

MAIN FEATURES

- ❖ 100W output RF power
- ❖ Stable output power over temperature
- ❖ Low noise figure
- ❖ Ethernet or RS485 M&C interface
- ❖ Robust construction



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. 1:1 hot redundant arrangement increases the reliability of the system.

SPECIFICATIONS

Operation Frequency Band	2020 – 2120 MHz
RF Output Power	50 dBm @ P3dB
Gain	75 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	<2.5 °/dB
ALC Control	20 dB min
In/Out Impedance Nominally	50 Ohms
Input VSWR	< 1.3:1
Output VSWR	< 1.4:1
Output Noise in 2.2-2.3 GHz band with filter (*)	< -125 dBm/Hz @ 2200MHz (filter characteristics can be improved upon request)
Group delay variation (with filter)	Linear: 0.02ns/MHz Parabolic: 0.001ns/MHz ² Ripple: 1.2 ns pk-pk
Gain adjustment range	20 dB
Gain adjustment step	0.1 dB typ
Noise Figure (standalone system)	<3 dB (@max gain)
Noise Figure (redundant system)	<8 dB
Harmonics @ P3dB-3dB	< - 60 dBc
Spurious @ P3dB-3dB	< - 80 dBc
Output sample	-50 dBc typ.



BPBS58 100W S-band Outdoor Power Amplifier

Intermodulation distortion @ Pout=47 dBm (two tone, 43dBm/tone, 1MHz spacing)	< - 25 dBc
MTBF	> 100 000 hours
Remote M&C interface	Ethernet (Option: RS485)
Operating Temperature Range	-40°C to +60°C
Relative Humidity	98%
IP protection class	IP67
Shock & Vibration	transportation
Weight	24 kg
Connectors	AC: MS3102E18-10P ETHERNET: Amphenol MS3112E12-10S RF IN: N-Female SAMPLE: N-Female RF OUT: N-Female
Dimensions (L x W x H)	Approx. 170 x 306 x 560 mm
Power supply	110-240 V AC, 47-63 Hz
AC Power Consumption (230V AC) @ Pout=50Bm	< 500 VA

Specifications are subject to change without notice.



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SOFTWARE SCREENSHOT

BPBS Control Program v1.4.0.9

Factory Settings: Recall, Boot Mode
User Settings: Recall, Save
Remote Control: Restart Device, Settings
Connection Mode: TCP/IP, Serial
IP: 192.168.16.211, Port: 23
System Status: Connected, Connections: 1

Summary | Details

Device Type: BPBS58
Serial Number: 001
Date of Manufacture: 06.08.2019
Firmware Version: 0.1
Hardware Version: 2.0

ALC ON-OFF: ON OFF
ALC Level: 30.0 dBm
Attenuation: 00.0 dB
Input Switch Off Level: -10 dBm

AMPLIFIER OPERATING
RF Out: ON

Output Power: 51.1 dBm
Temperature: 33.71 °C

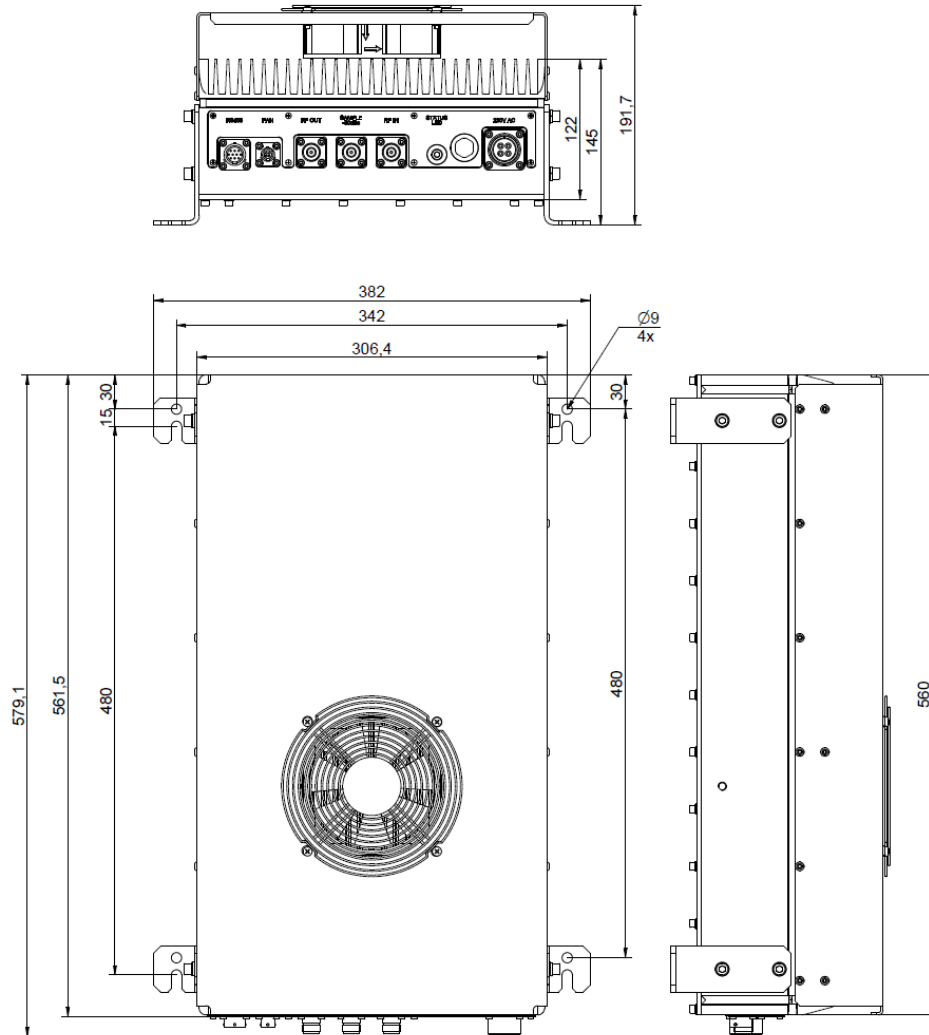
Monitor	Current	History
Temperature	●	●
9V Supply Voltage	●	●
28V Supply Voltage	●	●
Output Return Loss	●	●
RF Input	●	●
9V Current	●	●
Driver FET Current	●	●
End FET(s) Current	●	●
Fan curr.	●	●

Clear Alarm History CLEAR

Output Return Loss = -16.60 dB
RF Input Power = -20.9 dBm

RF by User: ON OFF

OUTLINE DRAWING (mm)



ORDERING INFORMATION

MODEL NUMBER	DESCRIPTION
BPBS58K10676	BPBS58 100 W, S band, 2020 – 2120 MHz, power amplifier module

DOCUMENT REVISION

DOCUMENT NAME	REVISION	DATE
BPBS58-LM-K10676	V01	30/03/20232022