

## RigExpert® 869MPA Bi-directional 869 MHz Power Amplifier

### Product Overview

Bidirectional ISM band (869MHz) amplifier, designed for low voltage application.

Provides around 20dB RX gain for small signals in passband and 15dB for TX.

The output power +34dBm in Pulse mode can be reached and +33dBm in CW mode.

50 Ohm matched.

VOX based TX/RX switching. VOX level can be adjusted by replacing resistors



### Applications

- TX/RX Amplifier for UAV Systems
- SDR
- HAM Radio
- IoT
- Test & Measurement

### Main Features

- 862-872 MHz Operation
- Automatic TX/RX switching
- Tiny Size
- Low Voltage Operation, 5 V Power Supply
- 15 dB TX RF gain
- 20 dB RX RF gain
- 33dBm CW TX Power
- 34 dBm Pulse TX Power
- ESD Protection



## Specifications

Table 1. Absolute Maximum Ratings

Parameter	Rating
Max RF Input TX Power	21 dBm
Max RF Input RX Power	-13 dBm
Device Voltage	5.5 V

\*\*Important note: Input TX Power can be adjusted by changing input ATT.

Table 2. Recommended Operating Conditions

Parameter	Min	Typ.	Max	Units
RF Input TX Power	15	20	21	dBm
Device Voltage	+4.75	+5	+5.25	V

Table 3. Electrical Specifications

Parameter	Conditions	Min	Typ.	Max	Units
Operational Frequency Range		862		872	MHz
TX Gain			15		dB
RX Gain			20	20.4	dB
Output Power CW	Input RF Power 20dBm @ 869 MHz	32	33	33.3	dBm
Output Power Pulse	Input RF Power 20dBm @ 869 MHz	33	34	34.4	dBm
2 <sup>nd</sup> Harmonic CW	Output Power 33dBm @ 869 MHz		1.2		dBm
2 <sup>nd</sup> Harmonic Pulse	Output Power 33dBm @ 869 MHz		1.6		dBm
Power Consumption in CW TX	Output RF Power 33dBm @ 869 MHz		9.4		W
Power Consumption in RX			0.44		W

## Mechanical Specifications

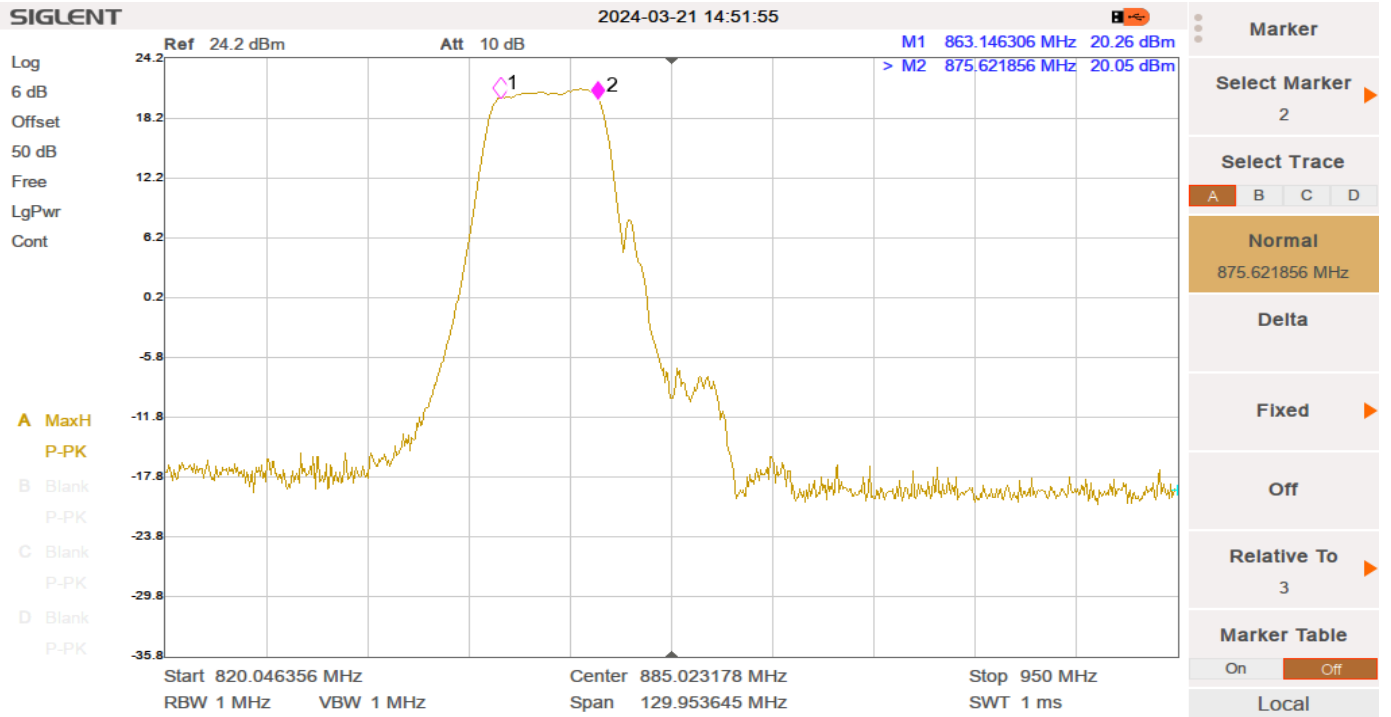
Table 4. Absolute Maximum Ratings

Dimensions, mm	40 x 56 x 15
Weight, g	46

Laboratory measurement results

NOTICE. All measurements are done with 5 V power supply and room temperature 22°C.

Figure 1. LNA Gain sweep. Input RF signal -20dBm



3

Figure 2. LNA Gain sweep. Input RF signal -40dBm

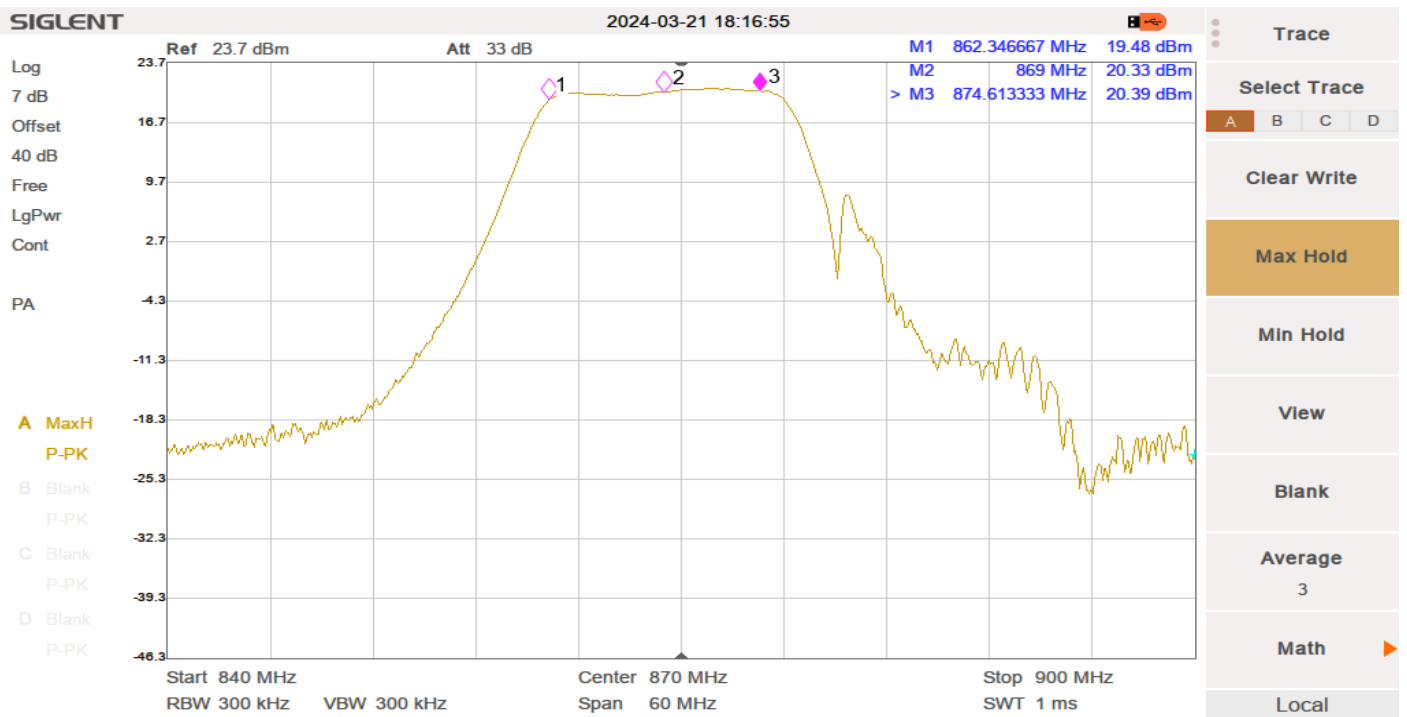


Figure 3. PA Gain sweep. Input RF signal CW 17dBm

