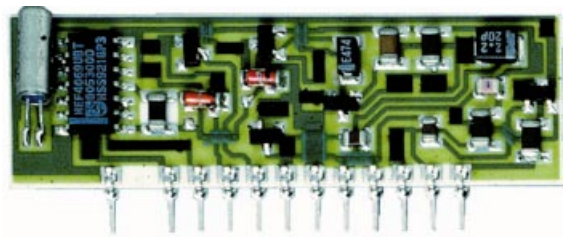
telecontrolli

UTR1

Ultrasonic Transmitter / Receiver



General description

The UTR1 is an hybrid circuit that allows to realize an ultrasonic detector adding few external components.

Detection is based on amplitude variation of received ultrasonic signal (40KHz) due to the movement of an object.

It shows stable electric characteristics thanks to the "Thick film hybrid" tecnhology.

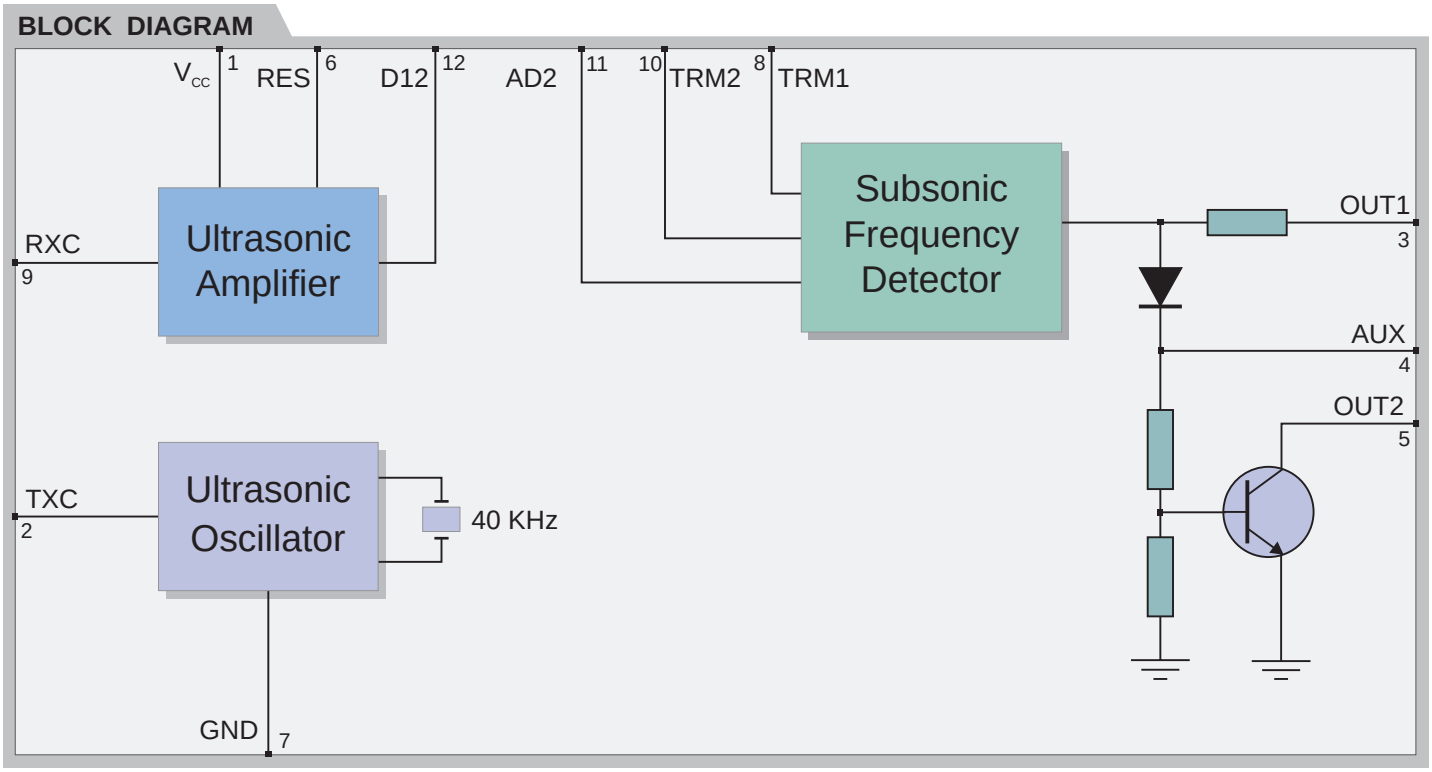
Features

- High RFI Immunity
- SIL Package

Applications

- Car Alarm systems
- Residential and commercial security systems
- Automatic doors opening systems

BLOCK DIAGRAM



Electrical Characteristics

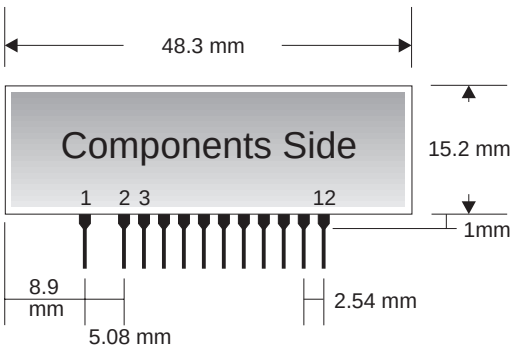
Ta = 25°C unless otherwise specified

	CHARACTERISTICS	MIN	TYP	MAX	UNIT
V_{CC}	Supply Voltage	9	12	16	VDC
I_S	Supply Current		9		mA
G	Utrasonic Amplifier Gain		50		dB
F_U	Ultrasonic Frequency	38	40	42	KHz
I_O	Out2 Sink Current			100	mA
T_{OP}	Operating Temperature Range	-20		+80	°C

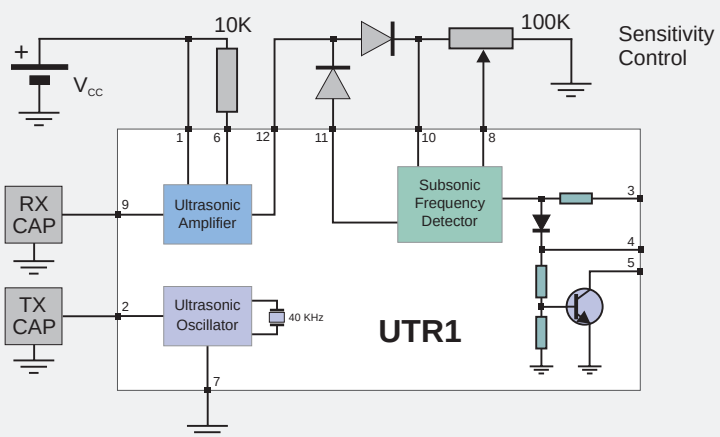
Pin Description

1	V_{CC}	Supply Voltage
2	TXC	Ultrasonic Piezoceramic Transmitter Output (TXCAP)
3	OUT1	Output Signal (OUT = "HIGH" if objet is moving)
4	AUX	Auxiliary Output Signal
5	OUT2	Open Collector Output
6	RES	Pull-up Resistor Input
7	GND	Ground
8	TRM1	External Trimmer
9	RXC	Ultrasonic Piezoceramic Receiver input (RXCAP)
10	TRM2	External Trimmer
11	AD2	External Diode Anode
12	D12	External Diodes Common Point

Mechanical Dimensions



TYPICAL APPLICATION



TX CAP : MA40S3S Murata

RX CAP : MA40S3R Murata

D1 -D2 : Germanium Diode

Component typical values

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