

# AL50-02A

433~435MHz, 902~928MHz 50W Dual band HPA

## General Description

The AL50-02A is a general dual band HPA module that have high linearity & gain performance. The module features a flat high gain with excellent current consumption.



## Applications

- Drone jammer
- Car-mount jammer
- Scientific measurement system
- EMC/EMI test

## Electrical Specification (ISM L1)

Parameter	Specification	Comment
Frequency	433 ~ 435MHz	
Output Power	47dBm	Psat
Gain Flatness	$\pm 1$ dB	Psat
Input Power for rated output power	0	Typ.
Input/Output Return Loss	-15dB	
Quiescent Current	0.8A	
Current Consumption	2.7A	Typ. @ 47dBm
Harmonic level	-45dBc	2nd @ 47dBm
	-70dBc	3rd @ 47dBm

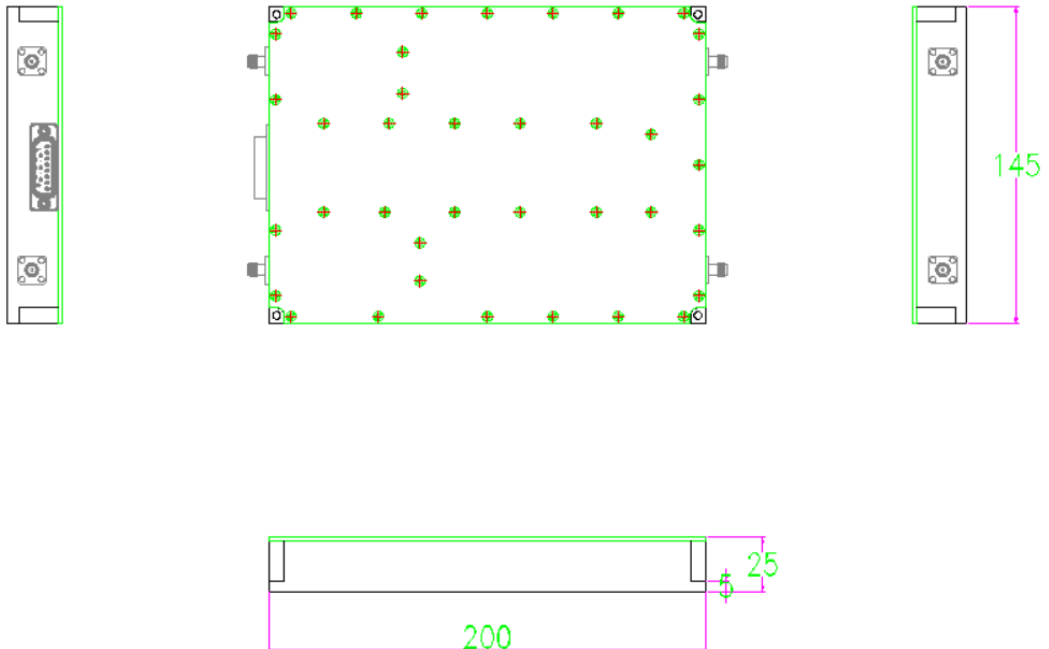
## Electrical Specification (ISM L2)

Parameter	Specification	Comment
Frequency	902 ~ 928MHz	
Output Power	47dBm	Psat
Gain Flatness	$\pm 1$ dB	Psat
Input Power for rated output power	0	Typ.
Input/Output Return Loss	-15 dB	
Quiescent Current	1.5A	
Current Consumption	5.5A	Typ. @ 47dBm
Harmonic level	-50dBc	2nd @ 47dBm
	-70dBc	3rd @ 47dBm

## Power / Data Connector, D-sub 15pin, Male

Pin	Specification	Comment
1	ISM L1 Shutdown	TTL Logic Low (0V)
2	2.03V <sub>DC</sub>	Current Monitor @ 25mW/100mA
3	0.80V <sub>DC</sub>	Temp. Out @ 10mV/°C+500mV
4	1.68V <sub>DC</sub> (ISM L1) 1.78V <sub>DC</sub> (ISM L2)	Forward Out @ 50mV/dB
9	ISM L2 Shutdown	TTL Logic Low (0V)
5,6,12,13	GND	
7,8,14,15	+28V	
10,11	N/C	

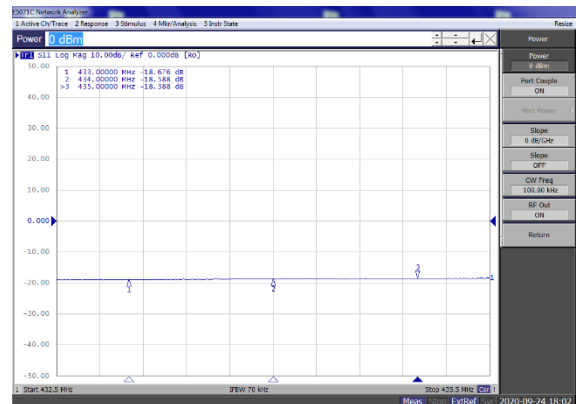
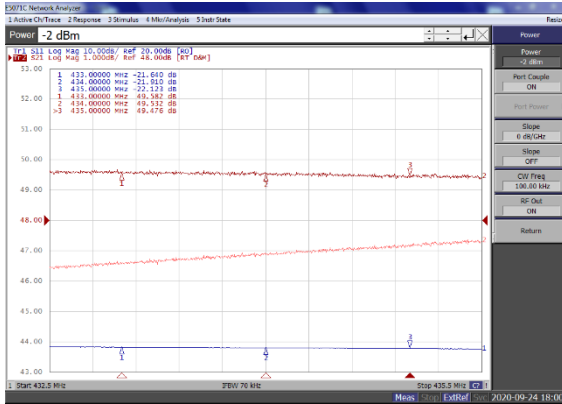
## Mechanical specification



### Performance Plot (433~435MHz : ISM L1)

Plot 1 - Small Signal and  $P_{SAT}$   
 Top Curve: Small Signal Gain @  $P_{IN} = -20dBm$   
 Middle Curve:  $P_{SAT}$  @  $P_{IN} = -2dBm$   
 Reference: 48dB, 1dB/div.  
 Bottom Curve: Input Return Loss  
 Reference: 10dB, 20dB/div.

Plots 2 – Output Return Loss  
 Curve: Output Return Loss @  $P_{IN} = 0dBm$   
 Reference: 10dB, 0dB/div.



### Performance Plot (902~928MHz : ISM L2)

Plot 3 - Small Signal and  $P_{SAT}$   
 Top Curve: Small Signal Gain @  $P_{IN} = -20dBm$   
 Middle Curve:  $P_{SAT}$  @  $P_{IN} = -1dBm$   
 Reference: 48dB, 1dB/div.  
 Bottom Curve: Input Return Loss  
 Reference: 10dB, 20dB/div.

Plots 4 – Output Return Loss  
 Curve: Output Return Loss @  $P_{IN} = 0dBm$   
 Reference: 10dB, 0dB/div.

