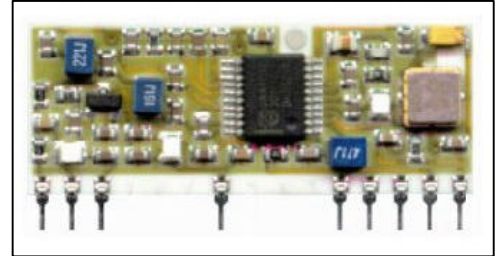




FM SIL RECEIVER MODULE

FM-RRF1

- Compact Hybrid Module
- Very High Frequency Stability (With No Adjustable Components).
- Receiving Range up to 250 Metres.
- CMOS/TTL Compatible Output.
- Low Current Consumption (Typ 5.5mA)
- Single Supply Voltage 5V.
- Compatible with R.F. Solutions FM Transmitters.
- Available as 315, or 433MHz
- Compliant To ETSI 300-220.
- Requires No Radio Licence to Operate.



Description

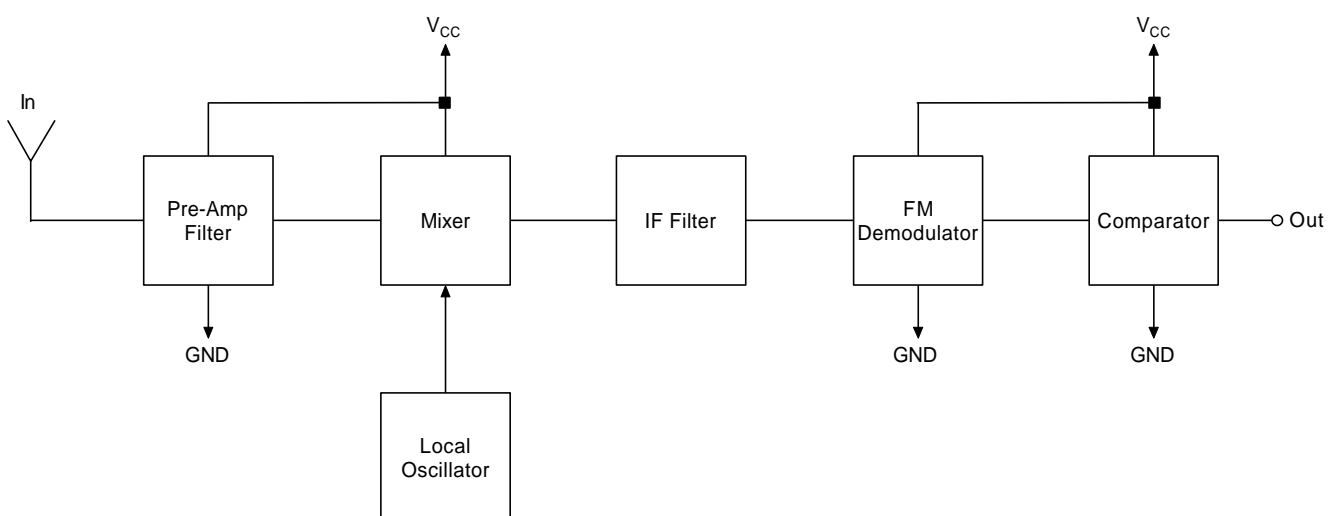
The R F Solutions Ltd. FM hybrid receiver module provides a complete RF receiver which can be used to receive data at up to 9.6Kbps.

The module is very simple to operate and offers low current consumption (typ. 5.5 mA). The TTL/CMOS data output can be interfaced directly to a microprocessor or decoding device, thus keeping the component count down and ensuring a low hardware cost.

The module exhibits extremely stable electronic characteristics due to the use of 'Thick-Film' hybrid technology, which uses no adjustable components and ensures very reliable operation.

The module is compatible with R F solutions Ltd. range of FM transmitters to provide a complete solution.

Block Diagram

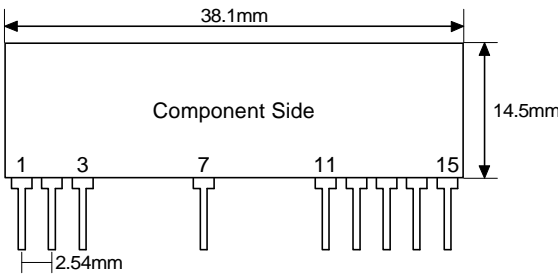




FM SIL RECEIVER MODULE

FM-RRF1

Mechanical Dimensions

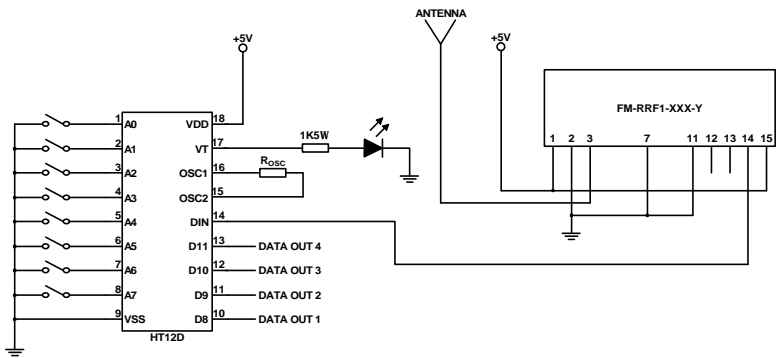


Pin Dimentions :
0.25mm x 0.50mm

Pin Description

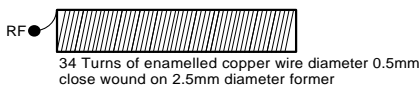
Pin Number	Name	Description
1	Vcc	Supply Voltage
2	GND	Ground, Connect to RF earth return path
3	IN	External Antenna
7	GND	Ground, Connect to RF earth return path
11	GND	Ground, Connect to RF earth return path
12	NC	No Connection
13	NC	No Connection
14	OUT	Data output
15	Vcc	Supply Voltage

Typical Application

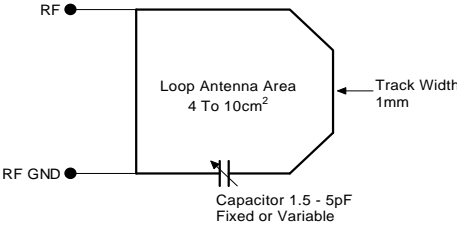


Antenna Configuration

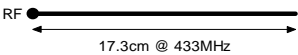
Helical Coil Antenna



Loop Antenna



Whip Antenna





FM SIL RECEIVER MODULE

FM-RRF1

Technical Specifications

Electrical Characteristics	Min	Typical	Max	Dimension	Note
Supply Voltage	3.5	5	5.5	Vdc	
Supply Current		5.5		mA	
RF Sensitivity	A version: 2.4 Kbps B version: 4.8 Kbps C version: 9.6 Kbps	-94 -90 -87		dBm	
Frequency Deviation		±25		KHz	
-3dB Bandwidth		±400		KHz	
Level of Emitted Spectrum		-70	-65	dBm	
Low-Level Output Voltage			0.6	V	
High-Level Output Voltage	Vcc-0.5			V	
Output Current (Source)			10	uA	1
Time from Power on to data output valid			50	MSecs	
Digital Data output Rise time			10	USecs	1
Operating Temperature	-25		+80	°C	

Notes

1. If excess current is drawn from the output pin this will increase the max rise time.

Part Numbering

Part Number	Description
FM-RRF1-315A**	FM Receiver Module 2.4Kbps 315MHz
FM-RRF1-315B**	FM Receiver Module 4.8Kbps 315MHz
FM-RRF1-315C**	FM Receiver Module 9.6Kbps 315MHz
FM-RRF1-433A	FM Receiver Module 2.4Kbps 433MHz
FM-RRF1-433B	FM Receiver Module 4.8Kbps 433MHz
FM-RRF1-433C	FM Receiver Module 9.6Kbps 433MHz

** Future Part

For more information or general enquiries, please contact our official UK distributor;

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**Unit 21, Cliffe Industrial Estate,
South Street,
Lewes,
E Sussex, BN8 6JL. England**

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Email sales@rfsolutions.co.uk

<http://www.rfsolutions.co.uk>

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