

1. SMRS-24VT

Ka-Band Vco radar transceiver(SMVT) for Finding movements.

1.1 Definition

SMRS-24VT is Microwave Radar Dual Sensor for 24.125GHz bands FMCW

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	
Tuning Voltage	0.5		10	V	
Tuning slope		30		MHz/V	
Output Power		16		dBm	
Supply Voltage		5		V	
Supply Current		40	60	mA	
I/Q Balance (Amplitude)			6	dB	
I/Q Balance (Phase)	60	90	120	° (deg)	
IF-Output* Operating Temperature		2		V	
	-20		60	°C	
Outline Dimension	44 x 30 x 8.5			mm	
Antenna					
Antenna Pattern(-3dB)		45		° (deg)	Azimuth
		30		° (deg)	Elevation
Side Lobe		13		dB	Az. / El.

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

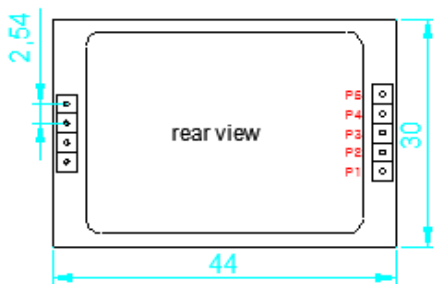
3. Interface

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

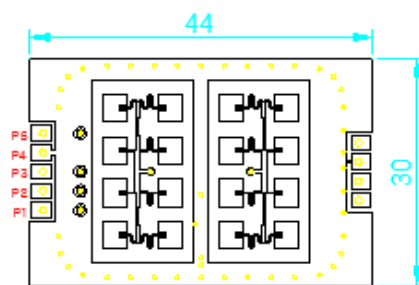
Pin #	Description	In/Out	Comment
1	Vtune		Freq. tuning Voltage
2	N.C	input	not connected
3	Vcc	output	supply voltage (+5 v)
4	GND		GND
5	IF1	output	signal 1 output
6	IF2	output	signal 2 output
7	GND	output	GND
8	GND	output	GND
9	N.C	output	not connected
10	N.C	output	not connected

4. Mechanical Outlines (unit : mm)

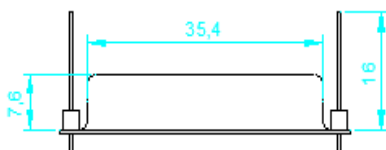
[Rear view]



[Front view]



[Side view]



5. Antenna Pattern Description

