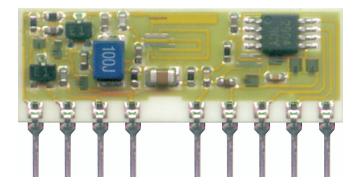


Radio Receiver

RR30-XXX

Super Regenerative Radio Receiver With Laser Trimmed Inductor



General description

Very small super regenerative data receiver: dimensions are 50% smaller than RR3 model.

Designed for application with space constrains.

Sensitivity typically exceedes -100dBm (2.2uVrms) when matched to 50 ohm.

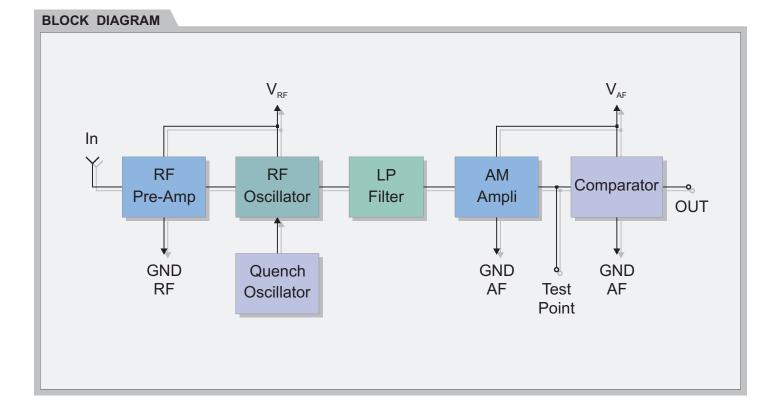
It shows high frequency stability also in presence of mechanical vibrations, manual handling and in a wide range of temperature.

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

XXX: custom-specified working frequency (300 ÷ 450 MHz)

Applications

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



Electrical Characteristics

Ta = 25°C unless otherwise specified

CHARACTERISTICSMINTYPMAXUNIT V_{RF} RF Supply Voltage4.555.5VDC V_{AF} AF Supply Voltage4.555.5VDC I_s Supply Current4.52.53mA F_w Working Frequency300450MHzTuning Tolerance10.2±0.2±0.5MHz B_w -3dB Bandwidth1±2±3MHzMax Data Rate100-1054.8Kbit/sLevel of Emitted Spectrum-100-65-60dBm V_{ol} Low-Level Output Voltage110.6V							
V_AFAF Supply Voltage4.55VDCI_sSupply CurrentC2.53mAF_wWorking Frequency300450MHzTuning Tolerance11<0.210.5MHzB_w-3dB Bandwidth1<213MHzMax Data RateI100140.5Kbit/sRF Sensitivity (100% AM)-100-105-60dBm		CHARACTERISTICS	MIN	TYP	MAX	UNIT	
IsSupply Current2.53mAFwWorking Frequency300450MHzTuning Tolerance1111Bw-3dB Bandwidth1111Max Data Rate11111RF Sensitivity (100% AM)-100-105-60dBm	V_{RF}	RF Supply Voltage	4.5	5	5.5	VDC	
FwWorking Frequency300450MHzTuning Tolerance±0.2±0.5MHzBw-3dB Bandwidth1±2±3MHzMax Data Rate-10014.8Kbit/sRF Sensitivity (100% AM)-100-105dBmLevel of Emitted Spectrum-65-60dBm	V_{AF}	AF Supply Voltage	4.5	5	5.5	VDC	
Tuning Tolerance±0.2±0.5MHzBw-3dB Bandwidth±2±3MHzMax Data RateImage: Max Data RateImage: Max Data RateImage: Max Data RateMax Data RateImage: Max Data RateMax Data RateImage: Max Data RateImage: M	l _s	Supply Current		2.5	3	mA	
Bw -3dB Bandwidth ±2 ±3 MHz Max Data Rate - 4.8 Kbit/s RF Sensitivity (100% AM) -100 -105 dBm Level of Emitted Spectrum -65 -60 dBm	F_{w}	Working Frequency	300		450	MHz	
Max Data Rate-100-1054.8Kbit/sRF Sensitivity (100% AM)-100-105dBmLevel of Emitted Spectrum-65-60dBm		Tuning Tolerance		±0.2	±0.5	MHz	
RF Sensitivity (100% AM) -100 -105 dBm Level of Emitted Spectrum -65 -60 dBm	B _w	-3dB Bandwidth		±2	±3	MHz	
Level of Emitted Spectrum -65 -60 dBm		Max Data Rate			4.8	Kbit/s	
		RF Sensitivity (100% AM)	-100	-105		dBm	
Vol Low-Level Output Voltage 0.6 V		Level of Emitted Spectrum		-65	-60	dBm	
	$V_{\rm ol}$	Low-Level Output Voltage			0.6	V	
V _{oh} High-Level Output Voltage 3.6 V	V_{oh}	High-Level Output Voltage	3.6			V	
T _{OP} Operating Temperature Range -25 +80 °C	T _{op}	Operating Temperature Range	-25		+80	°C	

Pin Description

- 1 RF +V_{cc}
- 2 RF GND
- 3 IN
- 4 RF GND
- 6 AF GND
- 7 AF +V_{cc}
- 8 Test Point
- 9 OUT
- 10 AF +V_{cc}

TYPICAL APPLICATION

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Mechanical Dimensions

