



AM-RRQ3-433 AM PLL Synthesized Receiver Module

(Replaces the AM-RRS3-433 Receiver Module as a pin compatible drop in replacement)



Features

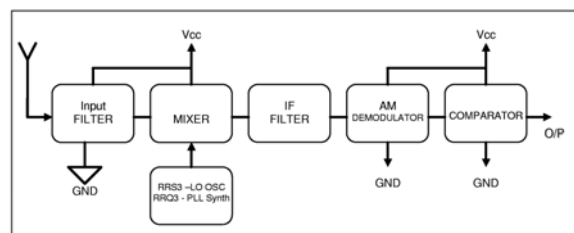
- Compact hybrid module
- Ceramic substrate
- Very high frequency and temperature stability
- PLL synthesized front end
- Operating Temperature: -25°C to +85°C
- Sensitivity typically -107dBm
- CMOS/TTL compatible output
- Single supply voltage 5V
- Compatible with ABACOM Technologies AM transmitters.
- ETSI 300-220 compliant

Description

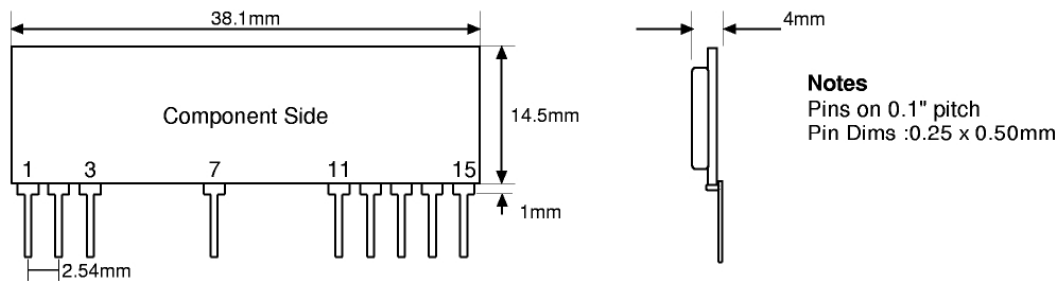
The AM-RRQ3-433 AM Superheterodyne PLL Receiver module offers a compact modular RF receiver, which can be used to capture undecoded data from any of ABACOM Technologies 433MHz AM Transmitter modules, such as AM-RT4, AM-RT5, ATX-433-IA, AM-TXHP and the AM-TX1.

The receiver is manufactured on a ceramic substrate and incorporates a PLL synthesized front end for maximum sensitivity and reduced EMC emissions. These modules offer a very cost effective receiver considering their performance which exhibits very high frequency stability over a wide operating temperature even when subjected to mechanical vibrations or manual handling

Block Diagram



Mechanical Dimensions



Pin Assignment

Pin Number	Pin Name
1	+Vcc
2	GND
3	DATA IN (Antenna)
7	GND
11	GND
12	NC
13	Test Point
14	DATA OUT
15	PD (Power Down input) 0 = Standby Mode (Istandby100nA max) 5V = Normal Operation



Electrical Characteristics				
Ambient temperature = 25°C.				
	Min	Typical	Max	Dimension
Supply Voltage (Vcc)	4.5	5	5.5	V
Supply Current		5	6	mA
Receiver Frequency 315MHz variants		315		MHz
Receiver Frequency 433MHz variants		433.92		MHz
Receiver Frequency 868MHz variants		868.35		MHz
Low Level Output Voltage			0.8	V
High Level Output Voltage	Vcc-1			V
Operating Temperature Range	-25		+80	°C
R.F Sensitivity (100% AM)		-107		dBm
3dB Bandwidth		+/-200		KHz
Max Data Rate			4.8	KHz
Level of Emitted Spectrum			-70	dBm

Antenna

Suitable manufactured antenna such as the 1/4-433-BNC, the HEL-433-BNC and the 1/4-433-STD molded "rubber duck" are available from ABACOM Technologies. For prototyping and even for production, a length of solid core insulated wire (eg. 22 guage) cut to 1/4 wavelength of the operating frequency (16.5cm @ 433MHz) works well. In this case, the antenna should be attached as close to the antenna pin as possible. Any PCB trace length from the antenna joint to the antenna pin of the module should be factored into the length. In all cases, the antenna should be provided with as much free space around it as possible and should be pointing vertically.

Disclaimer:

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