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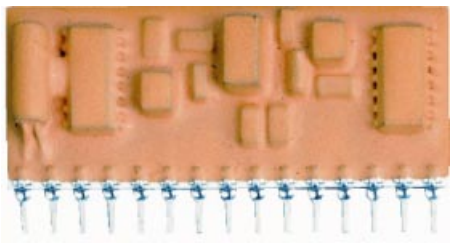
UTR2

Ultrasonic Transmitter / Receiver



General description

The UTR2 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.

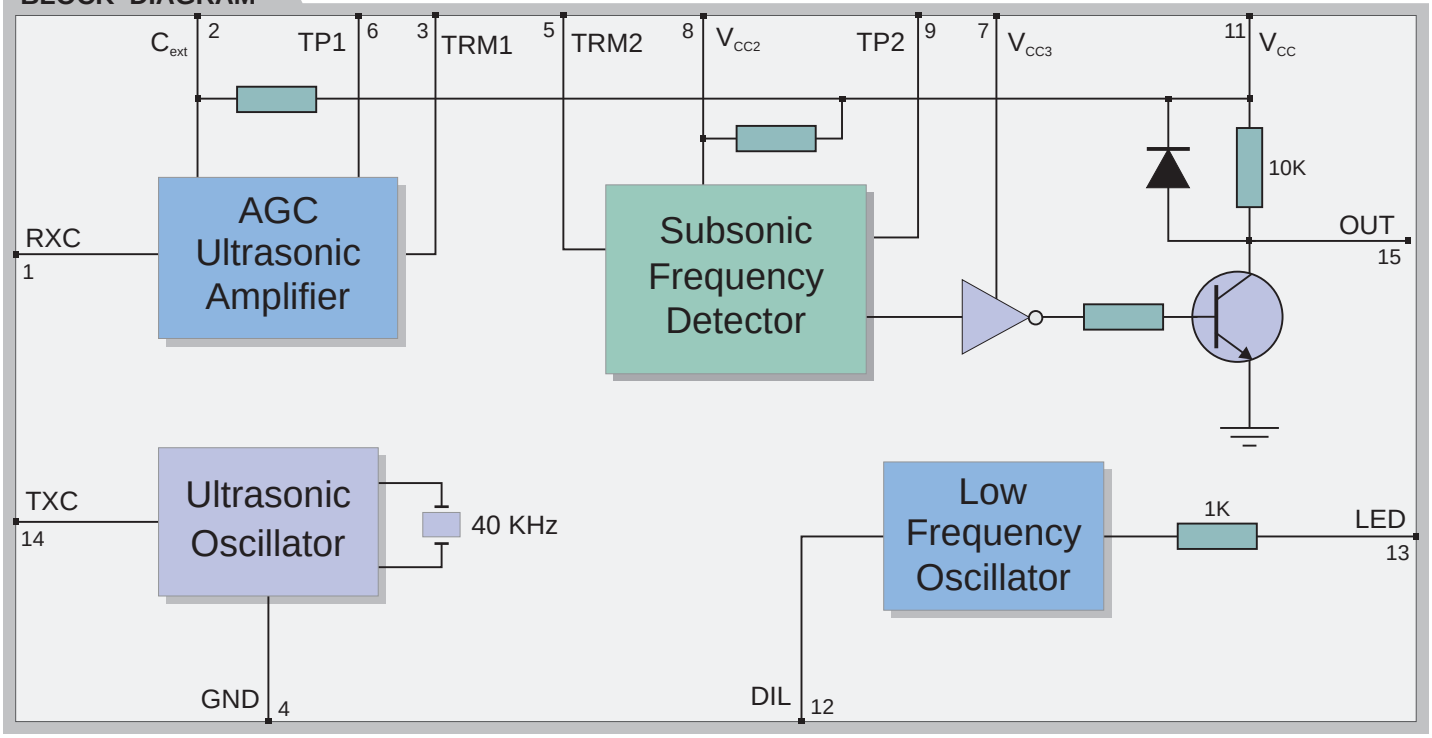
Features

- AC Input Amplifier with Automatic Gain Control
- Output Relay Driving with Ricirculation Diode

Applications

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

BLOCK DIAGRAM



Electrical Characteristics

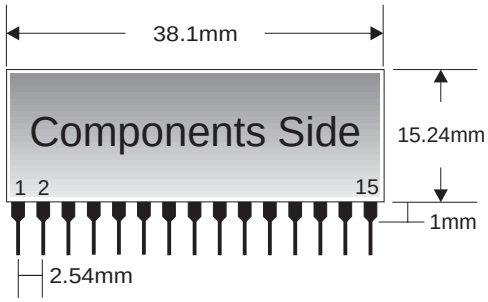
Ta = 25°C unless otherwise specified

	CHARACTERISTICS	MIN	TYP	MAX	UNIT
V_{CC}	Supply Voltage	9	12	16	VDC
I_S	Supply Current		15		mA
G	Utrasonic Amplifier Gain		50		dB
F_U	Ultrasonic Frequency	38	40	42	KHz
I_O	Out2 Sink Current			20	mA
T_{OP}	Operating Temperature Range	-20		+80	°C

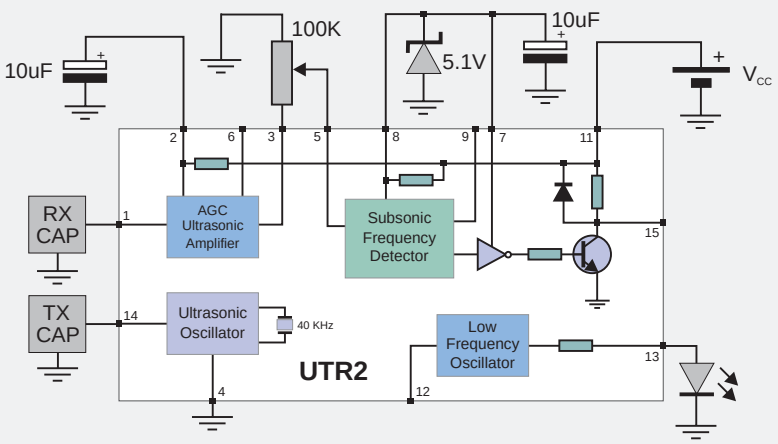
Pin Description

1	RXC	Ultrasonic Piezoceramic Receiver Input (RXCAP)
2	Cext	Supply Voltage External Capacitor
3	TRM1	External Trimmer
4	GND	Ground
5	TRM2	External Trimmer
6	TP1	Test Point
7	VCC3	Supply Voltage of output stage
8	VCC2	Supply Voltage of internal stage
9	TP2	Test Point
10	INS	Internal signal: not to be connect
11	VCC	External Supply Voltage
12	DIL	Disable signal LED control: active Low
13	LED	LED control signal
14	TXC	Ultrasonic Piezoceramic Transmitter Output (TXCAP)
15	OUT	OUT="LOW" if Objet is moving

Mechanical Dimensions



TYPICAL APPLICATION



TX CAP : MA40S3S Murata

RX CAP : MA40S3R Murata

Component typical values

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