

RR4-XXX

Super Regenerative Radio Receiver With Laser Trimmed Inductor and Cascode Input Stage

General description

The RR4-XXX is a super regenerative data receiver.

Sensitivity typically exceeds -100dBm ($2.2\mu\text{Vrms}$) when matched to 50ohm .

Emission level: -70 dBm typ (Cascode Input)

$-3\text{dB Bandwidth: } \pm 1.5\text{ MHz typ}$

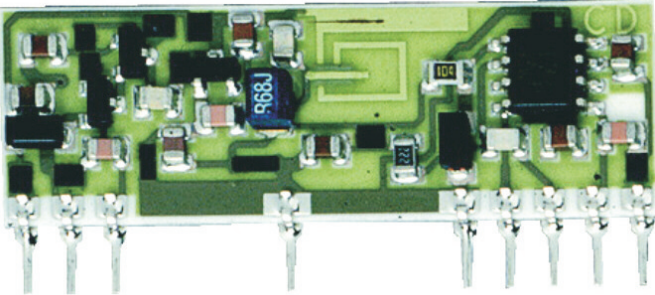
It shows high frequency stability also in presence of mechanical vibrations, manual handling and in a wide range of temperature.

The frequency accuracy is very high thanks to laser trimming process. **PATENTED.**

I-ETS 300 220 Compliance (RR4-433.92)

Applications

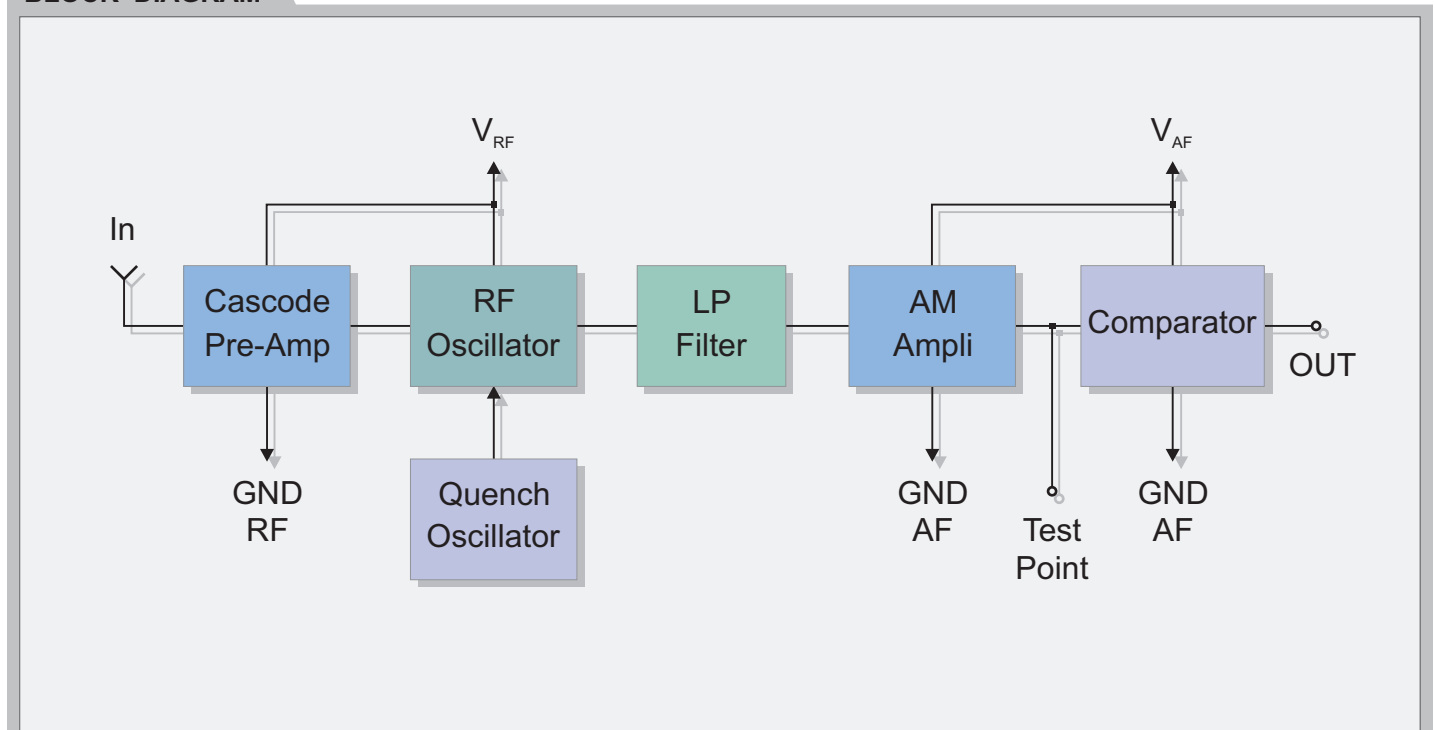
- Home security systems
- Car Alarm systems
- Remote gate controls
- Sensor reporting



XXX: custom-specified working frequency
 ($200 \div 450\text{ MHz}$)

Standard European and U.S. frequencies (315MHz , 418MHz , 433.92MHz) are readily available from stock.

BLOCK DIAGRAM



Electrical Characteristics

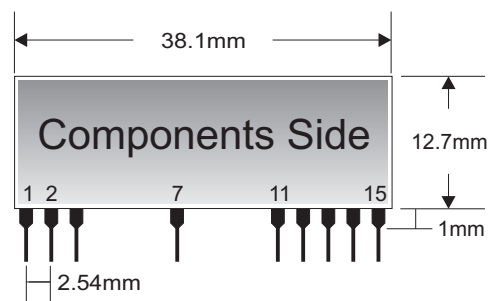
Ta = 25°C unless otherwise specified

CHARACTERISTICS		MIN	TYP	MAX	UNIT
V _{RF}	RF Supply Voltage	4.5	5	5.5	VDC
V _{AF}	AF Supply Voltage	4.5	5	5.5	VDC
I _S	Supply Current		2.5	3	mA
F _W	Working Frequency	200		450	MHz
	Tuning Tolerance		±0.2	±0.5	MHz
B _W	-3dB Bandwidth		±1.5	±2	MHz
	Max Data Rate			4.8	Kbit/s
	RF Sensitivity (100% AM)	-100	-105		dBm
	Level of Emitted Spectrum		-70	-65	dBm
V _{ol}	Low-Level Output Voltage			0.6	V
V _{oh}	High-Level Output Voltage	3.6			V
T _{OP}	Operating Temperature Range	-25		+80	°C

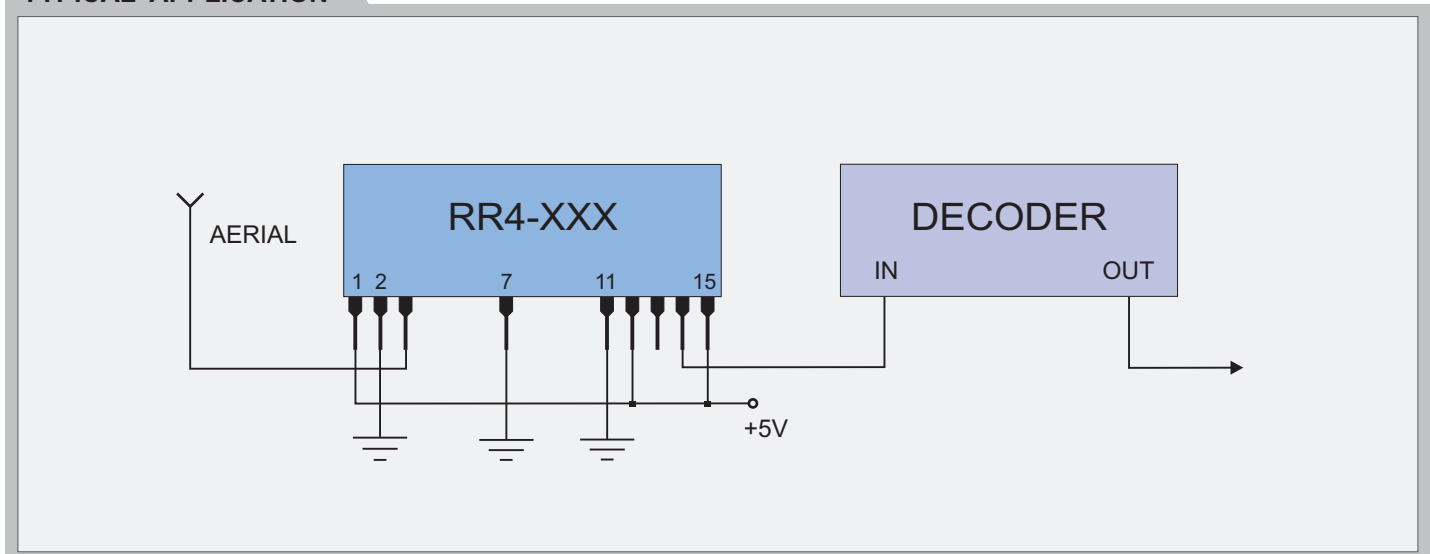
Pin Description

1	RF +V _{CC}	9	NC
2	RF GND	10	NC
3	IN	11	AF GND
4	NC	12	AF +V _{CC}
5	NC	13	Test Point
6	NC	14	OUT
7	RF GND	15	AF +V _{CC}
8	NC		

Mechanical Dimensions



TYPICAL APPLICATION



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