

AP98

Ceiling-Mount K-band Microwave Sensor



Features:

- Small and flat profile
- Light weight
- CW and pulse mode operation
- Low current consumption

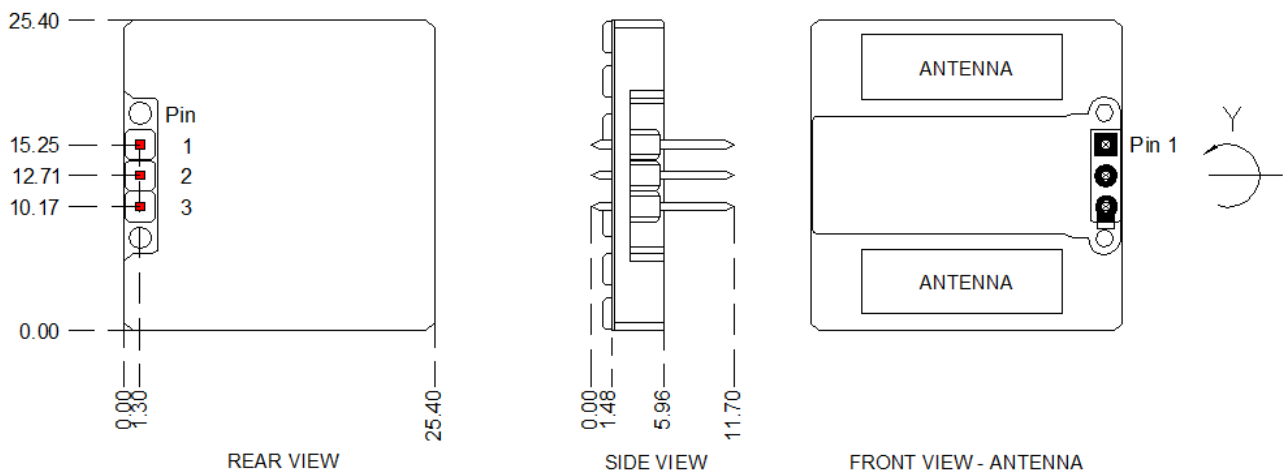
Applications:

- Lighting control
- Motion detection
- Security alarm
- Automatic door control

The AP98 series ceiling-mount K-band microwave sensor is a Doppler transceiver with a HEMT oscillator, a single balanced mixer and bi-static microstrip patch antennas. It is suitable for applications in lighting control, automatic access and security.

Its lightweight, miniature size and slim profile offer the flexibility to OEMs in making trendy and slim products.

Module Outline



All dimensions are in mm.

Pin	Name	Description
1	+V	Supply voltage, V_{IN}
2	IF	IF output
3	GND	Ground

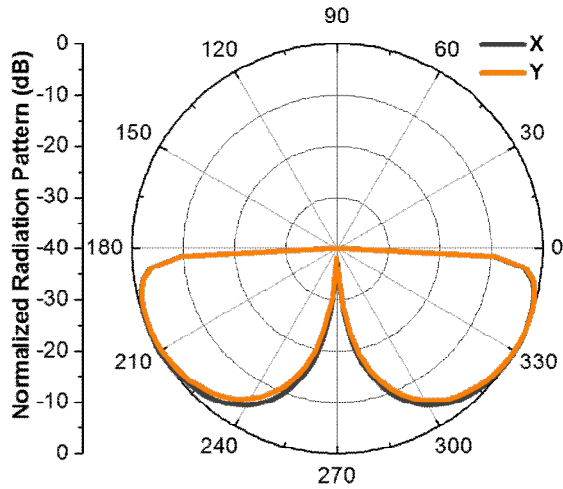
Note 1: Complies with EN 300 440.

Note 2: Complies with FCC Part 15.245.

Note 3: **CAUTION: ELECTROSTATIC SENSITIVE DEVICE.** Observe precautions for handling and storage.

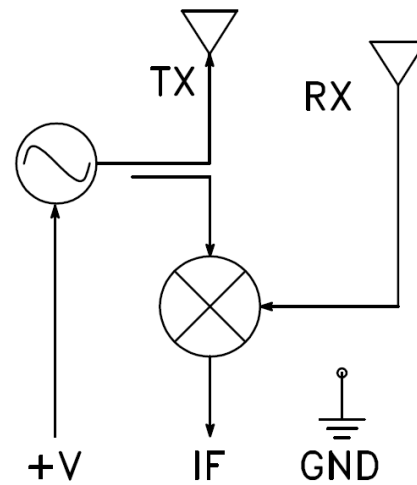


Antenna Beam Pattern



* Antenna beam pattern is based on simulations. Illustration assumes ceiling mounted sensor directed towards the ground.

Block Diagram



Technical Specifications

Unless noted otherwise, the specifications are measured in CW mode, $V_{IN} = +5 V_{DC}$ and 12 kohm load at +25°C.

Parameter	Remarks	Min	Typical	Max	Units
Operating Conditions					
Supply voltage, V_{IN}	AP98, AP98-1	4.75	5	5.25	V_{DC}
	AP98-3, AP98-4	2.85	3	3.15	V_{DC}
Current consumption			30	40	mA
Operating temperature		-20		60	°C
Recommended Pulse Scheme					
Pulse frequency	Pulse mode		2		KHz
Duty cycle	Pulse mode		2		%
Transmitter					
Operating frequency	AP98, AP98-3	24.000	24.125	24.250	GHz
	AP98-1, AP98-4	24.150	24.200	24.250	GHz
Radiated power (EIRP)			15		dBm
Spurious emission				-30	dBm
Frequency drift vs temperature			-1		MHz/°C
Physical Properties					
Dimension			25.4×25.4×11.7		mm
Weight			2		g