

0.5-43.5GHz Envelope Detector,

RF Input Power: -25 to +15dBm, 40dB Range



Product Overview

AT-DET-0043A is a broadband envelope detector with 0.5-43.5GHz input frequency and 40dB detect range. Input power range is from -25dBm to +15dBm. The envelope bandwidth is 40MHz.

The RF input port is 2.4mm female in default and 2.92mm connector is available according to request. Vout is SMA Female.

More information, please visit www.atmicrowave.com

Advantages

- ✓ Frequency: 0.5-43.5GHz
- ✓ RF Range: -25 to +15dBm
- ✓ Envelope Bandwidth: 40MHz
- ✓ Single Power Supply

Application

- ✓ 5G Communication
- ✓ Test Equipment
- ✓ ROF (RF Over Fiber)
- ✓ Radar System

Key Features

Parameter	Min	Typical	Max
Frequency		0.5-43.5GHz	
RF Detection Range		40dB	
Min Input Power		-25dBm	
Max Input Power		+15dBm	
Envelope Bandwidth		40MHz	
Nominal Input Impedance		50 Ohms	
RF Input Return Loss		-5dB	
Spec Temp		25C	





AT-DET-0043A

0.5-43.5GHz Envelope Detector

Mechanical Information

Item	Description
Input Port	2.4mm Female
Vout Port	SMA Female
DC Bias	PIN Solder
Case Material	Copper
Finish	Gold Plated
Weight (Without Heatsink)	90g
Size:	30x30x9.5 mm

Order Information

Part Number	Description
AT-DET-0043E	Input 2.4mm Female
AT-DET-0043E-29	Input 2.92mm Female

Absolute Maximum Ratings Table

Parameter	Value
Drain Supply	+13V
RF Input Power	+20 dBm
Operating Temperature	-20 to +70C
Storage Temperature	-65 to +150C

Caution:

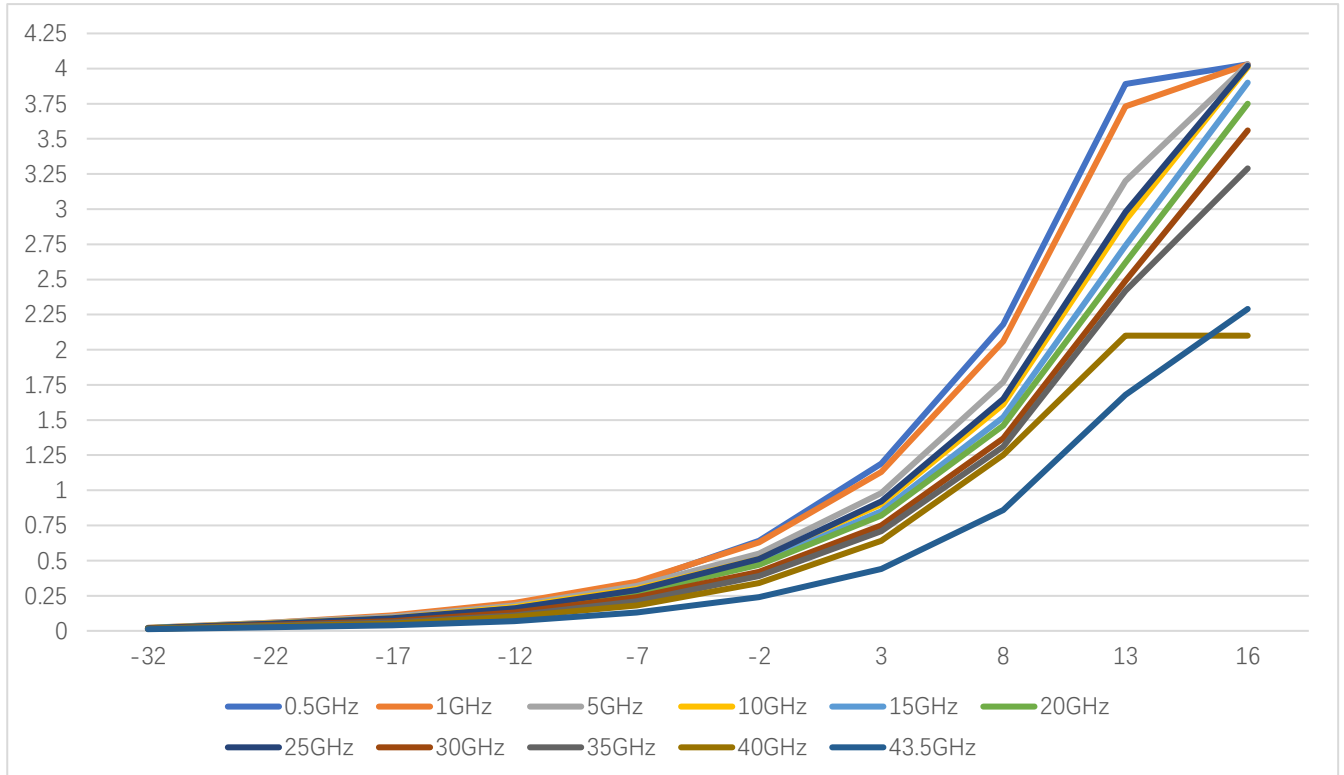
Please pay attention to the case temperature. If case temperature exceed higher than +50C, heat sink and fan are required, or the amplifier may be damaged.

Notes:

1. Datasheet may be changed according to update of MMIC, Raw materials , process, and so on.
2. This data is only for reference, not for guaranteed specifications.
3. Please contact AT Microwave team to make sure you have the most current data.



Test Data:



Detector Vout vs Pin at different frequencies

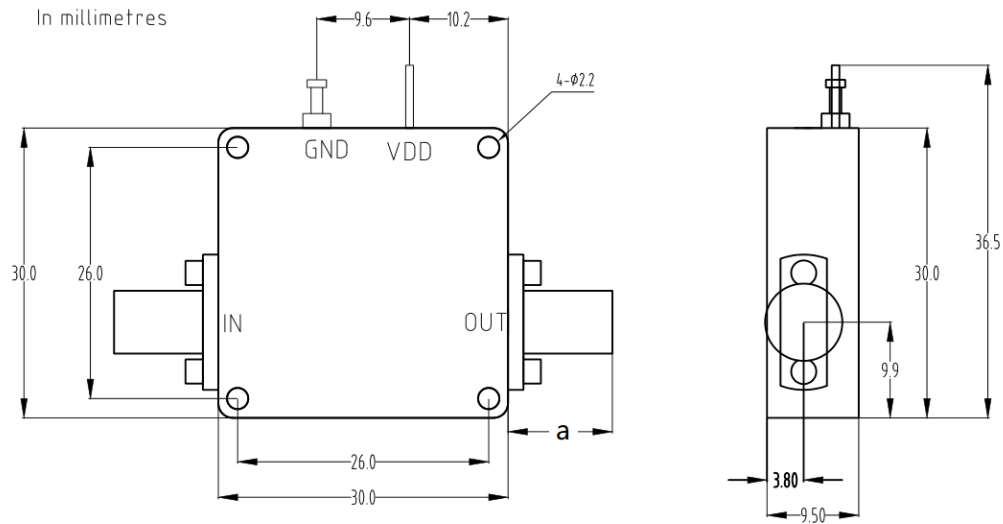
Vout vs Input Power in Table

(Note: Vout value will vary from different modules)

Pin	0.5GHz	1GHz	5GHz	10GHz	15GHz	20GHz	25GHz	30GHz	35GHz	40GHz	43.5GHz
-32	0.018	0.021	0.022	0.02	0.019	0.018	0.019	0.016	0.015	0.014	0.012
-22	0.046	0.058	0.058	0.053	0.049	0.048	0.05	0.042	0.037	0.032	0.025
-17	0.082	0.11	0.1	0.09	0.08	0.08	0.09	0.07	0.06	0.05	0.04
-12	0.17	0.2	0.18	0.17	0.16	0.15	0.16	0.13	0.11	0.1	0.07
-7	0.34	0.35	0.32	0.3	0.28	0.27	0.29	0.24	0.21	0.18	0.13
-2	0.64	0.63	0.55	0.51	0.48	0.47	0.51	0.42	0.39	0.34	0.24
3	1.19	1.13	0.98	0.9	0.85	0.82	0.92	0.75	0.71	0.64	0.44
8	2.18	2.06	1.77	1.61	1.52	1.46	1.65	1.37	1.31	1.25	0.86
13	3.89	3.73	3.2	2.92	2.74	2.62	2.98	2.49	2.42	2.1	1.68
16	4.03	4.03	4.03	4.01	3.9	3.75	4.02	3.56	3.29	2.1	2.29



Dimension: (unit in mm)



	<26.5GHz	<40GHz	<50GHz	<67GHz
Connector	SMA	2.92mm	2.4mm	1.85mm
Lenth of a	9.4mm	9.5mm	10.8mm	11.3mm

Note: Female Default. Contact with us for other types.

