



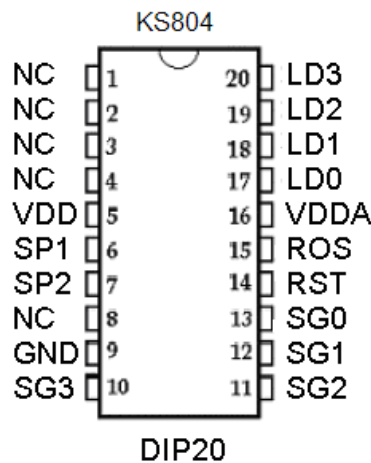
KS804 - Sound Generator IC

The KS804 Sound Generator IC is a voice chip with standard CMOS process and embedded voice storage memory. The IC comes with four programmed sound of different topics. Additional or customized sound can be implemented upon requests.

FEATURES:

- Built in LED circuit for 4 LED outputs
- 4 trigger keys to play each sound and flash corresponding LED
- Trigger Options: Edge/Unholdable/Non Retrigger

PIN CONFIGURATION



PIN DESCRIPTION

Pin Name	Description
VDD	Positive Power Supply
SP1,SP2	PWM Outputs to drive speaker
COUT	DAC Output to drive speaker
GND	Power Ground
SG0-SG3	Trigger pins for sound and LED
LD0-LD3	LED output corresponding to trigger
RST	Reset Pin, active when low
ROS	Oscillator input
VDDA	Positive Power Supply



APPLICATIONS:

- Toys
- Security Applications
- Car Alarm
- Halloween Props
- Gift Baskets
- Musical Box

SOUNDS:

The following are some of the sounds programmed on the KS804-X. For more sound selection, visit www.kowatec.com.

Siren Sound	Trigger Pin	Duration (s)
Police	SG0	10
Fire Engine	SG1	8
Ambulance	SG2	5
Submarine	SG3	5

Order P/N: KS804-1

Wild Animal Sound	Trigger Pin	Duration (s)
Lion	SG0	10
Chimp	SG1	9
Wolf	SG2	5
Elephant	SG3	5

Order P/N: KS804-2

Ordering

When ordering the Sound Generator IC, please specify the sound selection you want or contact us for additional sound.

TRIGGER MODE AND TIMING CHART

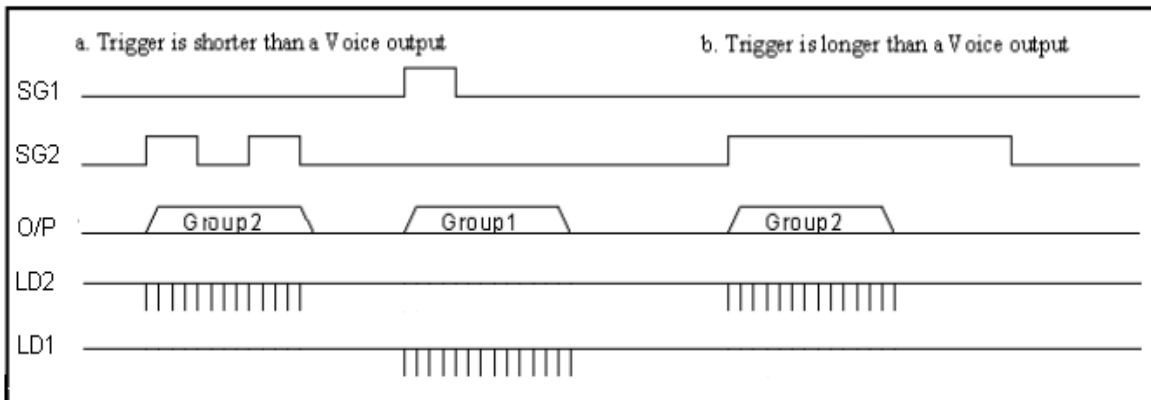


Fig. Edge, Unholdable, Non-retrigger



APPLICATION CIRCUIT

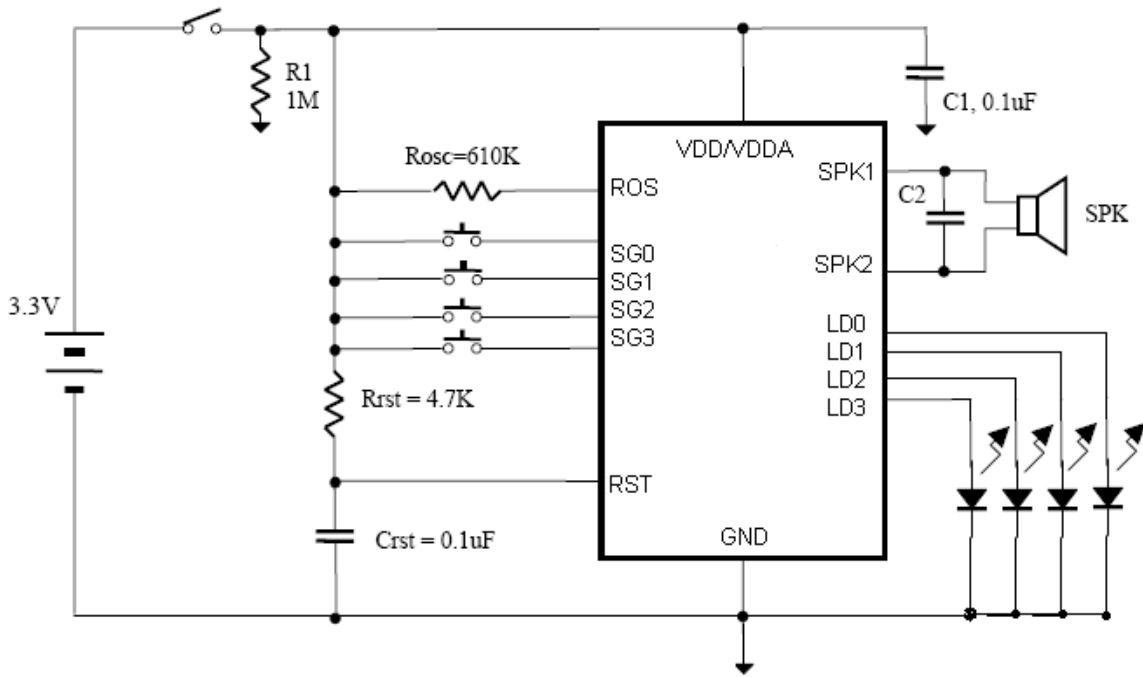


Fig 2 PWM 3.3v

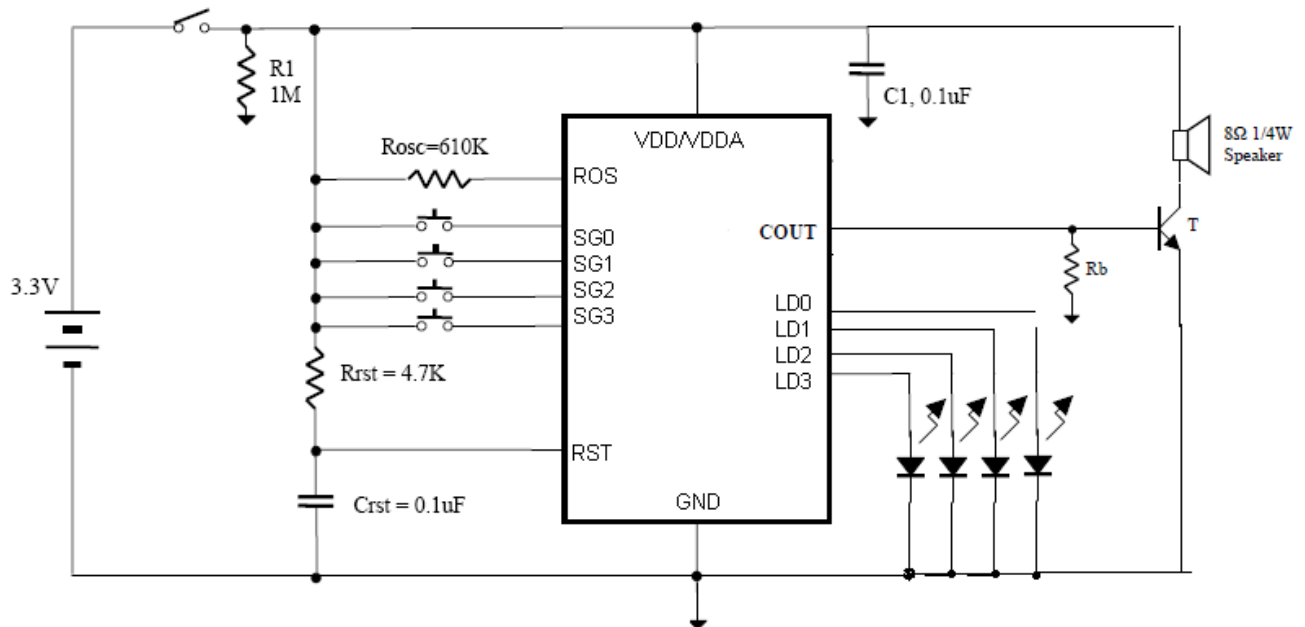


Fig 3 Cout 3.3V

Rb is base resistor from 120 Ohm to 390 Ohm depends on VDD value and transistor gain. T is an NPN transistor with beta larger than 150.



ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Min	Type	Max	Unit	Remark
Operating Voltage	VDD	2.2	3.0	3.6	V	
Operating Current	IOP		7		mA	I/O properly terminated
Standby Current	ISB		1	5	uA	I/O properly terminated
Operating Temperature	TEMP	-40		+85	C	

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