



R&E International

A Subsidiary of Microchip Technology Inc.

RE46C101

Piezoelectric Horn Driver and LED Driver Circuit

Product Specification

General Description

This product is intended for applications using a self oscillating piezoelectric horn although it can be used in direct drive applications. Feedback control and a driver circuit are provided as well as a horn enable function. The design also provides an open drain N-channel driver suitable for use with a light emitting diode.

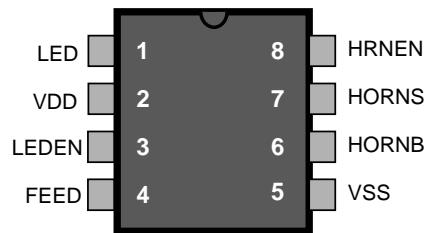
Applications

Smoke detectors
CO Detectors
Personal Security Products
Electronic Toys

Features

- Low Quiescent Current (<100nA)
- Low Driver Ron - 20Ω typical at 9V
- Wide Operating Voltage Range
- 8 Pin DIP and SO Packages
- Available in Standard Packaging or RoHS Compliant Pb Free Packaging

Pin Configuration



ABSOLUTE MAXIMUM RATINGS

PARAMETER

Supply Voltage
Input Voltage Range Except FEED
FEED Input Voltage Range
Input Current except FEED
Operating Temperature
Storage Temperature
Maximum Junction Temperature

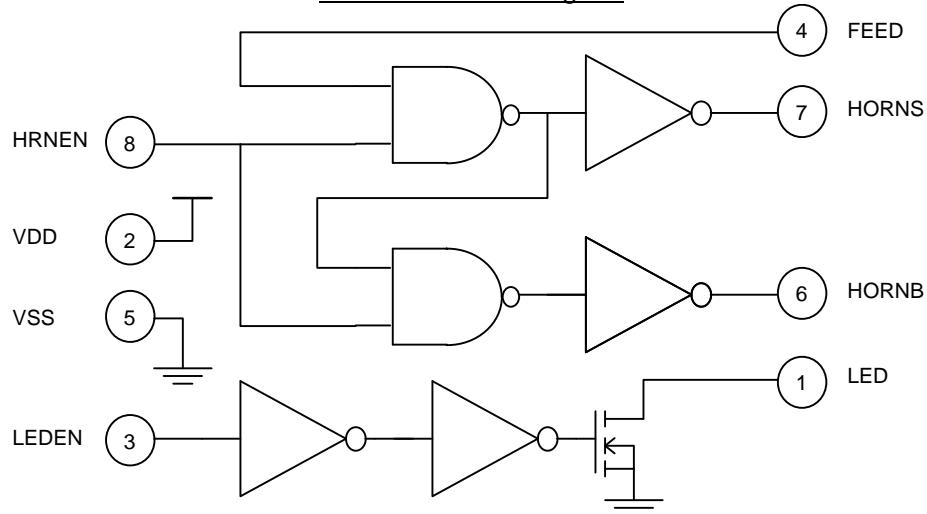
SYMBOL	VALUE	UNITS
V_{DD}	18	V
V_{in}	-.3 to $V_{dd} + .3$	V
V_{infd}	-10 to +22	V
I_{in}	10	mA
T_A	0 to 50	°C
T_{STG}	-55 to 125	°C
T_J	150	°C

Stresses beyond those listed under Absolute Maximum Ratings may cause permanent damage to the device. These are stress ratings only and operation at these conditions for extended periods may affect device reliability.

This product utilizes CMOS technology with static protection; however proper ESD prevention procedures should be used when handling this product. Damage can occur when exposed to extremely high static electrical charge.

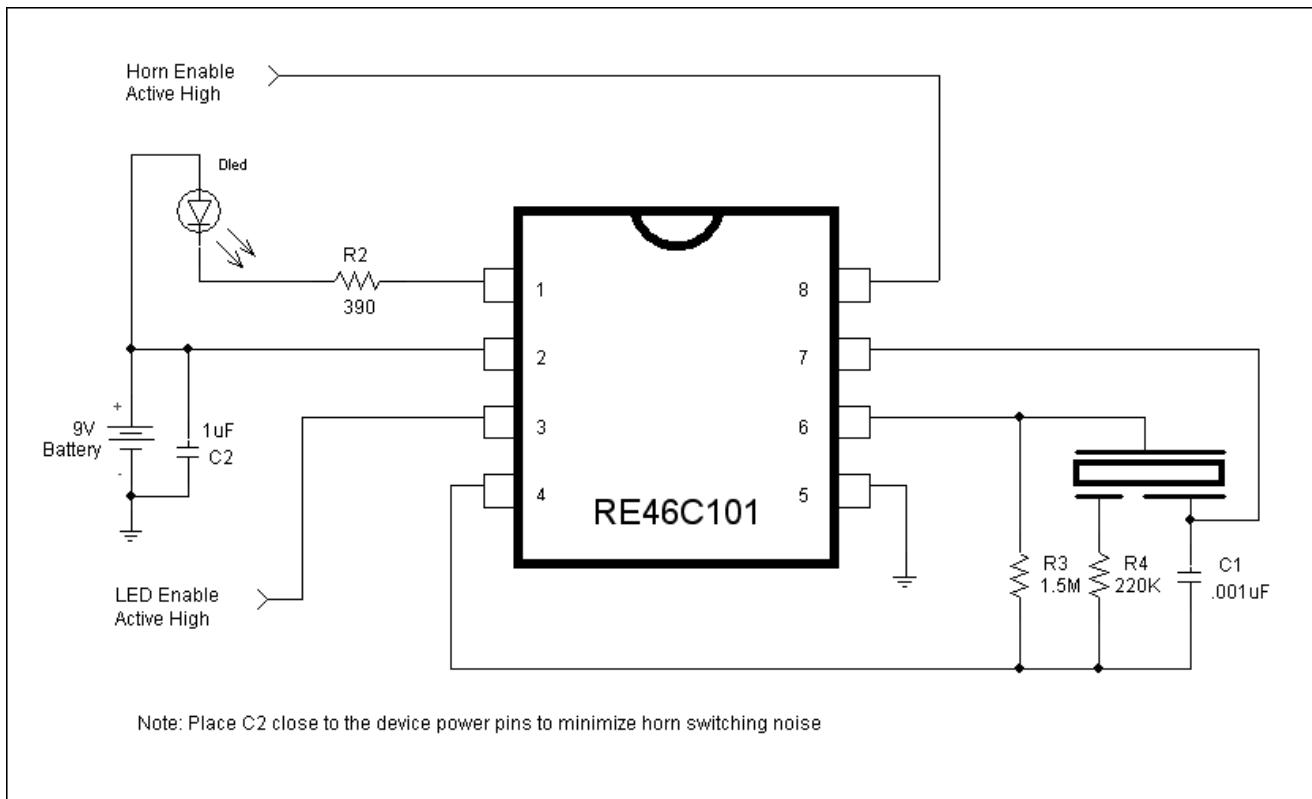
**DC Electrical Characteristics at TA = 25°C, VDD=9V, Typical Application (unless otherwise noted)**

Parameter	Symbol	Test Pin	Test Conditions	Limits			
				Min	Typ	Max	Units
Supply Voltage	V _{DD}	2	Operating	6	9	16	V
Supply Current	I _{DD1}	2	HRNEN,LEDEN and FEED=0V			100	nA
Input Voltage Low	V _{IL1}	3,8				1	V
Input Voltage High	V _{IH1}	3,8		2.3			V
Input Leakage Low	I _{IL1}	3,8	Vin=VSS			-100	nA
	I _{LFD}	4	FEED=-10V			-50	uA
Input Leakage High	I _{IH1}	3.8	Vin=VDD			100	nA
	I _{HFD}	4	FEED=22V			50	uA
Output Voltage Low	V _{OL1}	6,7	I _{ol} =16mA		.3	.5	V
	V _{OL2}	6,7	I _{ol} =16mA, VDD=7.2V			.9	V
	V _{OL3}	1	I _{ol} =10mA, VDD=7.2V		.5	1	V
Output Voltage High	V _{Oh1}	6,7	I _{oh} =-16mA	8.5	8.7		V
	V _{Oh2}	6,7	I _{oh} =-16mA, VDD=7.2V	6.3			V

Functional Block Diagram



Typical Application





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