



Home & Building Automation

Industrial Automation

Security Systems

Sensor Reporting

Telemetry

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Power

Radio Receivers


Radio Transmitters

Radio Transceivers

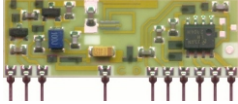

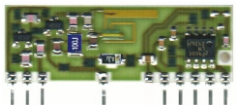
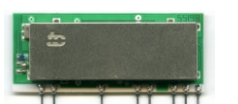
Keeloq Encoders / Decoders

Thick Film Sensors

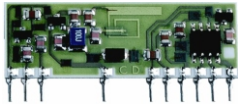
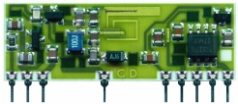
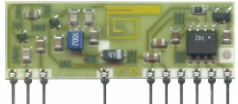
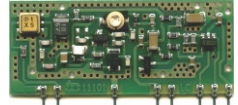
AM Super Regenerative Receivers - Very Small Dimensions - Ultra Low Cost

MODEL	DESCRIPTION	Vdc Is	Sensitivity	Frequency (XXX)	-3dB BW	Turn on Time	Coating	
RR40-HP-LC Laser Trimmed Inductor	Frequency tuning by laser trimmed coil 50% smaller than RR3 model MOQ = 10.000 pieces per year	5V 2.5mA	-103 dBm	315 433.92 MHz	+/- 2 MHz	< 1.2 sec	Y (see note)	 <p>NEW</p> <p>Dimensions: 25.4 x 8.9 mm</p>



AM Super Regenerative Receivers

RR3-XXX Laser Trimmed Inductor	Frequency tuning by laser trimmed coil XXX also : 224.5 & 403.5 Mhz I-ETS 300-220 Compliance FCC 15/C Compliance	5V 2.5mA	-103 dBm	315 418 433.92 MHz	+/- 2 MHz	< 1.2 sec	Y (see note)	 <p>Dimensions: 38.1 x 12.7 mm</p>
RR4-XXX Cascode Input Stage	Frequency tuning by laser trimmed coil Low level of emitted spectrum I-ETS 300-220 Compliance	5V 2.5mA	-105 dBm	315 418 433.92 MHz	+/- 1.5 MHz	< 2 sec	Y (see note)	 <p>Dimensions: 38.1 x 12.7 mm</p>
RR10-XXX Narrow Bandwidth	Frequency tuning by laser trimmed coil Low current consumption Narrow bandwidth I-ETS 300-220 Compliance	5V 1.2mA	-102 dBm	315 418 433.92 MHz	+/- 1.2 MHz	< 1.2 sec	Y (see note)	 <p>Dimensions: 38.1 x 12.7 mm</p>
RR19-433 Front End SAW Filter	RX with saw front-end filter to reduce RF Bandwidth EMI immunity improved by a metal shield	5V 3.0mA	-103 dBm	433.92 MHz	+/- 300 KHz		N	 <p>Dimensions: 40.64 x 16.51 mm</p>

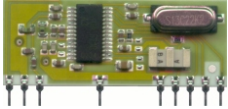
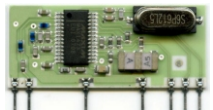
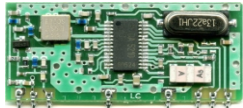
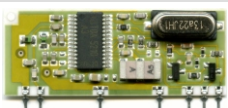

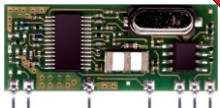

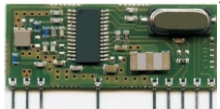
AM Super Regenerative Receivers - Low Consumption

RR6-XXX Very Low Consumption	Frequency tuning by laser trimmed coil Very low current consumption Fast turn on time I-ETS 300-220 Compliance FCC 15/C Compliance	5V 0.5mA	-95 dBm	315 418 433.92 MHz	+/- 1.5 MHz	< 150 msec	Y (see note)	 <p>Dimensions: 38.1 x 12.7 mm</p>
RR8-XXX 3V Supply Voltage	Frequency tuning by laser trimmed coil Very low current consumption 3V supply voltage I-ETS 300-220 Compliance	3V 0.5mA	-90 dBm	315 418 433.92 MHz	+/- 1.5 MHz	< 150 msec	Y (see note)	 <p>Dimensions: 38.1 x 12.7 mm</p>
RR11-XXX Very Low Consumption	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	Y (see note)	 <p>Dimensions: 38.1 x 12.7 mm</p>
RR18-XXX Very Low Consumption Front End SAW Filter	RX with saw front-end filter 70uA current consumption EMI immunity improved by a metal shield (RR18-XXX-S) I-ETS 300-220 Compliance	3V 70uA	-96 dBm	433.92 MHz	+/- 300 KHz		N	 <p>Dimensions: 40.13 x 16.51 mm</p>

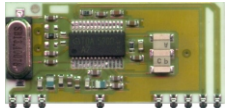
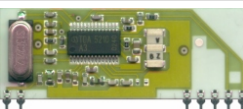
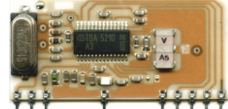
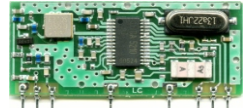
AM Super Regenerative Receivers - Very Small Dimensions

RR30-XXX Laser Trimmed Inductor	Frequency tuning by laser trimmed coil 50% smaller than RR3 model	5V 2.5mA	-103 dBm	315 433.92 MHz	+/- 2 MHz	< 1.2 sec	Y (see note)	 <p>Dimensions: 25.4 x 8.9 mm</p>
RR80-XXX 3V Supply Voltage	Frequency tuning by laser trimmed coil Very low current consumption 3V supply voltage 50% smaller than RR8 model	3V 0.5mA	-90 dBm	315 418 433.92 MHz	+/- 1.5 MHz	< 150 msec	Y (see note)	 <p>Dimensions: 27.94 x 8.9 mm</p>


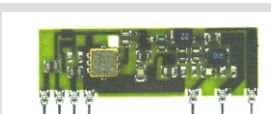
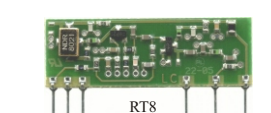
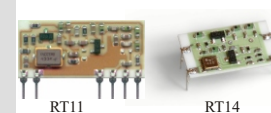

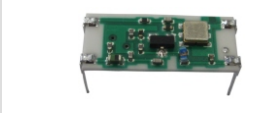
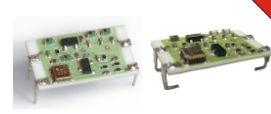
ASK Superhet - Crystal Controlled Receivers

MODEL	DESCRIPTION	Vdc Is	Sensitivity	Frequency (XXX)	-3dB BW	Data Rate	Coating	
RRQ3-XXX AM Superhet Receiver	- ASK Superhet data receiver with PLL - Squelch circuit integrated - Optional Metal Shield (RRQ3-XXX-S) - XXX also 434.5, 868.30, 868.95 MHz I-ETS 300-220 Compliance	5V 5mA	-107 -107 -103 dBm	315 433.92 868.35 915 MHz	+/- 150 KHz	4.8 Kbit/s	Y (see note)	 Dimensions: 38.1 x 14.5 mm
RRQ4-XXX-V AM Superhet Receiver	- ASK Superhet data receiver with PLL - 50dB RF Image Rejection - 3.3V or 5V Supply Voltage I-ETS 300-220 Compliance	3.3 / 5V 6mA	-107 -107 dBm	315 433.92 MHz	+/- 150 KHz	4.8 Kbit/s	Y (see note)	 Dimensions: 35.56 x 14.5 mm
RRQ5-XXX AM Superhet Receiver	- ASK Superhet data receiver with PLL - Front End SAW Filter. - High Sensitivity - Optional Metal Shield (RRQ5-XXX-S)	5V 6mA	-110 dBm	433.92 868.35 MHz	+/- 150 KHz	4.8 Kbit/s	N	 Dimensions: 40.64 x 18.29 mm
RRQ6-XXX AM Superhet Receiver	- ASK Superhet data receiver with PLL - Output monostable circuit to restore impulses integrity.	5V 5mA	-107 -107 -103 dBm	315 433.92 868.35 MHz	+/- 150 KHz	2.4 Kbit/s	Y (see note)	 Dimensions: 38.1 x 14.5 mm
RRQ7-XXX AM Superhet Receiver	- ASK Superhet data receiver with PLL - Squelch circuit integrated - XXX also 868.95 MHz - DIL Package	5V 5mA	-107 -107 -103 dBm	315 433.92 868.35 MHz	+/- 150 KHz	4.8 Kbit/s	N	 Dimensions: 22.86 x 12.7 mm
RRQ8-XXX AM Superhet Receiver	- ASK Superhet data receiver with Output Noise Filter - Ideal for the application that needs high immunity to noise generated by electrical brushes motor.	3V/5V 7.5mA	-113 dBm	433.92 MHz	+/- 150 KHz	4.8 Kbit/s	N	 Dimensions: 36.5 x 14.5 mm NEW
RRQ8S-XXX AM Superhet Receiver CLASS 2 CE MARKED	- ASK Superhet data receiver with Front End SAW Filter and Output Noise Filter - Ideal for the application that needs high immunity to noise generated by electrical brushes motor.	3V/5V 7.5mA	-113 dBm	433.92 MHz	+/- 150 KHz	4.8 Kbit/s	N	 Dimensions: 36.5 x 14.5 mm NEW
RRQ9-XXX AM Superhet Receiver	- ASK Superhet data receiver with Crystal Oscillator and SAW Filter input. - Squelch circuit integrated - XXX also 433.42 Pin to pin compatible with RRO3	5V 5mA	-107 -107 -103 dBm	315 433.92 868.35 MHz	720 KHz	4.8 Kbit/s	N	 Dimensions: 38.1 x 14.5 mm NEW

FSK Superhet - Crystal Controlled Receivers




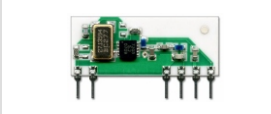

MODEL	DESCRIPTION	Vdc Is	Sensitivity	Frequency (XXX)	-3dB BW	Data Rate	Coating	
RRFQ1-XXX FSK Superhet Receiver	FSK Superhet data receiver with PLL - XXX also 434.42, 920 MHz I-ETS 300-220 Compliance	5V 5.7mA	-102 dBm	315 433.92 868.35 915 MHz	+/- 150 KHz	4.8 Kbit/s	Y (see note)	 Dimensions: 38.1 x 18.3 mm
RRFQ2-XXX FSK Superhet Receiver	FSK Superhet data receiver with PLL and crystal oscillator Radiometrix Pinout	5V 5.7mA	-102 dBm	315 433.92 868.35 MHz	+/- 150 KHz	4.8 Kbit/s	N	 Dimensions: 45.72 x 16.5 mm
RRFQ3-XXX ASK / FSK Superhet Receiver	Dual Mode ASK / FSK Superhet data receiver with PLL	5V 5.7mA	-102 dBm	315 433.92 868.35 MHz	+/- 150 KHz	10 Kbit/s	N	 Dimensions: 38.1 x 18.3 mm
RRFQ5-XXX FSK Superhet Receiver	FSK Superhet data receiver with Front End SAW Filter. Optional Metal Shield (RRFQ5-XXX-S)	5V 5.7mA	-105 dBm	433.92 868.35 MHz	+/- 150 KHz	4.8 Kbit/s	N	 Dimensions: 40.64 x 18.29 mm

ASK Radio Transmitters - SAW Resonator

MODEL	DESCRIPTION	Vdc	Is	Frequency (XXX)	Po	Data Rate	Coating	
RT4-XXX (*) RT5-XXX ASK Transmitter	Very small thick film ASK Radio transmitter modules XXX also 434.42 Mhz Rt4- available also SMT version I-ETS 300-220 Compliance	2 - 14 V	4 mA	315 418 433.92 MHz	+7 dBm	9.6 Kbit/s	N	 RT4 17.8 x 10.2 mm RT5 17.8 x 11.4 mm
RT6-XXX ASK Transmitter	Thick film SIL ASK Radio transmitter module	3 - 14 V	7 mA	315 418 433.92 MHz	+7 dBm	9.6 Kbit/s	Y (see note)	 Dimensions: 38.1 x 12.2 mm
RT8-868 RT13-868 ASK Transmitter	Thick film SIL ASK Radio transmitter modules RT13: pinout compatible with Rt11 module	3 - 14 V	12 mA	868.35 MHz	+7 dBm	9.6 Kbit/s	N	 Dimensions: 35.6 x 11.4 mm
RT11-XXX RT14-XXX ASK Transmitter	Two-stages ASK radio transmitter module (SAW oscillator + power amplifier). RT14: pinout compatible with Rt4 Rt14- available also SMT version I-ETS 300-220 Compliance	2 - 9 V	8 mA	315 433.92 MHz	+12 dBm	9.6 Kbit/s	Y (see note)	 RT11 25.4 x 11.4 mm RT14 17.8 x 10.2 mm
RT15-868 ASK Transmitter	ASK Radio Transmitter at 868.35 TWO-stages (SAW oscillator + power amplifier) .Power Output +5 dBm @ 3V and +10 dBm @ 6V . RT15: pinout compatible with RT4	2 - 6 V	9 mA	868.35 MHz	+5 dBm	9.6 Kbit/s	N	 Dimensions: 17.78 x 11 +/-0.2 mm
RT40-XXX ASK Transmitter	Very small thick film ASK Radio transmitter module pinout compatible with RT4/RT14 Smaller than Rt4 I-ETS 300-220 Compliance	2 - 14 V	4 mA	433.92 MHz	+8 dBm	9.6 Kbit/s	N	 Dimensions: 17.78 x 7.62 mm
RT41-XXX ASK Transmitter	Two-stages ASK radio transmitter module (SAW oscillator + power amplifier). pinout compatible with Rt4 Very low operating voltage supply (single NiMH or alkaline battery cells) available also SMT version	1.2 V	5 mA	433.92 MHz	+3 dBm	9.6 Kbit/s	N	 Dimensions: 17.78 x 10.16 mm NEW

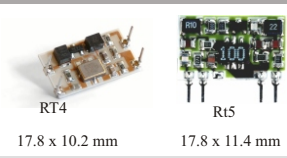
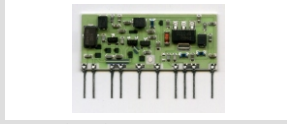
(*) Don't use in new design

ASK Radio Transmitters - Crystal Control


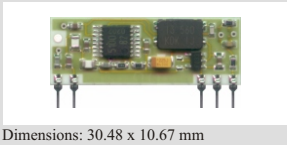
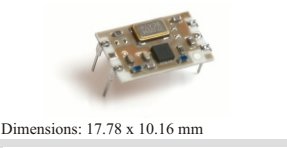
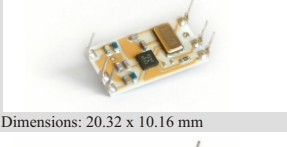
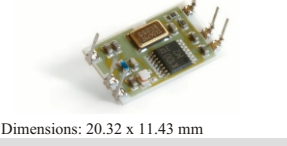
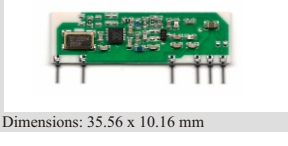
MODEL	DESCRIPTION	Vdc	Is	Frequency (XXX)	Po	Data Rate	Coating	
RTQ1-XXX ASK Transmitter	Very small thick film DIL ASK Radio transmitter module I-ETS 300-220 Compliance	2.4 - 4 V	7 mA	315 433.92 868.35 MHz	+5 +5 +1 dBm	9.6 Kbit/s	Y (see note)	 Dimensions: 20.32 x 11.43 mm
RTQ4-XXX ASK Transmitter	Very small thick film DIL ASK Radio Transmitter Module. XXX also 920 MHz Pin-out compatible with RT4 Module.	1.9 - 5.5 V	9 mA	433.92 868.35 MHz	+7 dBm	9.6 Kbit/s	N	 Dimensions: 17.78 x 10.16 mm
RTQ6-XXX ASK Transmitter	Very small thick film DIL ASK Radio Transmitter Module. XXX also 868.525 MHz Pin-out compatible with RTQ1 Module.	1.9 - 5.5 V	9 mA	433.92 868.35 MHz	+7 dBm	9.6 Kbit/s	Y (see note)	 Dimensions: 20.32 x 10.16 mm
RTQ8-868 ASK Transmitter	ASK Radio Transmitter - Crystal controlled .Power Output +7 dBm @ 5V XXX also 868.95 MHz Pinout compatible with RT11 .	1.9 - 5.5 V	9 mA	868.35 MHz	+7 dBm	9.6 Kbit/s	N	 Dimensions: 25.4 x 10.16 mm
RTQ10-XXX ASK Transmitter	10mW ASK Radio Transmitter Module with Crystal Oscillator and External Antenna. RTQ10 : pinout compatible with RTQ1	2.4- 4.0 V	14.5 mA	433.92 868.35 MHz	+10 dBm	40 Kbit/s	N	 Dimensions: 20.32 x 10.16 mm



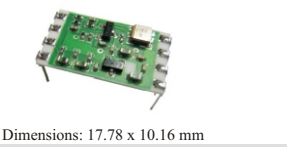
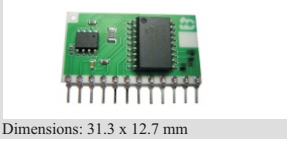

ASK Radio Transmitters BOOST

MODEL	DESCRIPTION	Vdc	Is	Frequency (XXX)	Po	Data Rate	Coating	
RT4-433-BOOST RT5-433-BOOST ASK Transmitter	Very small thick film ASK Radio transmitter modules	2 - 14 V	7 mA	433.92 MHz	RT4 : 13 RT5 : 20 mW	9.6 Kbit/s	N	 RT4: 17.8 x 10.2 mm RT5: 17.8 x 11.4 mm
TX-433 SAWBOOST ASK Transmitter	Transmitter module 433.92 Mhz 400/800 mWatt output	12 / 18 V	80 mA	433.92 MHz	400/800 mW	8 Kbit/s	N	 Dimensions: 20.32 x 10.16 mm

FSK Radio Transmitters - Crystal Control



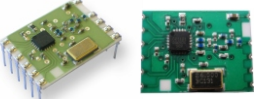




MODEL	DESCRIPTION	Vdc	Is	Frequency (XXX)	Po	Data Rate	Coating	
RTFQ1-XXX FSK Transmitter	Small thick film DIL FSK Radio transmitter module <i>Available also SMT version</i> <i>XXX also 868.30, 916, 920 MHz</i> I-ETS 300-220 Compliance	2.4 - 4 V	7 mA	315 433.92 868.35 MHz	+5 +5 +1 dBm	9.6 Kbit/s	Y (see note)	 Dimensions: 20.32 x 11.43 mm
RTFQ2-XXX FSK Transmitter	Very small thick film SIL FSK Radio transmitter module. Extended supply voltage (RTFQ2-XXX-R) <i>XXX also 868.30, 916 MHz</i> I-ETS 300-220 Compliance	2.5 - 12 V	7 mA	315 433.92 868.35 915 MHz	+5 +5 +1 +1 dBm	9.6 Kbit/s	N	 Dimensions: 30.48 x 10.67 mm
RTFQ4-XXX FSK Transmitter	Very small thick film DIL FSK Radio Transmitter Module. Pin-out compatible with RT4 Module.	1.9 - 5.5 V	9 mA	315 433.92 868.35 MHz	+7 dBm	9.6 Kbit/s	N	 Dimensions: 17.78 x 10.16 mm
RTFQ6-XXX FSK Transmitter	Very small thick film DIL FSK Radio Transmitter Module. <i>XXX also 868.525 MHz</i> Pin-out compatible with RTFQ1 Module.	1.9 - 5.5 V	9 mA	433.92 868.35 MHz	+7 dBm	9.6 Kbit/s	N	 Dimensions: 20.32 x 10.16 mm
RTFQ10-XXX FSK Transmitter	10mW FSK Radio Transmitter Module with Crystal Oscillator and External Antenna. RTFQ10 : pinout compatible with RTFQ1	2.4 - 4.0 V	14.5 mA	433.92 868.35 MHz	+10 dBm	40 Kbit/s	N	 Dimensions: 20.32 x 11.43 mm
RTFQ11-868 FSK Transmitter	15mW FSK Radio Transmitter Module with Crystal Oscillator and External Antenna	2.2 - 5.5 V	26 mA	868.35 MHz	+14 dBm	40 Kbit/s	N	 Dimensions: 35.56 x 10.16 mm

Keeloq Encoder & Decoder




MODEL	DESCRIPTION	Vdc	Is	Frequency (XXX)	Po	Data Rate	Coating	
RT14-HCS HCS Transmitter Module	Radio Transmitter Module with SAW Resonator and HCS Keeloq Encoder	3.5 - 12 V	10 mA	433.92 MHz	+7 dBm	9.6 Kbit/s	N	 Dimensions: 17.78 x 10.16 mm
DC-4CH Keeloq Decoder	The DC-4CH hybrid module is a 4 channels Keeloq decoder unit which match with HCS Keeloq encoder (programmed with TC manufacturer code).	3 - 5.5 V	1.2 mA				N	 Dimensions: 31.3 x 12.7 mm
RX4CH 4 Channels Radio Receive Keeloq	4 Channels Radio Receivers Decoder Board with Keeloq Coding	10 - 14 V	50 mA	315 433.92 868.35 915 MHz			NA	 Dimensions: 90 x 54 mm



Radio Transceivers - Crystal Control

MODEL	DESCRIPTION	Vdc	Is	Frequency (XXX)	Sens / Po	Data Rate	Coating	
RXQ2-XXX Multichannel RF Transceiver	Multichannel radio transceiver module with embedded microcontroller.	1.9 - 3.6 V	12 (RX) 30 (TX) mA	433.92 868.35 915 MHz	-100 / +10 dBm	up to 38.4 Kbit/s	Y (see note)	 Dimensions: 20.32 x 22.86 mm
RXQ3-XXX Multichannel RF Transceiver	Multichannel radio transceiver module with embedded microcontroller. Available with dedicated firmware for transmission serial data.	2.0 - 3.6 V	20 (RX) 33 (TX) mA	433.92 868.35 915 MHz	-110 / +10 dBm	up to 500 Kbit/s	Y (see note)	 Dimensions: 22.86 x 15.24 mm
RXQ4-XXX Sub 1GHz Multichannel Radio Transceiver without microcontroller	Low-cost sub 1GHz radio transceiver designed for very low-power wireless applications, based on the CC1101(Texas Instruments). Available also in SMT version.	1.8 - 3.6 V	15 (RX) 29 (TX) mA	433.92 868.35 915 MHz	-110 / +10 dBm	up to 500 Kbit/s	Y (see note)	 Dimensions: 20.32 x 15.24 mm
RXQ5-XXX Sub 1GHz Multichannel Radio Transceiver without microcontroller	TheRXQ5-XXXis a low-cost sub 1GHz radio transceiverFSKdesigned for very low-power wireless applications, based on the MRF49XA	2.2 - 3.8 V	11 (RX) 15 (TX) mA	433.92 868.35 915 MHz	-112 / +10 dBm	up to 256 Kbit/s	N	 Dimensions: 21.59 x 10.16 mm
RXQ6-XXX Radio Transceiver Module Multichannel with low cost microcontroller on board	The RXQ6-XXX is a low-cost sub 1GHz radio transceiver designed for very low-power wireless applications, based on the CC1101 device and the microcontroller PIC18F26J11(Microchip).	2.2 - 3.6 V	20 (RX) 34 (TX) mA	433.92 868.35 915 MHz	-110 / +10 dBm	up to 500 Kbit/s	N	 Dimensions: 25.4 x 17.78 mm
RXQ7-XXX Sub 1GHz 20 dBm Radio Transceiver	High Power Output up to +20dBm (100mWatt) in the frequency range from 869.4 Mhz to 869.65Mhz. Based on wireless MCU Si101X Silicon Labs. Embedded bootloader inside.	1.8 - 3.6 V	18.5 (RX) 17-85 (TX) mA	433.92 868.35 915 MHz	-108 / +20 dBm	up to 256 Kbit/s	N	 Dimensions: 22.86 x 20.32 mm NEW
RXQ7^{SMD}-XXX Sub 1GHz 20dBm Radio Transceiver	High Power Output up to +20dBm (100mWatt) in the frequency range from 869.4 Mhz to 869.65Mhz. Based on wireless MCU Si100X Silicon Labs. Embedded bootloader inside.	1.6 - 3.8 V	18.5 (RX) 17-85 (TX) mA	433.92 868.35 915 MHz	-108 / +20 dBm	up to 256 Kbit/s	N	 Dimensions: 22.86 x 20.32 mm NEW

Evaluation Board

MODEL	DESCRIPTION	Vdc	Is	Frequency (XXX)	Sens / Po	Data Rate	Coating	
RXDL1 RS232 Radio Data Link	Evaluation Board for RXQ2-XXX Transceiver. RS232 Interface Embedded	5 - 12 V	23 (RX) 31 (TX) mA	433.92 868.35 915 MHz	-100 / +10 dBm	up to 38.4 Kbit/s	N/A	 Dimensions: 79.38 x 36.83 mm
RXDL2 USB Radio Data Link	Evaluation Board for RXQ2-XXX Transceiver. USB Interface Embedded		23 (RX) 31 (TX) mA	433.92 868.35 915 MHz	-100 / +10 dBm	up to 38.4 Kbit/s	N/A	 Dimensions: 78 x 30 mm
RXDL3 USB Radio Data Link	Evaluation Board for RXQ3-XXX Transceiver. USB Interface Embedded		23 (RX) 31 (TX) mA	433.92 868.35 915 MHz	-100 / +10 dBm	up to 38.4 Kbit/s	N/A	 Dimensions: 61.5 x 18.5 mm

Special Series - Coated Version

It's an improved version, using a coverage made of a special resin (MIL approved), well developed for hard environment applications (f. e. automotive, railways, nautical, etc.) or where there is an higher level of Humidity . The coverage guarantee a reliability improvement up to 100% .

Dimensions and functionality are the same of standard modules.

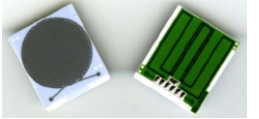

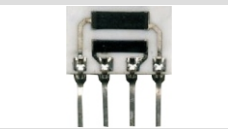
(*)Note : Coated version on demand



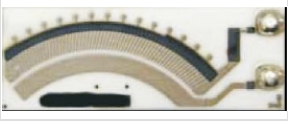
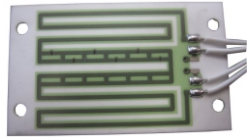
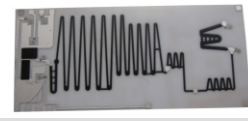
Special Products - Custom Hybrid Solutions

Hereby are shown some special applications which use thick film hybrid technology .
 These are only some examples of customized hybrid solutions used in several fields.
 It is possible to modify and optimize some technical characteristics of these modules to reach special custom requirements.

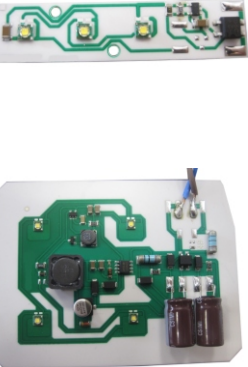
Thick Film Technology Sensor

MODEL	DESCRIPTION							
Rain Sensor	Rain Sensor realized on ceramic substrate (Alumina). It is based on capacitive principle . Provided with heater and NTC for temperature regulation.	Vdc	Is	PoMax	R Heater	C	NTC	
		12 V	292 mA	3.5 Watt	42 Ohm	100 PF	1Kohm at 25 °C	Dimensions: 30.48 x 35.56 mm
Touch Sensor	Digital capacitive touch sensor realized on ceramic substrate.	Vdc	Is(max)	Key Time Normal Mode	Key Time Standby Mode	Load Current	Sensitivity	
		8 - 24 V	6.5 mA	125 msec	500 msec	100 mA	up to 10mm	Dimensions: 20.0 x 10.0 x 32.0mm
Flow Sensor	Flow Sensor made in thick film hybrid technology which use the calorimetric principle.	PoMax	Rnom (heater)	NTC (resistance)	NTC (Beta)			
		1.5 Watt	50 Ohm	30 Kohm	-1950 -2050			

Resistance / Heater Applications

MODEL	DESCRIPTION							
Fuel Card	Fuel resistor card used for fuel level measuring. It can be made under customer "REQUIREMENT".	Resistance Tolerance	Temperature Coefficient	Ambient Temperature	Operating Temperature	Relative Humidity	Operational Life	
		± 1%	± 75ppm	-40°C to 125°C	-40°C to 70°C	1% to 100%	500.000 wet cycles	
Power Resistor & Heater	With thick film technology it is possible to achieve high power and non-inductive resistors realized on high dielectric substrate.	Power Density	Dielectric Strength	Max Surface Temperature	TCR			
		up to 100 W/cm ²	>15kV/mm	450 °C	< 150 Ppm/°C			
High Value Resistor	With thick film technology it is possible to achieve high value resistors and high voltage resistor using laser trimming technology, also very stable in time.	Resistance Value	Resistance Tolerance	Temperature Coefficient	Standard Voltage Operation	Short Term Voltage Overload		
		up to 1 Gohm	± 5%	+50 -75 ppm/°C	140 V/mm	350 V/mm		

Lighting / Power Applications

MODEL	MOST IMPORTANT FEATURES							
DC Module & AC Module	The ceramic substrate used in lighting applications are : 1) High thermal conductivity (comparable with IMS substrate). 2) Very low thermal expansion 3) High working temperature 4) High level of dissipation 5) No water absorption 6) Dielectric Strength very high. Very useful for AC and high voltage applications.	Material Used	Thermal Conductivity	Thermal Expansion 25 - 500 °C	Dielectric Strength	Dissipation	Water Absorption	
		Alumina Al2O3 96%	25 W/m ² C	7,3 ppm/°C	24 KV/mm	0,5 W/cm ²	NIL	

Certified Quality System



Disclaimer

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The information contained in our data sheets is believed to be accurate, however we do not assume any liability arising from the application or use of any product or circuit described herein.

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Web Site: www.telecontrolli.com

HEAD OFFICE & PLANT

Via Nazionale delle Puglie, 177
80026 CASORIA (NA), Italy
Tel: +39 081 759 90 33
Fax: +39 081 759 64 94
sales @ telecontrolli.com