

MAIN FEATURES

- ❖ 200 W output RF power
- ❖ Stable output power over temperature
- ❖ Low noise figure
- ❖ Ethernet or RS-485 M&C interface
- ❖ High reliability



DESCRIPTION

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 controlled via the built-in Ethernet interface. Optional 1:1 hot redundant arrangement increases the reliability of the system.

SPECIFICATIONS

ELECTRICAL PARAMETERS	
Frequency band	2025 – 2120 MHz
RF output power	53 dBm @ P1dB
Gain	74 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.
AM/PM conversion @ P1dB	<3 °/dB
ALC control range	20 dB min. with 0.5 dB step
In/Out impedance nominally	50 Ω
Input VSWR	<1.3 : 1
Output VSWR	<1.4 : 1
Output noise in 2.2 – 2.3 GHz band with filter	<-125 dBm/Hz (filter characteristics can be improved upon request)
Group delay variation (with filter)	Linear: 0.05 ns/MHz Parabolic: 0.001ns/MHz ² Ripple: 1ns pk-pk
Gain adjustment range	20 dB
Gain adjustment step	0.1 dB typ.
Noise figure	<4 dB (@ max. gain)
Harmonics @ P1dB-3dB	<-60 dBc
Spurious @ P1dB-3dB	<-80 dBc
Output sample	-50 dBc typ.
Intermodulation distortion @ Pout= 50 dBm (two-tone, 47 dBm/tone, 1 MHz spacing)	<-25 dBc
MTBF	>65 000 hours
Power supply voltage	110 – 240 VAC, 47 – 63 Hz
AC Power Consumption (230 VAC) @ Pout= 53 dBm	<900 VA



BPBS49 200 W S-band Outdoor Power Amplifier

MECHANICAL PARAMETERS	
Connectors	AC: MS3102E18-10P Ethernet: Amphenol MS3112E12-10S RF IN: N-female Sample: N-female RF OUT: N-female
Weight	22.5 kg
Dimensions	Approx. 366 x 176 x 580 mm (see outline drawing)
ENVIRONMENTAL PARAMETERS	
Operating temperature range	-40 °C ... +60 °C
Degree of protection	IP67 Outdoor
Cooling	Forced air cooling
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 v1.3.9.3

Factory Settings: Recall, Boot Mode
User Settings: Recall, Save
Remote Control: Restart Device, Settings
IP: 192.168.16.188, Port: 23
System Status: Connected, Connections: 1

Summary | Details

Device Type: BPBS49
Serial Number: 005
Date of Manufacture: 08.08.2017
Firmware Version: 2.7

ALC ON-OFF: ON OFF
ALC Level: 53.0 dBm
Attenuation: 00.0 dB

AMPLIFIER
RF OFF
RF Out: OFF

Output Power: < 5 dBm (0 to 54 dBm)
Temperature: 33.80 °C (-40 to 85 °C)

Output Return Loss = N.A. dB

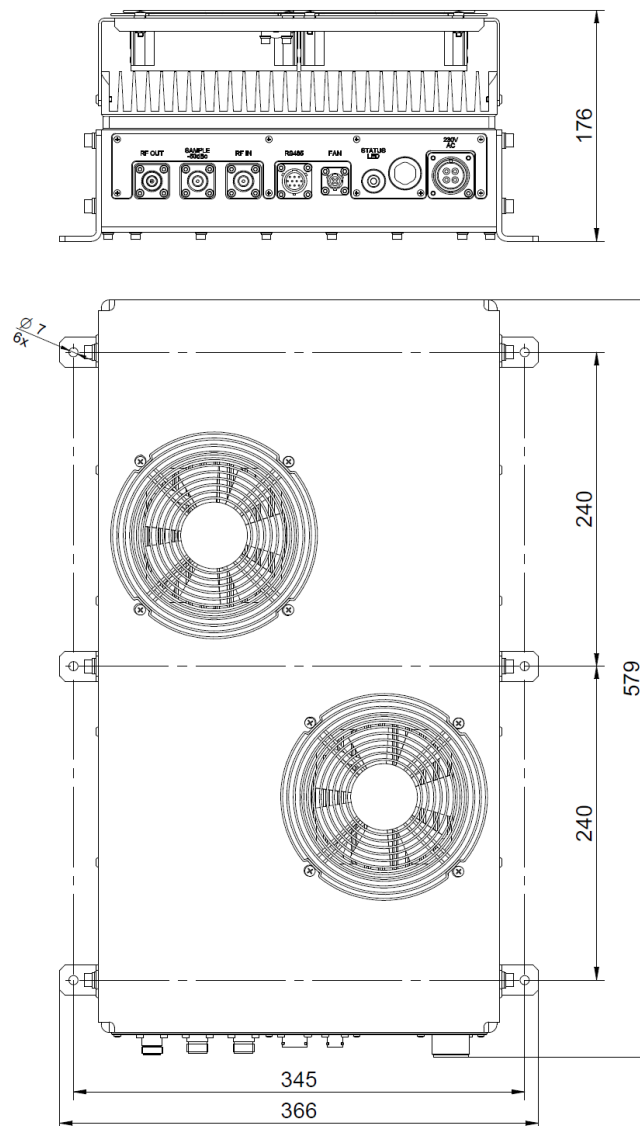
Operating Mode = Standalone

Monitor	Current	History
Temperature	●	●
9V Supply Voltage	●	●
30V Supply Voltage	●	●
Output Return Loss	●	●
9V Current	●	●
Driver FET Current	●	●
End FET(1) Current	●	●
End FET(2) Current	●	●
Fan curr.	●	●

Clear Alarm History: CLEAR

RF by User: ON OFF

OUTLINE DRAWING (mm)



ORDERING INFORMATION

MODEL NUMBER	DESCRIPTION
BPBS49K10307	BPBS49 200 W, S band, 2025 – 2120 MHz, single outdoor SSPA, Ethernet control
BPBS49K10642	BPBS49 200 W, S band, 2025 – 2120 MHz, single outdoor SSPA, RS-485 control

DOCUMENT REVISION

DOCUMENT NAME	REVISION	DATE
BPBS48-LM-gyűjtő	V01	2023-07-31