ALARM SOUND GENERATOR
TYPE:SG0100

■ Descriptions

SG0100 is an alarm sound integrated circuit designed using CMOS technology.

■ Features

- CMOS process manufacturing, low power consumption
- Operating Voltage:2.1—5.5V
- Low quiescent current
- Built-in oscillation, built-in reset, few external components

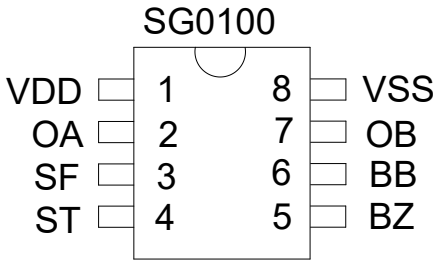
■ Applications:

- Vehicle anti-theft system
- Home anti-theft system
- Alarm system

■ Encapsulation form

TYPE	Package form and specification
SG0100P	8 Pin DIP
SG0100S	8 Pin SOP

■ PIN diagram

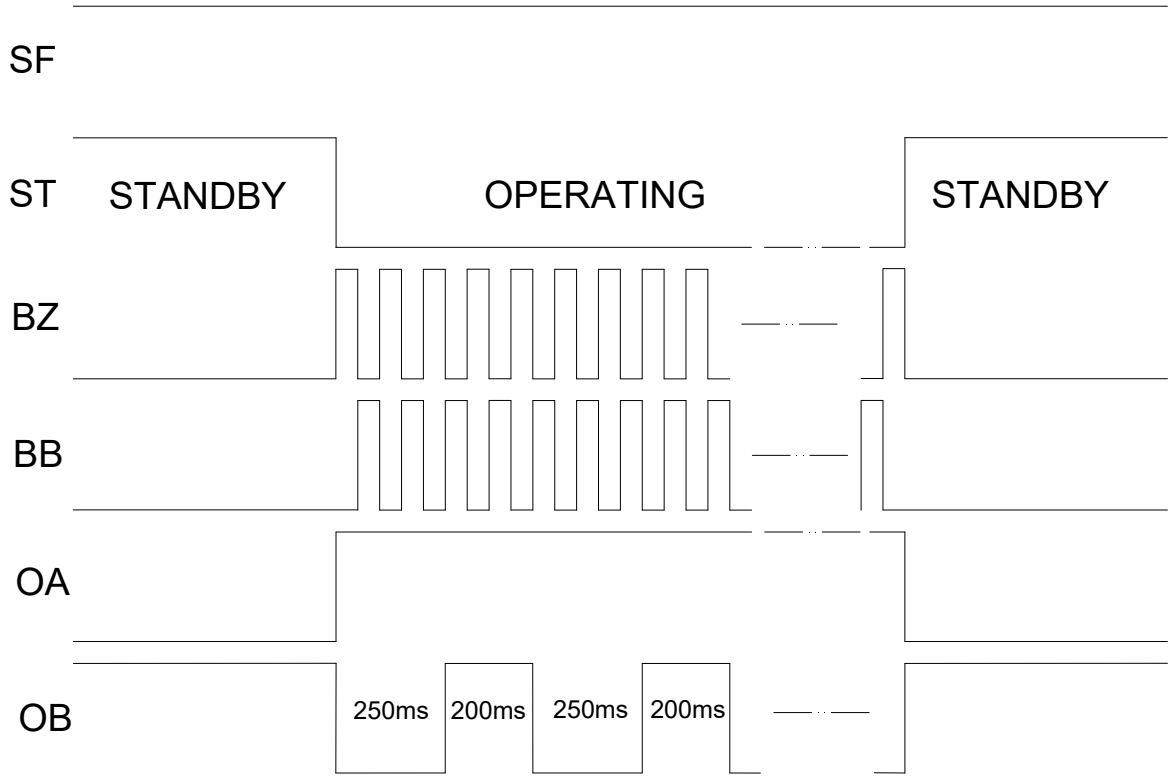


■ PIN Descriptions

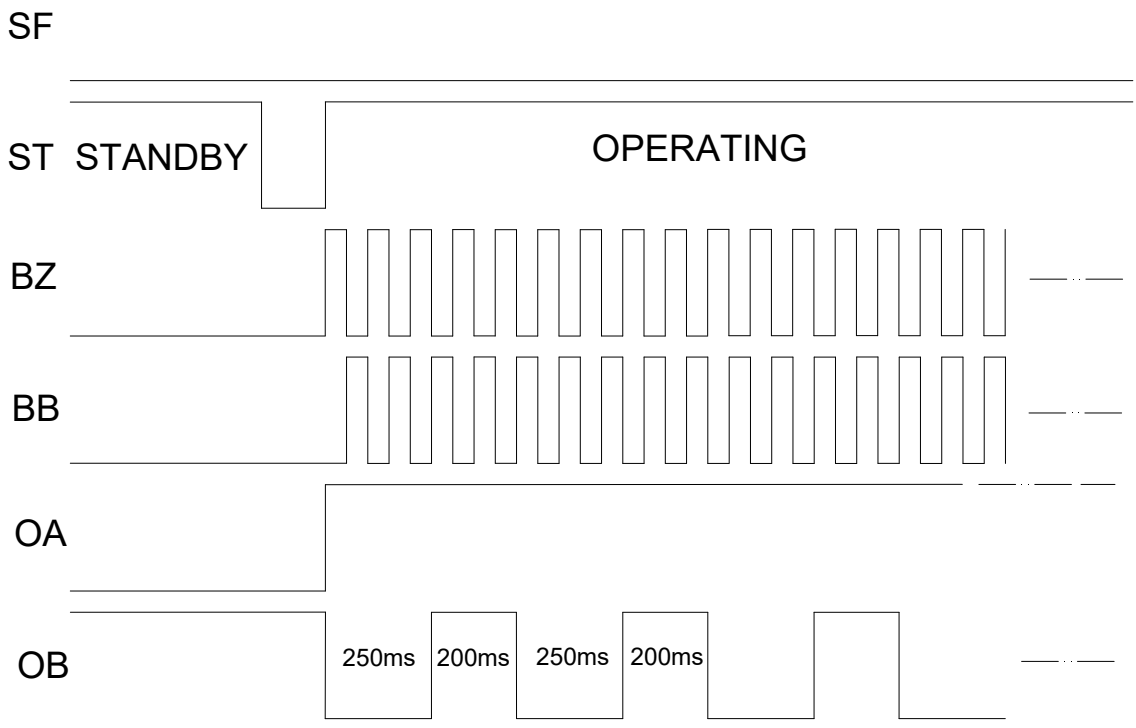
No.	Name	Input/Output	Descriptions
1	VDD	-	Power supply input pin
2	OA	O	Output A,Output low level when standby,Output high level when alarming
3	SF	I	Trigger mode selection,Level trigger when connected to VDD or Not connected, Pulse trigger connected to VSS
4	ST	I	Trigger pulse/level input
5	BZ	O	Audio output, positive
6	BB	O	Audio output, negative
7	OB	O	Output B, Output high level when standby, Output 0.2 second high/0.25 second low waveform when alarming
8	VSS	-	Power ground

■ Function timing diagram

● Timing diagram of level control mode



● Pulse control mode timing diagram



■ Characteristic parameter:

● Absolute Maximum Ratings:

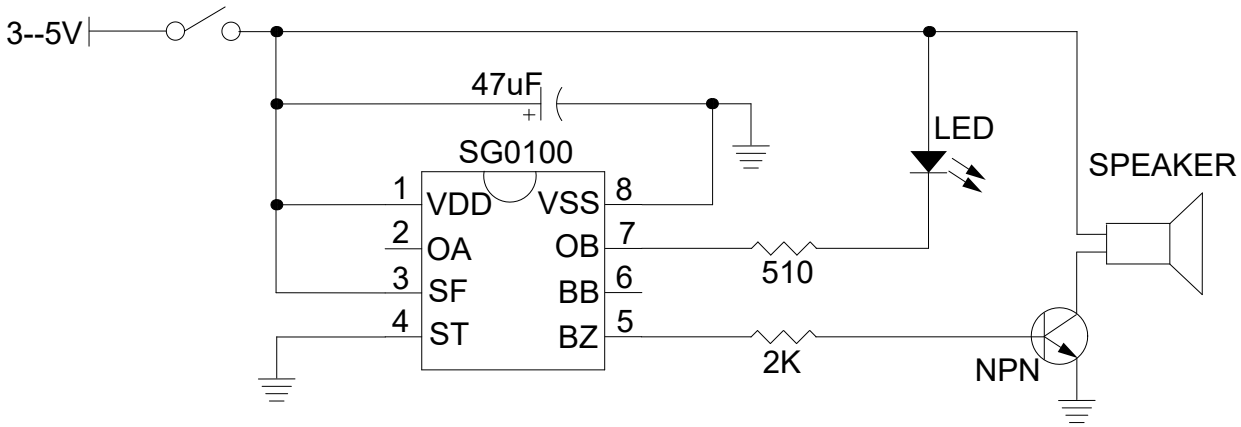
Parameter	Symbol	Parameter range	Unit
Operating Voltage	VDD	-0.3 ~ 5.5	V
Input Voltage	VI	VSS-0.3 to VDD+0.3	V
Lead Soldering Temperature*1	Tsol	260	℃
Operating Temperature	Topr	0 ~ 70	℃
Storage Temperature	Tstg	-40 ~ 125	℃

Notes:*1:Soldering time≦5 seconds.

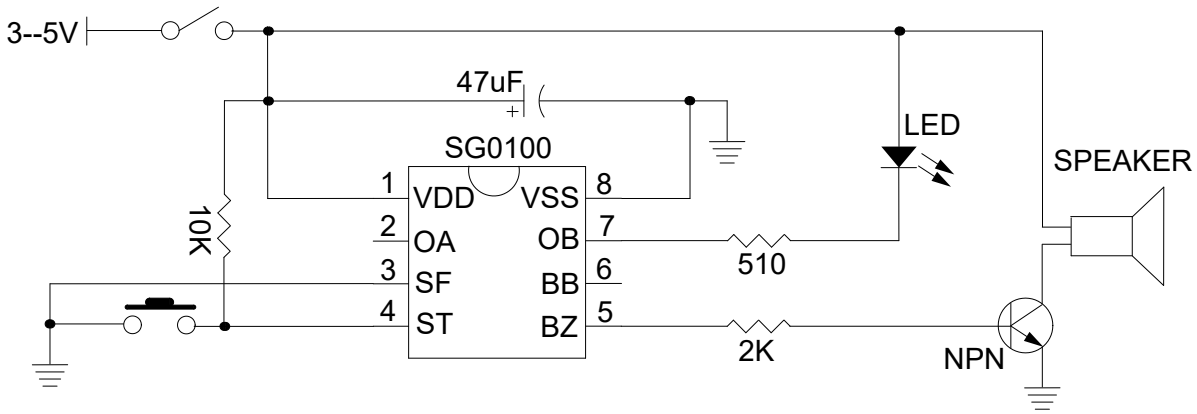
● Electronic Characteristics (Unless otherwise specified,Ta=25℃, VDD=5.0V)

Parameter	Symbol	MIN	Typ.	MAX	Unit	Note
Operating Voltage	VDD	2.1	3.0	5.0	V	
Standby Current	Istb	--	1	5	uA	VDD=3.0V
Standby Current	Istb	--	30	50	uA	VDD=5.0V
Operating Current	Iop	--	1	1.5	mA	No load
BZ/BB Drive current	Io	10		-	mA	
OA/OB Drive current	Ioa/ob	10		-	mA	
Input high level voltage	V_{IH}	0.8VDD	--	VDD	V	
Input low level voltage	V_{IL}	VSS	--	0.2VDD	V	

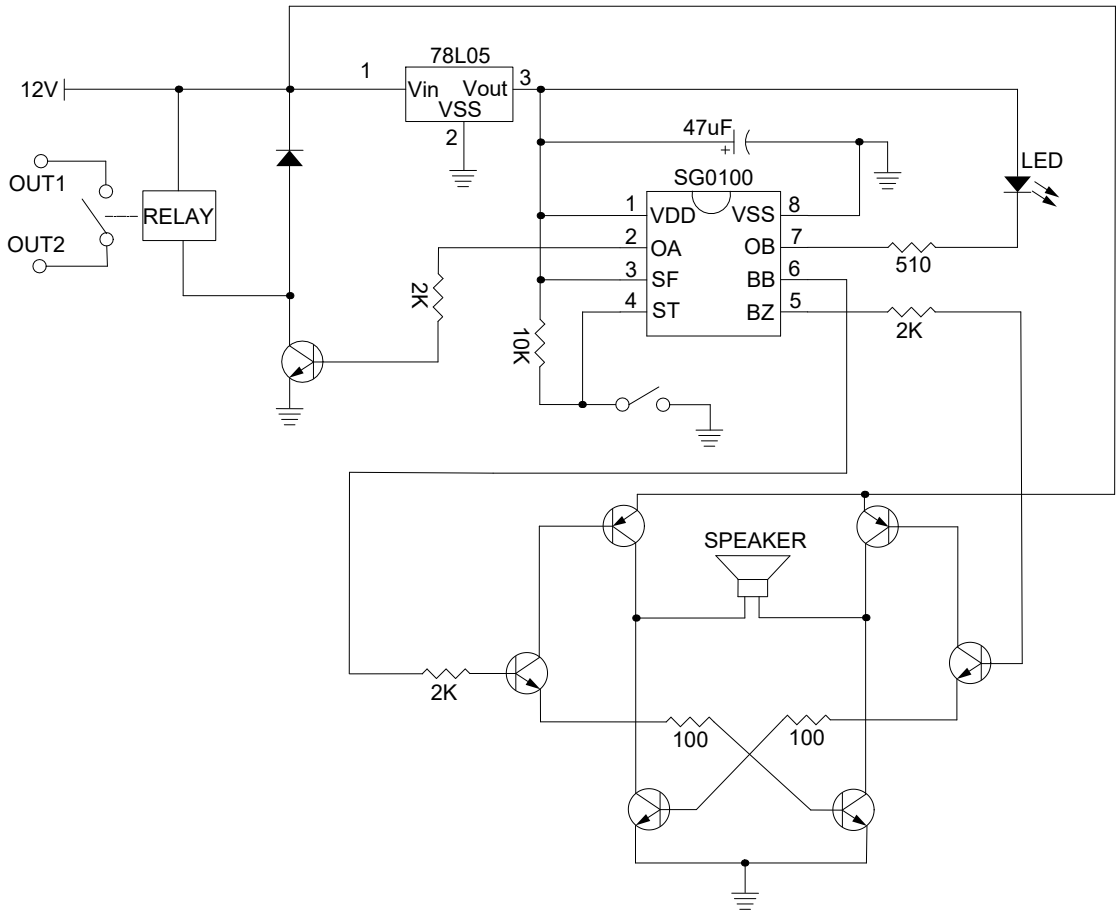
Reference application circuit



Application example 1: IC alarms when power is on, and stops when power is off. The circuit is simple and the quiescent current is zero.



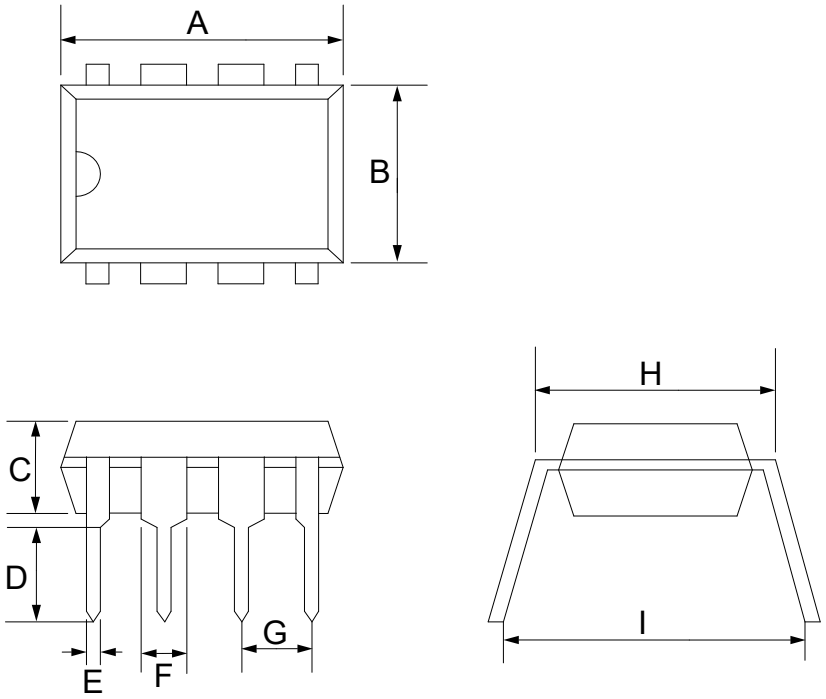
Application example 2: The IC is in the standby state after power-on, and alarms after S1 is triggered, and it can be stopped only when the power is turned off



Application example 3: Multi-function, high volume, can control other alarm circuits

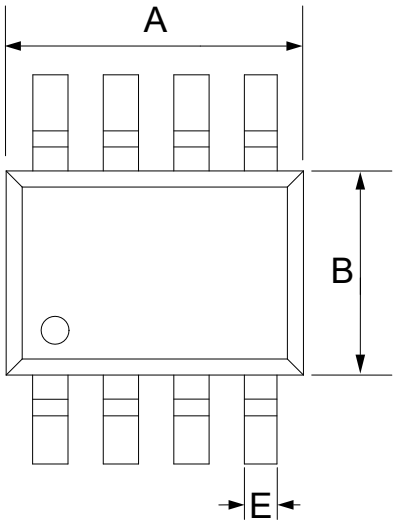
■ PAGKAGE DIMENSION:

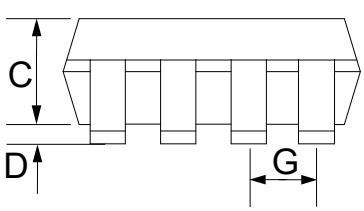
● 8-PIN PDIP 300mil

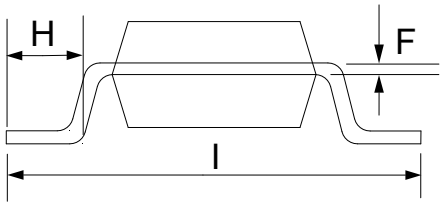


SYMBOLS	MIN	TYP.	MAX	MIN	TYP.	MAX
	Dimensions (inches)			Dimensions (mm)		
A	0.355	0.365	0.400	9.02	9.27	10.16
B	0.240	0.250	0.280	6.10	6.35	7.11
C	0.115	0.130	0.195	2.92	3.30	4.95
D	0.115	0.130	0.150	2.92	3.30	3.81
E	0.014	0.018	0.022	0.36	0.46	0.56
F	0.045	0.060	0.070	1.14	1.52	1.78
G	--	0.100	--	--	2.54	--
H	0.300	0.310	0.325	7.26	7.87	8.26
I	--	--	0.43	--	--	10.92

- 8-PIN SOP 150mil







SYMBOLS	MIN	TYP.	MAX	MIN	TYP.	MAX
	Dimensions (inches)			Dimensions (mm)		
A	--	0.193	--	--	4.90	--
B	--	0.154	--	--	3.90	--
C	--	--	0.069	--	--	1.75
D	0.004	--	0.010	0.10	--	0.25
E	0.012	--	0.020	0.31	--	0.51
F	0.004	--	0.010	0.10	--	0.25
G	--	0.050	--	--	1.27	--
H	0.016	--	0.050	0.40	--	1.27
I	--	0.236	--	--	6.00	--