

UTR1

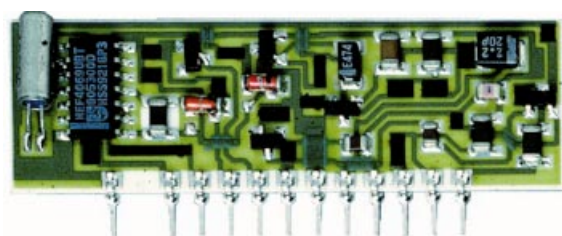
Ultrasonic Transmitter / Receiver

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" technology.

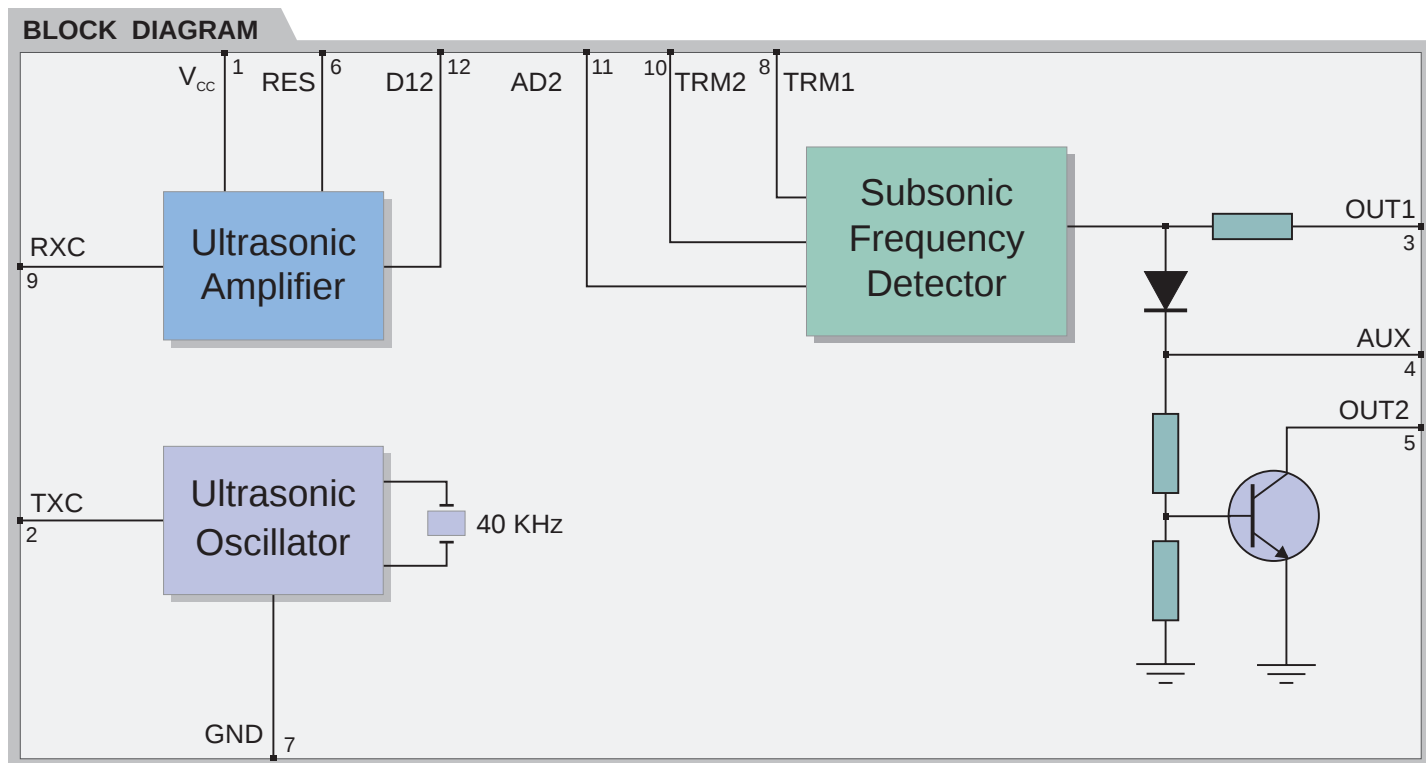


Features

- High RFI Immunity
- SIL Package

Applications

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



Electrical Characteristics

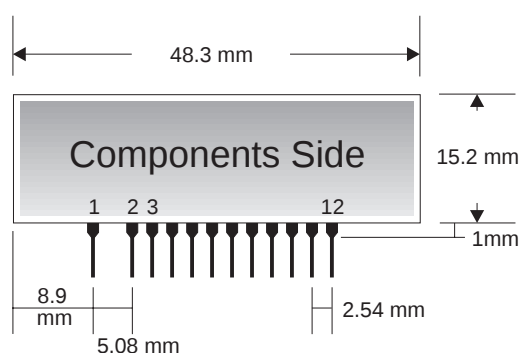
Ta = 25°C unless otherwise specified

CHARACTERISTICS		MIN	TYP	MAX	UNIT
V _{CC}	Supply Voltage	9	12	16	VDC
I _S	Supply Current		9		mA
G	Ultrasonic 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

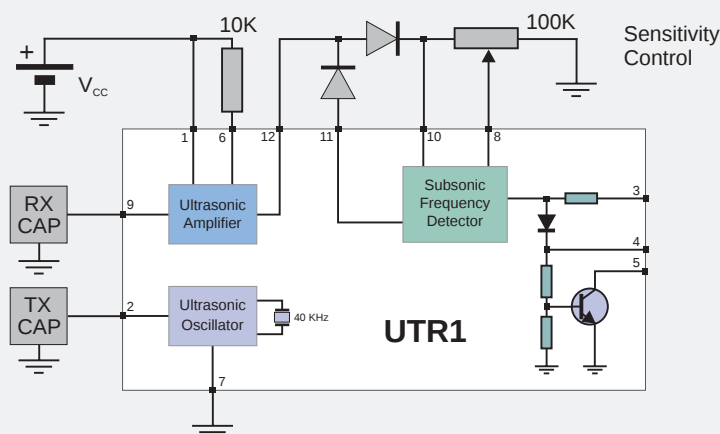
Pin Description

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