

Miniature AM Super-Regen Receiver

Features

- 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

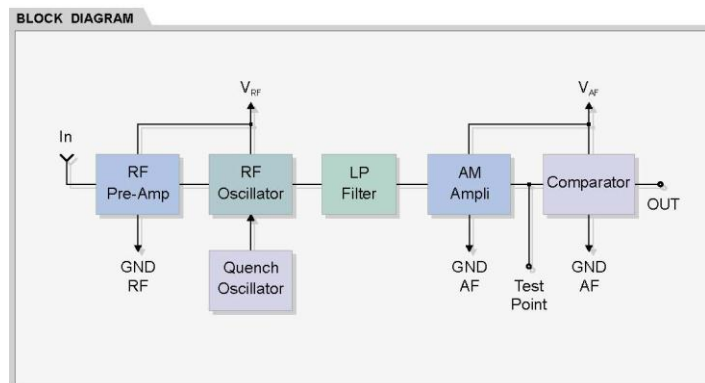
The R.F. Solutions Miniature AM 'Super Regen' Receiver module is an extremely compact hybrid RF receiver, which can be used to capture undecoded data from any AM Transmitter, such as R.F. Solutions AM-RT4 / 5 range of transmitters. (See AM Transmitter datasheet DS013).

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

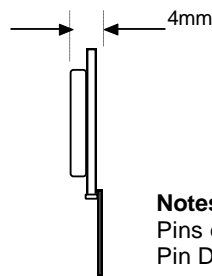
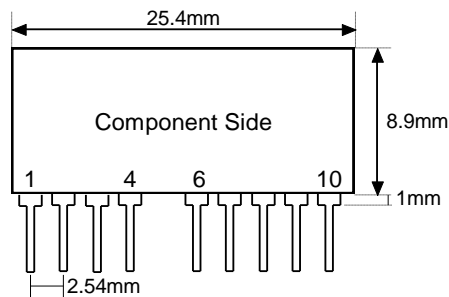


Part Numbers

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

Part Number	Description
AM-HRR30-433	Compact Hybrid Receiver Module, 433MHz
AM-HRR60-433	Compact Hybrid Receiver Module, 433MHz

Mechanical Details



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

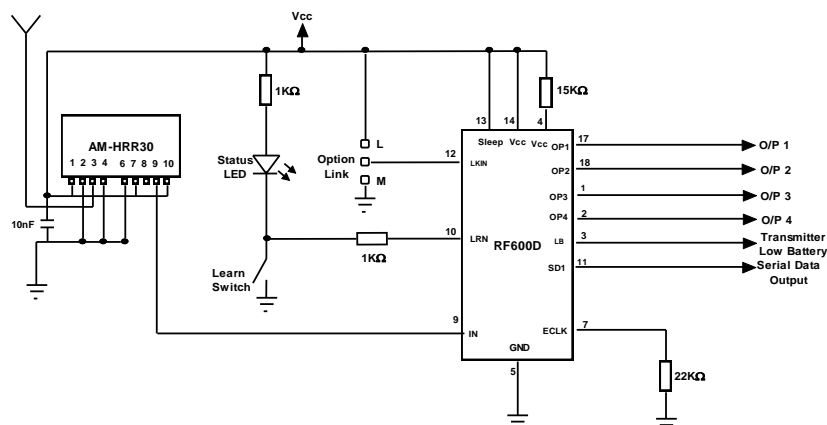
Pin	Pin Name
1	RF +Vcc
2	RF GND
3	DATA IN (Ant)
4	RF GND
6	AF GND
7	AF +VCC
8	TEST POINT
9	DATA OUT
10	AF +VCC

Electrical Characteristics

Ambient temperature = 25° Celsius

ELECTRICAL CHARACTERISTICS	MIN	TYPICAL	MAX	DIMENSION
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			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



RF Solutions Ltd. Recycling Notice

Meets the following EC Directives:

DO NOT

Discard with normal waste, please recycle.



ROHS Directive 2002/95/EC

Specifies certain limits for hazardous substances.



WEEE Directive 2002/96/EC

Waste electrical & electronic equipment. This product must be disposed of through a licensed WEEE collection point. RF Solutions Ltd., fulfills its WEEE obligations by membership of an approved compliance scheme.

Disclaimer:

Whilst the information in this document is believed to be correct at the time of issue, RF Solutions Ltd does not accept any liability whatsoever for its accuracy, adequacy or completeness. No express or implied warranty or representation is given relating to the information contained in this document. RF Solutions Ltd reserves the right to make changes and improvements to the product(s) described herein without notice. Buyers and other users should determine for themselves the suitability of any such information or products for their own particular requirements or specification(s). RF Solutions Ltd shall not be liable for any loss or damage caused as a result of user's own determination of how to deploy or use RF Solutions Ltd's products. Use of RF Solutions Ltd products or components in life support and/or safety applications is not authorised except with express written approval. No licences are created, implicitly or otherwise, under any of RF Solutions Ltd's intellectual property rights. Liability for loss or damage resulting or caused by reliance on the information contained herein or from the use of the product (including liability resulting from negligence or where RF Solutions Ltd was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict RF Solutions Ltd's liability for death or personal injury resulting from its negligence.

Waste Batteries and Accumulators Directive 2006/66/EC

Where batteries are fitted, before recycling the product, the batteries must be removed and disposed of at a licensed collection point.

Environment Agency producer registration number:
WEE/JB0104WV.