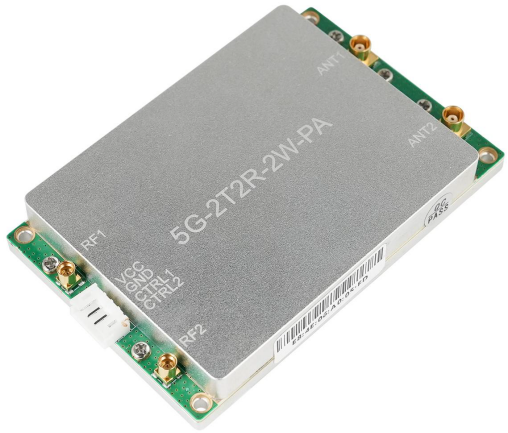
AB056 5.1-5.9GHz 1 0 W dual-channelsignal booster



Product Name: **AB056**

Type: **2T2R Power Amplifier Module**

Frequency Range: **5.1GHz ~ 5.9GHz**

Operating Mode: **TDD (Time Division Duplex)**

This product is a 2T2R extended range power amplifier module operating in the frequency range of 5.1GHz to 5.9GHz.

It uses the TDD working mode, achieving efficient frequency utilization and low power consumption. The design integrates a

Power Amplifier (PA), Low Noise Amplifier (LNA), and duplex switch, simplifying system structure and improving device reliability.

The product is known for its high efficiency, integrated design, excellent temperature compensation, protection mechanism,

and outstanding performance in modern wireless communication fields.

Key Features:

- TDD operating mode

- Integrated PA, LNA, and duplex switch

- Temperature compensation for PA and LNA

- Mismatch protection

- High linearity, multi-functional, multi-band, adaptive switching with fast response

Applications:

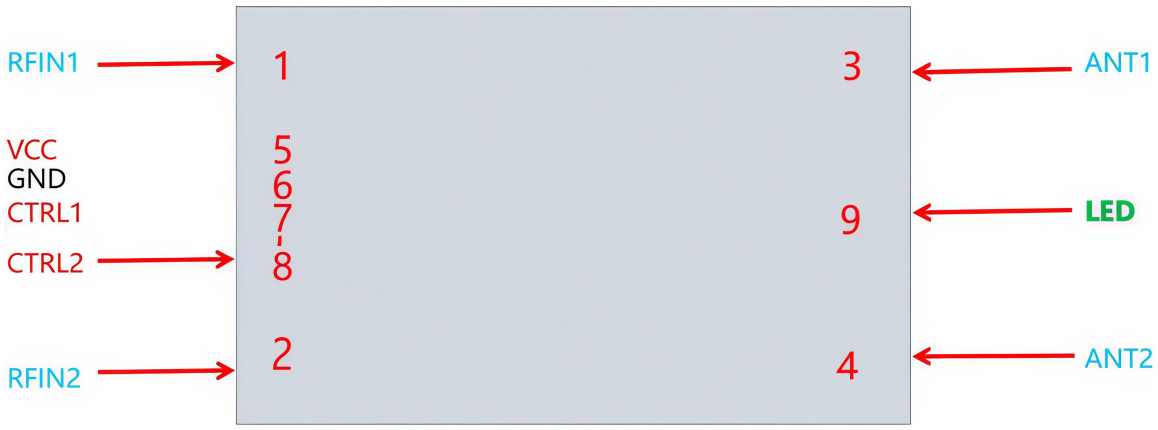
- Wi-Fi 6E systems for high-speed internet and stable connections.
- 5G base stations and small cell installations.
- Wireless communication devices requiring extended coverage and reliability.
- Industrial IoT applications and remote wireless sensors.

Parameters

Parameter	Min	Typical	Max	Unit / Remarks
Operating Frequency	5100	-	5900	MHz
Operating Voltage	9	24	36	V
Operating Current	0.8	-	-	A (At full power in dual transmit mode)
Output Power (TX)	32	33	34	dBm (M A X 1 0 W)
Transmit Gain (TX)	9	10	11	dB
EVM (TX)	-	<3%	-	For 30 dBm
VSWR (TX)	-	2.5	-	
Peak-to-Average Power Ratio (Input)	-	7.5	dB	
In-Band Flatness	2	3	4	dB (Measured with Network Analyzer)
Receive Gain (RX)	7	9	11	dB
VSWR (RX)	-	2.5	-	
Noise Figure	-	2.5	-	dB
Input Damage Level	-	10	dBm	Maximum input level
Response Time	-	5	us	Adaptive Switching
Optional Response Time	-	2.5	us	External Control Switching

Interface Description

No.	Name	Definition	Direction	Interface Type
1	RFIN1	RF Input	I	MCX
2	RFIN2	RF Input	I	MCX
3	ANT1	RF Output	O	MCX
4	ANT2	RF Output	O	MCX
5	VCC	Power Supply Voltage	I	DC 9V-36V
6	GND	Ground	I	-
7	LED	Green LED	O	-



Environmental Conditions

• Operating Temperature: -25 to +60°C

• Relative Humidity: 5% to 95%, non-condensing

• Atmospheric Pressure: 70 to 106 kPa

• High Humidity Working: Capable of working at temperatures no lower than 40°C, relative humidity no less than 95%

• Storage Temperature: -40 to +85°C

• Storage Humidity: 5% to 98%, non-condensing

Note : For long-term operation, it is recommended to keep the surface temperature below 50℃.

Dimensions (mm) :