



X-Band Doppler Motion sensor[®]

10.525Ghz ADR-01 Series

SPECIFICATION

작성	검토	팀장	영업	구매	Q.A	승인

X-Band Doppler Motion Sensor [ADR-01]

Datasheet Revision History

REV 0.0) 2018. 06. 16.

- 1) New release

X-Band Doppler Motion Sensor [ADR-01]

1 Description

ADR-01 is X-band (10.525Ghz) Doppler Motion sensor to detect motion . By adopting DRO oscillation method, stable oscillation characteristics are ensured and reliable motion detector implementation is provided..

2 General Specification

2.1 General Features

- X-Band (10.525Ghz) RF Motion sensor
- Reliable Oscillation stability (DRO : Dielectric resonator oscillator)
- High Sensitivity
- Low Radiated Power
- high Noise Immunity

2.2 Application

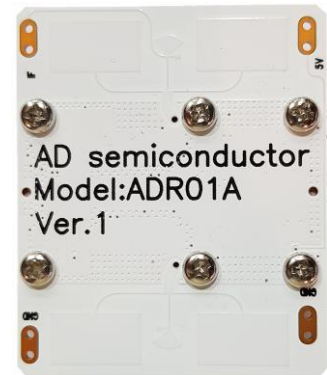
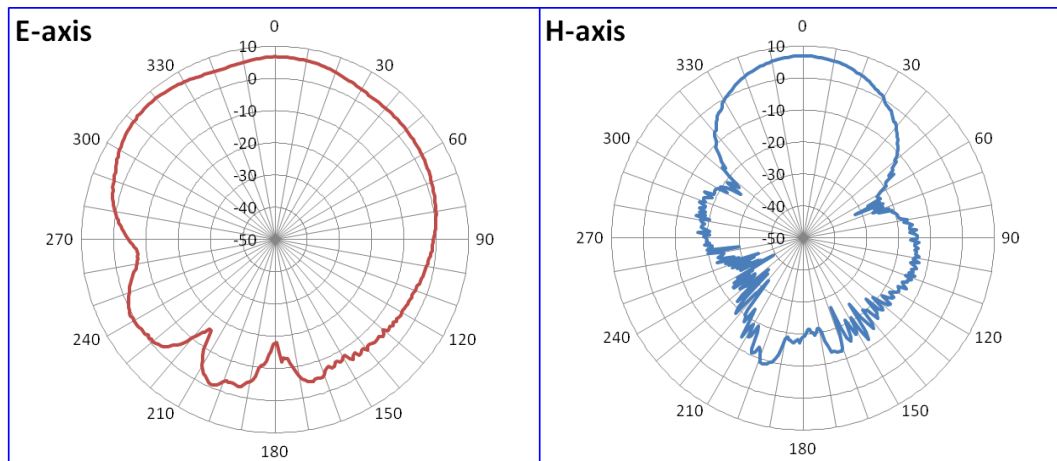
- Speed Measurement
- Power saved Lighting Control
- Security Alarm
- Automatic Door Control

3 Electrical Characteristics

3.1 Absolute Maximum Ratings

Supply voltage 5.5 V
Storage temperature - 15 ~ 55°C
Operating temperature -20 ~ 70°C

3.2 Antenna Beam Pattern



X-Band Doppler Motion Sensor [ADR-01]

3.3 Electrical Characteristics

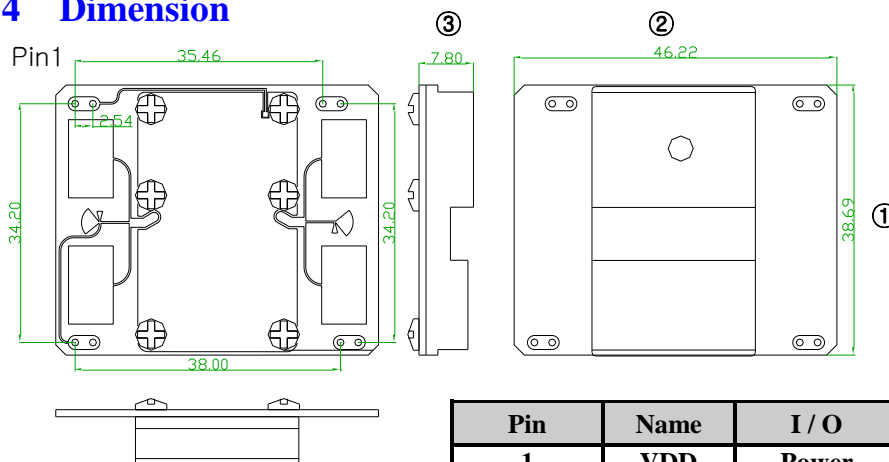
$V_{DD}=5.0V$ (Unless otherwise noted), $T_A = 25^\circ C$

Item		ADR-01A			ADR-01B			Unit
		Min	Typ.	Max	Min	Typ.	Max	
Operating Voltage		3.0	3.3	3.6	4.75	5	5.25	Vdc
Current Consumption	@ Vin 5.0V				20	30	40	mA
	@ Vin 3.3V	10	20	30				
TX	Frequency	10.50	10.525	10.55	10.50	10.525	10.55	GHz
	EIRP			14			14	dBm
	Spurious Emission			-30			-30	dBm
ANT	3dBm beam angle	X-plane	88			88		°
		Y-Plane	39			39		°
	Gain		7			7		dBi
IF	Received signal strength		160			130		mVpk-pk
	Noise			10			10	uVrms
Outline Dimension		38.7 x 46.2 x 7.8T			38.7 x 46.2 x 7.8T			mm
Operating Temp		-15		55	-15		55	°C

Note 1) The Received signal Strength is Measured at the total 2 ways Path Loss of 93dB.

Note 2) The Noise Voltages are measured from 10Hz to 100Hz at the output port ,inside an Anechoic chamber.

4 Dimension



Pin	Name	I / O
1	VDD	Power
2	IF	Output
3	GND	Ground
4	GND	Ground -

X-Band Doppler Motion Sensor [ADR-01]

LIFE SUPPORT POLICY

AD SEMICONDUCTOR'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE PRESIDENT AND GENERAL COUNSEL OF AD SEMICONDUCTOR CORPORATION

The ADS logo is a registered trademark of AD Semiconductor

© 2018 AD Semiconductor – All Rights Reserved

www.adsemicon.com

