



- 50% smaller than standard hybrid modules.
- Standard Frequencies; 315, 433MHz
- Frequencies Available: 300-450MHz
- Very High Frequency Stability (No Adjustable Components).
- Receiving Range Up To 50 Metres.
- CMOS/TTL Compatible Output.
- Compatible With R.F. Solutions AM Transmitters.
- Patented Laser Trimmed Inductor.
- Compliant To ETSI300-220.
- Requires No Radio Licence To Operate.



## Description

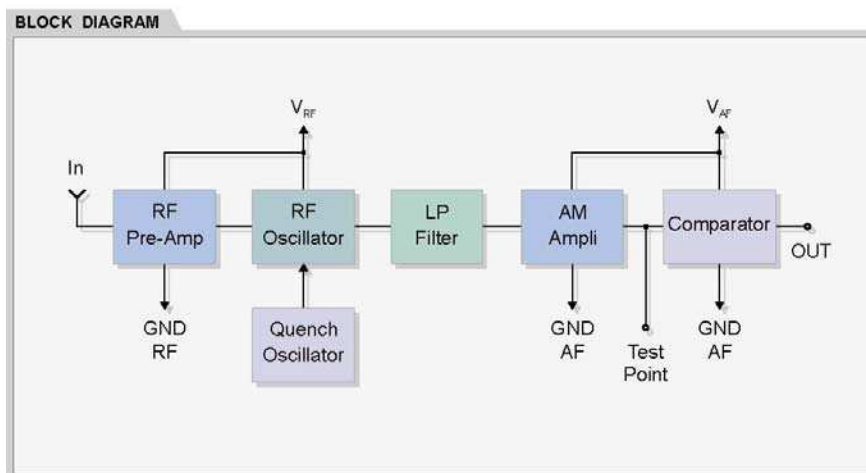
The R.F. Solutions Miniature AM 'Super Regen' Receiver module is an extremely compact hybrid RF receiver, which can be used to capture undecoded data from any AM Transmitter, such as R.F. Solutions AM-RT4 / 5 range of transmitters. (See AM Transmitter datasheet DS013).

These modules show a very high frequency stability over a wide operating temperature even when subjected to mechanical vibrations or manual handling. A unique laser trimming process which has been patented gives a very accurate on board inductor, removing the need for any adjustable components.

All receivers are compatible, producing a CMOS/TTL output, and require connections to power and antenna only.

RF Solutions also offer a range of Super Heterodyne Receivers, for data on these products (please see Datasheet DS017).

## Block Diagram



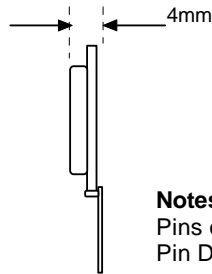
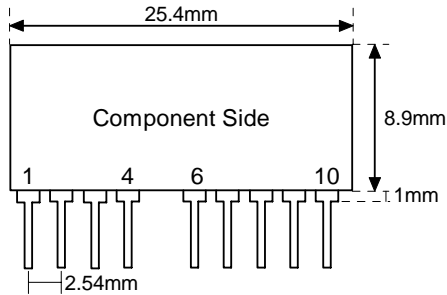
## Part Numbers

The following modules are available from stock although any frequency between 300-450MHz is available upon request.

Part Number	Description
<b>AM-HRR30-433</b>	Compact Hybrid Receiver Module, 433MHz
<b>AM-HRR60-433</b>	Compact Hybrid Receiver Module, 433MHz



**Mechanical Details**



**Notes**  
 Pins on 0.1" pitch  
 Pin Dims :0.25 x 0.50mm

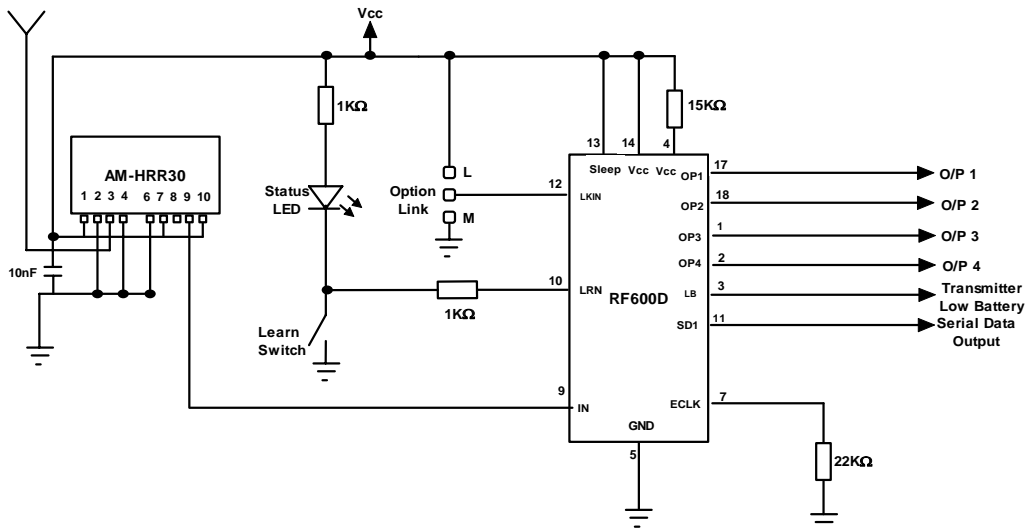
Pin	Pin Name
1	RF +Vcc
2	RF GND
3	DATA IN (Ant)
4	RF GND
6	AF GND
7	AF +VCC
8	TEST POINT
9	DATA OUT
10	AF +VCC

**Electrical Characteristics**

Ambient temperature = 25° Celsius.

<b>ELECTRICAL CHARACTERISTICS</b>	<b>MIN</b>	<b>TYPICAL</b>	<b>MAX</b>	<b>DIMENSION</b>
Operating Temperature Range	-25		+80	°C
Tuning Tolerance		± 0.2	± 0.5	MHz
Receiver Frequency (315 MHz versions)		315		MHz
Receiver Frequency (433 MHz versions)		433.92		MHz
Supply Voltage	4.5	5	5.5	V
Supply Current		2.5	3	mA
Data Rate	50		4800	bits/Sec
R.F Sensitivity 100% AM	-100	-105		dBm
-3dB Bandwidth		± 2	± 3	MHz
Conducted Spurious Emissions			-60	dBm
High Level Output Voltage	3.6			V
Low Level Output Voltage			0.6	V

**Application Circuit**



For further information on this circuit please see datasheet DS600

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