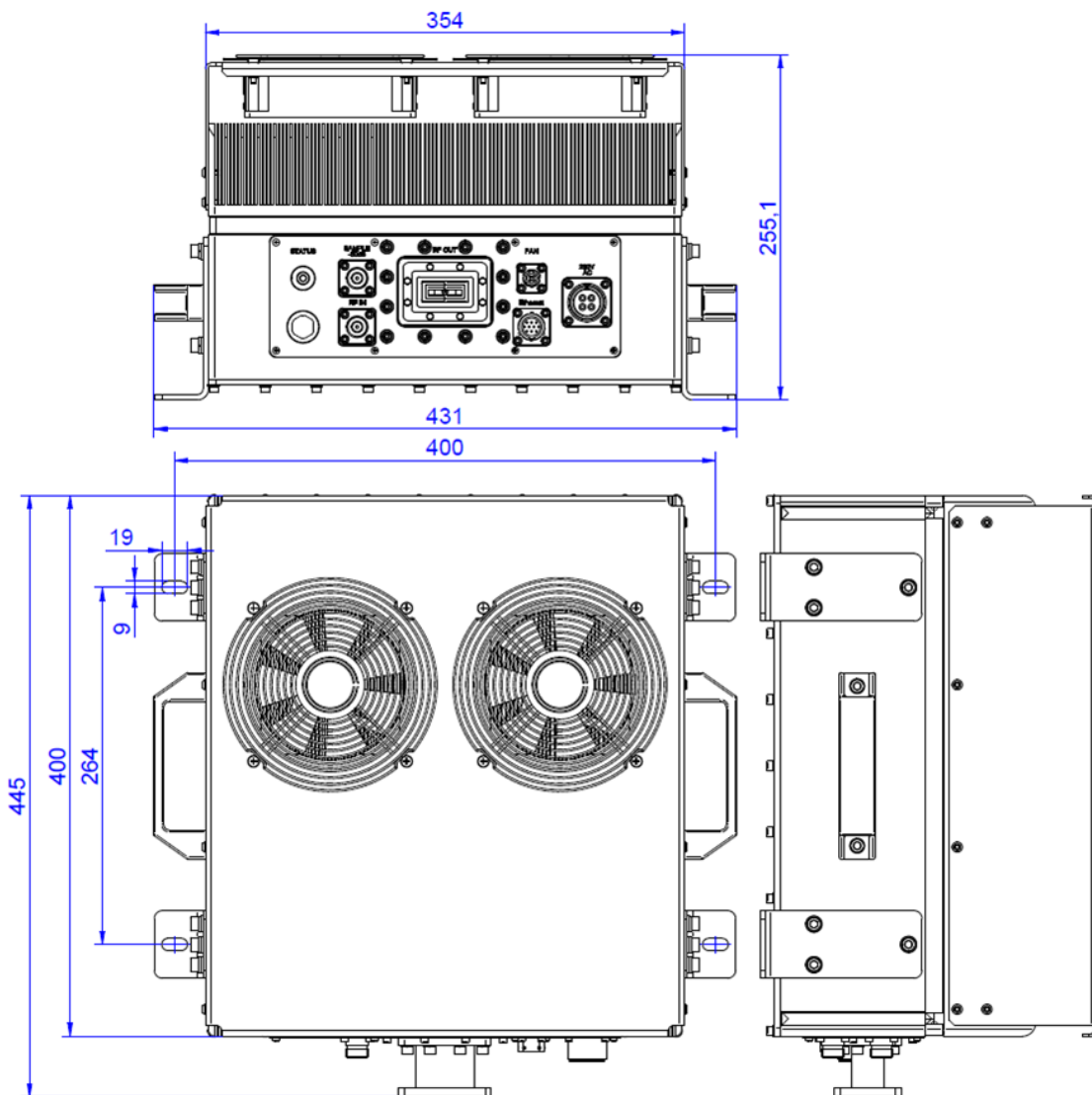
Clear Alarm History: CLEAR

Output Return Loss = -1.50 dB

RF by User: ON OFF

BHE logo

OUTLINE DRAWING (mm)



ORDERING INFORMATION

MODEL NUMBER	DESCRIPTION
BPBC16K10510	BPBC16, 200 W, 7145-7235 MHz, outdoor, power amplifier, Ethernet interface

DOCUMENT REVISION

DOCUMENT NAME	REVISION	DATE
BPBC16-LM-K10510	V01	03/05/2023