








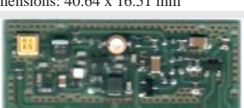



*Remote Control  
and  
Security Systems  
Hybrids*








- AM / ASK Super Regenerative Receivers*
- AM / ASK Radio Transmitters - SAW Controlled*
- AM / ASK Superhet Receivers - SAW Controlled*
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## ASK Super Regenerative Receivers

MODEL	DESCRIPTION	Vdc Is	Sensitivity	Frequency (XXX)	-3dB BW	Turn on Time	
<b>RR1-XXX</b> Fixed Frequency Super Regenerative Radio Receiver	Custom-specified working frequency range: 200 to 450 MHz	5V 2.5mA	-103 dBm	315 418 433.92 MHz	+/- 2 MHz	< 1.2 sec	 Dimensions: 38.1 x 12.7 mm
<b>RR3-XXX</b> Laser Trimmed Inductor Super Regenerative Radio Receiver	Frequency tuning by laser trimmed coil <b>I-ETS 300-220 Compliance</b> <b>FCC 15/C Compliance</b>	5V 2.5mA	-103 dBm	315 418 433.92 MHz	+/- 2 MHz	< 1.2 sec	 Dimensions: 38.1 x 12.7 mm
<b>RR4-XXX</b> Cascode Input Stage Super Regenerative Radio Receiver	Frequency tuning by laser trimmed coil Low level of emitted spectrum <b>I-ETS 300-220 Compliance</b>	5V 2.5mA	-105 dBm	315 418 433.92 MHz	+/- 1.5 MHz	< 2 sec	 Dimensions: 38.1 x 12.7 mm
<b>RR6-XXX</b> Very Low Consumption Super Regenerative Radio Receiver	Frequency tuning by laser trimmed coil Very low current consumption Fast turn on time <b>I-ETS 300-220 Compliance</b> <b>FCC 15/C Compliance</b>	5V 0.5mA	-95 dBm	315 418 433.92 MHz	+/- 1.5 MHz	< 150 msec	 Dimensions: 38.1 x 12.7 mm
<b>RR8-XXX</b> 3V Supply Voltage Super Regenerative Radio Receiver	Frequency tuning by laser trimmed coil Very low current consumption 3V supply voltage <b>I-ETS 300-220 Compliance</b>	3V 0.5mA	-90 dBm	315 418 433.92 MHz	+/- 1.5 MHz	< 150 msec	 Dimensions: 38.1 x 12.7 mm
<b>RR10-XXX</b> Narrow Bandwidth Super Regenerative Radio Receiver	Frequency tuning by laser trimmed coil Low current consumption Narrow bandwidth <b>I-ETS 300-220 Compliance</b>	5V 1.2mA	-102 dBm	315 418 433.92 MHz	+/- 1.2 MHz	< 1.2 sec	 Dimensions: 38.1 x 12.7 mm
<b>RR11-XXX</b> Very Low Consumption Super Regenerative Radio Receiver	Frequency tuning by laser trimmed coil Very low current consumption Fast turn on time	5V 0.3mA	-95 dBm	315 418 433.92 MHz	+/- 1.5 MHz	< 150 msec	 Dimensions: 38.1 x 12.7 mm
<b>RR13-868</b> 868.35 MHz Super Regenerative Radio Receiver	Frequency tuning by laser trimmed capacitor Very low current consumption Fast turn on time	5V 0.5mA	-90 dBm	868.35 MHz	+/- 2 MHz	< 150 msec	 Dimensions: 33.02 x 12.7 mm
<b>RR16-XXX</b> Super Regen. Radio Receiver - Front End SAW Filter	RX with saw front-end filter to reduce RF Bandwidth EMI immunity improved by a metal shield <b>I-ETS 300-220 Compliance</b>	5V 4.0mA	-102 dBm	433.92 MHz	+/- 250 KHz		 Dimensions: 40.64 x 16.51 mm
<b>RR18-XXX</b> Very Low Consumption Super Regen. Radio Receiver - Front End SAW Filter	RX with saw front-end filter to reduce RF Bandwidth 70uA current consumption EMI immunity improved by a metal shield	3V 70uA	-96 dBm	433.92 MHz	+/- 300 KHz		 Dimensions: 40.13 x 16.51 mm
<b>RR30-XXX</b> Laser Trimmed Inductor Super Regenerative Radio Receiver	Frequency tuning by laser trimmed coil 50% smaller than RR3 model	5V 2.5mA	-103 dBm	433.92 MHz	+/- 2 MHz	< 1.2 sec	 Dimensions: 25.4 x 8.9 mm





Note:

The RR.. receivers family can be utilized with all transmitters of RT.. series.




ASK Radio Transmitters							
MODEL	DESCRIPTION	Vdc	Is	Frequency (XXX)	Po	Data Rate	
<b>RT4-XXX</b> Radio Transmitter Module with SAW Resonator and External Antenna	Very small thick film DIL RF transmitter module with SAW controlled oscillator and external antenna.  <b>I-ETS 300-220 Compliance</b>	2 - 14 V	4 mA	315 418 433.92 MHz	+7 dBm	9.6 Kbit/s	 Dimensions: 17.78 x 10.16 mm
<b>RT5-XXX</b> Radio Transmitter Module with SAW Resonator and External Antenna	Very small thick film SIL RF transmitter module with SAW controlled oscillator and external antenna.  <b>I-ETS 300-220 Compliance</b>	2 - 14 V	4 mA	315 418 433.92 MHz	+7 dBm	9.6 Kbit/s	 Dimensions: 17.8 x 11.4 mm
<b>RT6-XXX</b> Radio Transmitter Module with SAW Resonator and External Antenna	Thick film SIL RF transmitter module with SAW controlled oscillator and external antenna.	3 - 14 V	7 mA	315 418 433.92 MHz	+7 dBm	9.6 Kbit/s	 Dimensions: 38.1 x 12.2 mm
<b>RT8-868</b> Radio Transmitter Module with SAW Resonator and External Antenna	Thick film SIL RF transmitter module with SAW controlled oscillator and external antenna.	3 - 14 V	12 mA	868.35 MHz	+7 dBm	9.6 Kbit/s	 Dimensions: 35.6 x 11.4 mm
<b>RT11-XXX</b> Radio Transmitter Module with SAW Resonator and External Antenna	Two-stages radio transmitter module (SAW oscillator + power amplifier).	2 - 6 V	8 mA	433.92 MHz	+12 dBm	9.6 Kbit/s	 Dimensions: 25.4 x 11.43 mm

Note:

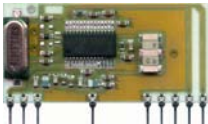

RT4 .. RT6, RT11 transmitters family can be utilized with all receivers of RR.. and RRQ.. series.  
RT8 transmitter can be utilized with RR13 receiver.

ASK Superhet Receivers - Crystal Controlled							
MODEL	DESCRIPTION	Vdc Is	Sensitivity	Frequency (XXX)	-3dB BW	Data Rate	
<b>RRQ3-XXX</b> AM Superhet Receiver	ASK Superhet data receiver with PLL and crystal oscillator Squelch circuit integrated <b>I-ETS 300-220 Compliance</b>	5V 5mA	-107 -107 -103 dBm	315 433.92 868.35 MHz	+/- 150 KHz	4.8 Kbit/s	 Dimensions: 38.1 x 14.5 mm
<b>RRQ4-XXX-V</b> AM Superhet Receiver	ASK Superhet data receiver with PLL and crystal oscillator Squelch circuit integrated 50dB RF Image Rejection 3.3V or 5V Supply Voltage	3.3 / 5V 6mA	-107 -107 dBm	315 433.92 MHz	+/- 150 KHz	4.8 Kbit/s	 Dimensions: 38.1 x 14.5 mm
<b>RRQ5-XXX-S</b> AM Superhet Receiver	ASK Superhet data receiver with Front End SAW Filter.  Optional Metal Shield.	5V 6mA	-110 dBm	433.92 MHz	+/- 150 KHz	4.8 Kbit/s	 Dimensions: 40.64 x 18.29 mm
<b>RRQ6-XXX</b> AM Superhet Receiver	ASK Superhet data receiver with crystal oscillator. Output monostable circuit to restore pulses integrity.	5V 5mA	-107 -107 -103 dBm	315 433.92 868.35 MHz	+/- 150 KHz	2.4 Kbit/s	 Dimensions: 38.1 x 14.5 mm

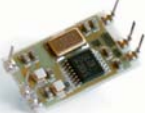



## ASK Radio Transmitters - Crystal Controlled

MODEL	DESCRIPTION	Vdc	Is	Frequency (XXX)	Po	Data Rate	
<b>RTQ1-XXX</b> Radio Transmitter Module with Crystal Oscillator and External Antenna	Very small thick film DIL RF transmitter module with crystal oscillator and external antenna. <b>I-ETS 300-220 Compliance</b>	2.1 - 4 V	7 mA	315 433.92 868.35 MHz	+5 +5 +1 dBm	9.6 Kbit/s	 Dimensions: 20.32 x 11.43 mm
<b>RTQ4-XXX</b> ASK Radio Transmitter with Crystal Oscillator and External Antenna	Very small thick film DIL ASK Radio Transmitter Module. Pin-out compatible with RT4 Module.	1.9 - 5.5 V	9 mA	868.35 MHz	+7 dBm	9.6 Kbit/s	 Dimensions: 17.78 x 10.16 mm
<b>RTQ6-XXX</b> ASK Radio Transmitter with Crystal Oscillator and External Antenna	Very small thick film DIL ASK Radio Transmitter Module. Pin-out compatible with RTQ1 Module.	1.9 - 5.5 V	9 mA	868.35 MHz	+7 dBm	9.6 Kbit/s	 Dimensions: 20.32 x 10.16 mm



## FSK Superhet Receivers - Crystal Controlled

MODEL	DESCRIPTION	Vdc Is	Sensitivity	Frequency (XXX)	-3dB BW	Data Rate	
<b>RRFQ1-XXX</b> FSK Superhet Receiver	FSK Superhet data receiver with PLL and crystal oscillator Available Frequency: 315, 433.9, 868.35 MHz <b>I-ETS 300-220 Compliance</b>	5V 5.7mA	-102 dBm	315 433.92 868.35 MHz	+/- 150 KHz	4.8 Kbit/s	 Dimensions: 38.1 x 18.3 mm
<b>RRFQ2-XXX</b> FSK Superhet Receiver	FSK Superhet data receiver with PLL and crystal oscillator Available Frequency: 315, 433.9, 868.35 MHz	5V 5.7mA	-102 dBm	315 433.92 868.35 MHz	+/- 150 KHz	4.8 Kbit/s	 Dimensions: 45.72 x 16.5 mm



## FSK Radio Transmitters - Crystal Controlled

MODEL	DESCRIPTION	Vdc	Is	Frequency (XXX)	Po	Data Rate	
<b>RTFQ1-XXX</b> FSK Radio Transmitter Module with Crystal Oscillator and External Antenna	Very small thick film DIL RF transmitter module with SAW controlled oscillator and external antenna <b>I-ETS 300-220 Compliance</b>	2.2 - 4 V	7 mA	315 433.92 868.35 MHz	+5 +5 +1 dBm	9.6 Kbit/s	 Dimensions: 20.32 x 11.43 mm
<b>RTFQ2-XXX</b> FSK Radio Transmitter Module with Crystal Oscillator and External Antenna	Very small thick film SIL RF transmitter module with SAW controlled oscillator and external antenna <b>I-ETS 300-220 Compliance</b>	2.5 - 12 V	7 mA	315 433.92 868.35 MHz	+5 +5 +1 dBm	9.6 Kbit/s	 Dimensions: 30.48 x 10.67 mm
<b>RTFQ4-XXX</b> FSK Radio Transmitter with Crystal Oscillator and External Antenna	Very small thick film DIL FSK Radio Transmitter Module. Pin-out compatible with RT4 Module.	1.9 - 5.5 V	9 mA	868.35 MHz	+7 dBm	9.6 Kbit/s	 Dimensions: 17.78 x 10.16 mm
<b>RTFQ6-XXX</b> FSK Radio Transmitter with Crystal Oscillator and External Antenna	Very small thick film DIL FSK Radio Transmitter Module. Pin-out compatible with RTFQ1 Module.	1.9 - 5.5 V	9 mA	868.35 MHz	+7 dBm	9.6 Kbit/s	 Dimensions: 20.32 x 10.16 mm

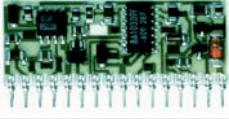

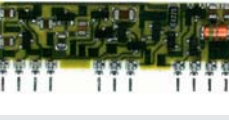
## FSK Radio Transceivers - Crystal Controlled

MODEL	DESCRIPTION	Vdc	Is	Frequency (XXX)	Sens / Po	Data Rate	
<b>RXQ1-433.9</b> Dual Band RF Transceiver	Half duplex radio transceiver module with two RF channels selectable by external pin. <b>I-ETS 300-220 Compliance</b>	2.7 - 5.25 V	12 (RX) 26 (TX) mA	433.92 434.33 MHz	-100 / +5 dBm	20 Kbit/s	 Dimensions: 30.48 x 22.86 mm
<b>RXQ2-XXX</b> Multichannel RF Transceiver	Multichannel radio transceiver module with embedded microcontroller. Available Frequency: 433.9, 868.35 MHz	1.9 - 3.6 V	12 (RX) 30 (TX) mA	433.92 868.35 MHz	-100 / +10 dBm	up to 38.4 Kbit/s	 Dimensions: 20.32 x 22.86 mm

## Ultrasonic Transmitter / Receivers

MODEL	DESCRIPTION	Vdc	Is	Frequency	Gain	Out sink current	
<b>UTR2</b> Ultrasonic Transmitter Receiver	Thick Film hybrid circuit that allows to realize an ultrasonic detector adding few external components.	9 - 16 V	15 mA	40 KHz	50 dB	20 mA	 Dimensions: 38.8 x 17.0 mm
<b>UTR3</b> Ultrasonic Transmitter Receiver	Thick Film hybrid circuit that allows to realize an ultrasonic detector adding few external components.	9 - 16 5 V	2 3 mA	40 KHz	50 dB	1 mA	 Dimensions: 38.8 x 17.0 mm

## Infrared Devices

MODEL	DESCRIPTION	Vdc	Is	Amplifier bandwidth	Gain	Out sink current	
<b>PID1</b> Passive Infrared Detector	Thick Film hybrid circuit that allows to realize a passive infrared detector adding few external components.	9 - 16 V	5 mA	1 - 10 Hz	70 dB	20 mA	 Dimensions: 40.6 x 15.2 mm
<b>IRT1</b> Infrared Pulse Transmitter	Thick Film hybrid circuit that allows to realize an infrared barrier when utilized with an infrared pulse detector (IRD1).	9 V	35 mA		pulse frequency 400 Hz		 Dimensions: 12.7 x 16.9 mm
<b>IRD1</b> Infrared Pulse Detector	Thick Film hybrid circuit that allows to realize an infrared barrier when utilized with an infrared pulse transmitter (IRT1).	12 / 24 V	3 mA		pulse frequency 400 Hz	20 mA	 Dimensions: 38.1 x 10.9 mm

SF-v14



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