

Bidirectional 770 MHz Power Amplifier RigExpert® 770 MPA-LD

Product Overview

Bidirectional ISM band (740–810 MHz) amplifier, designed for low voltage application. Provides around 15 dB RX gain for small signals in passband and 20 dB for TX. The output power 3 W. VOX based TX/RX switching. VOX level can be adjusted by replacing resistors.



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Applications

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

Main Features

- 740–810 MHz Operation
- Automatic TX/RX switching
- Tiny Size
- Low Voltage Operation, 5 V Power Supply
- 20 dB TX RF gain
- 15 dB RX RF gain
- 2.8 W CW TX Power
- 3.5 W Pulse TX Power
- Convenient MMCX connectors
- Power connector type: JST PH2.0 (4-pin)
- Max switching speed between TX and RX – 250 ns (nominal 150 ns)
- RF connector type: MMCX female
- ESD/EMI shield
- Passive cooling



Specifications

Table 1. Absolute Maximum Ratings

Parameter	Rating
Max RF Input TX Power	20 dBm
Min RF Input TX Power	From 3 dBm
Device Voltage	5.25 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	3		20	dBm
Device Voltage	+4.75	+5	+5.25	V

Table 3. Electrical Specifications

Parameter	Conditions	Min	Typ.	Max.	Units
Operational Frequency Range		740		810	MHz
TX Gain	740-810 MHz	18	20	22	dB
RX Gain	740-810 MHz	13	15	15.96	dB
Output Power CW	Input RF Power 20 dBm @ 750 MHz		2.82		W
Output Power Pulse	Input RF Power 20 dBm @ 750 MHz		3.53		W
Power Consumption in TX				10	W
Power Consumption in RX				0.4	W

Mechanical Specifications

Table 4. Dimensions and weight

Dimensions, mm	38 x 56 x 13
Weight, g	38

Laboratory measurement results

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

Figure 1. RX Gain. Input RF signal 20dBm



Figure 2. Output Power Pulse. Input RF signal 20dBm

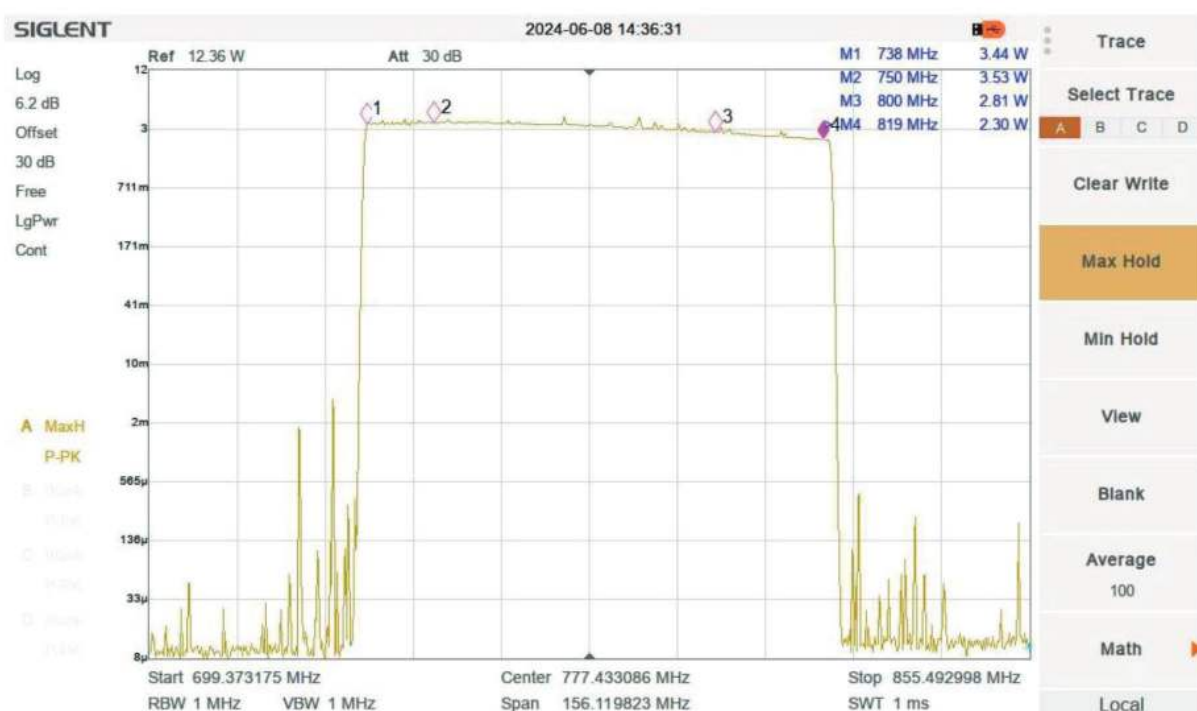


Figure 3. Output Power CW. Input RF signal 20dBm

