

1. SMRD-24D

Microwave Radar Dual Sensor Module(SMRD)

Can be distinguished in the direction of the moving object approaches/ apart.

2. Specification

2.1 General Specification

- 1) Transmit Frequency range : 24.05GHz~24.25 GHz
- 2) Operating Frequency : 24.125 GHz typ.
- 3) Supply Voltage : 4.75V~ 5.25V

2.2 Ambient Conditions

- 1) Operating temperature : -20 ~ +60 °C
- 2) Humidity(operation) : 0~80% RH

2.3 Absolute Maximum Ratings :

Parameter	Symbol	Rating	Unit
supply voltage	Vcc	5.5	V
operating temperature(out of spec)	Top	-40 / +85	°C
storage temperature	Tstg	+90	°C

2.4 Electrical Characteristics

Parameter	Min.	Typ.	Max.	Unit	Comment
RF_Module					
Transmit Frequency	24.05	24.125	24.25	GHz	
Temperature Drift Freq.		-1		MHz/°C	
Output Power		16		dBm	
Supply Voltage		5		V	
Supply Current		30	40	mA	
I/Q Balance (Amplitude)			6	dB	
I/Q Balance (Phase)	60	90	120	° (deg)	
IF-Output*		2±0.35		V	
Operating Temperature	-20		60	°C	
Outline Dimension	~25 x 25 x 7			mm	
Antenna					
Antenna Pattern(-3dB)		80		° (deg)	Azimuth
		32		° (deg)	Elevation
Side Lobe		13		dB	Elevation

* IF Output is manufacturer's condition, it will be possible to customized.

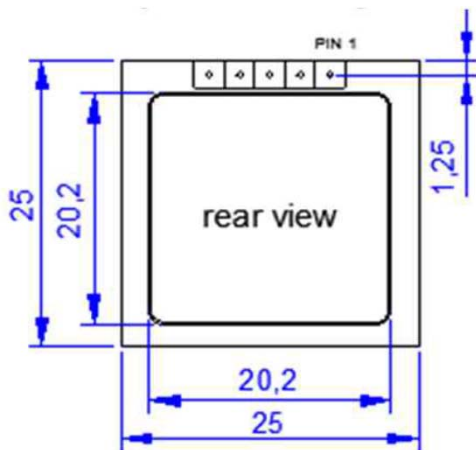
3. Interface

In/Out ports : 2.54mm pitch Pin-headers (Square pin □ 0.64mm)

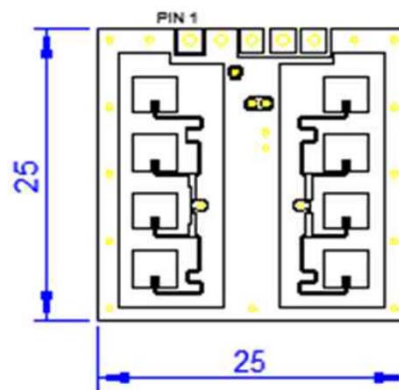
Pin #	Description	In/Out	Comment
1	NC		not connected
2	Vcc	input	supply voltage (+5 v)
3	IF1	output	signal 1 output
4	GND		GND
5	IF2	output	signal 2 output

4. Mechanical Outlines (unit : mm)

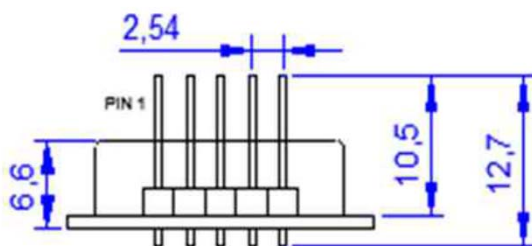
[Rear view]



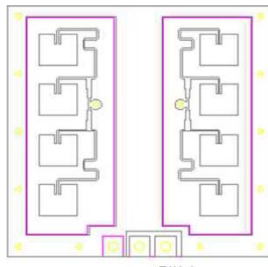
[Front view]



[Side view]



5. Antenna Pattern Description

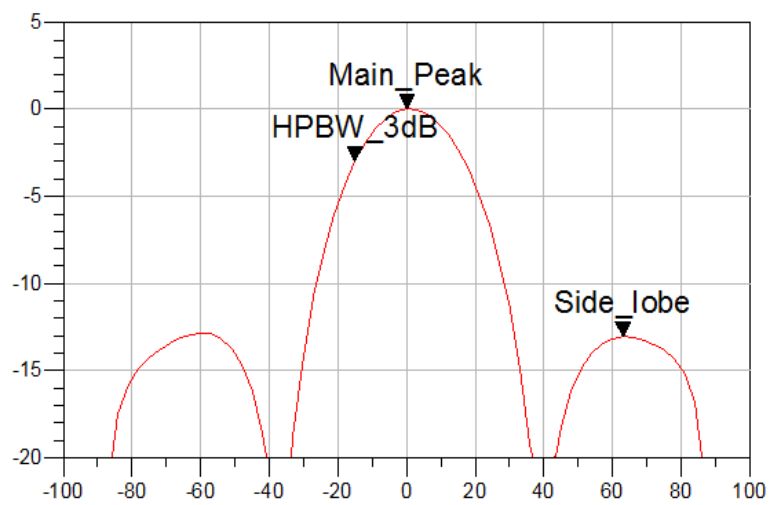


Vertical
Pattern Axis



Horizontal
Pattern Axis

[Vertical Pattern]

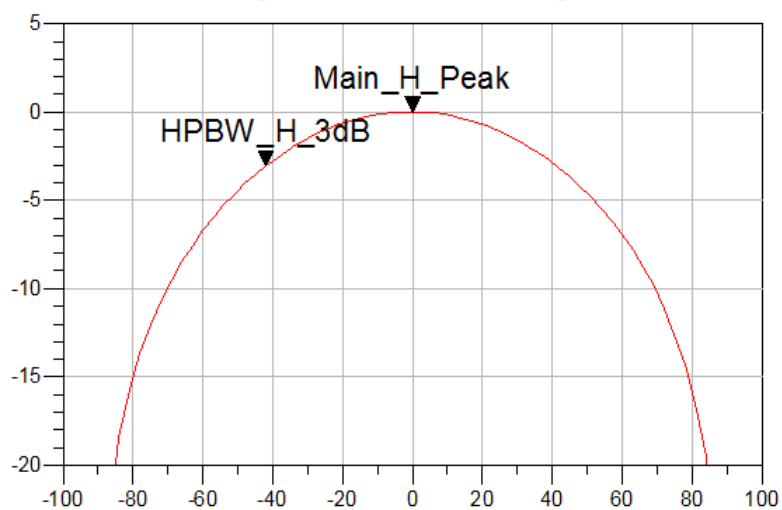


Main_Peak
Theta=-0.000
R_gain1=0.000
Peak

HPBW_3dB
Theta=-15.000
R_gain1=-3.014

Side_lobe
Theta=63.000
R_gain1=-13.079
Peak

[Horizontal Pattern]



Main_H_Peak
Theta=-0.000
R_gain1=0.000
Peak

HPBW_H_3dB
Theta=-42.000
R_gain1=-3.047