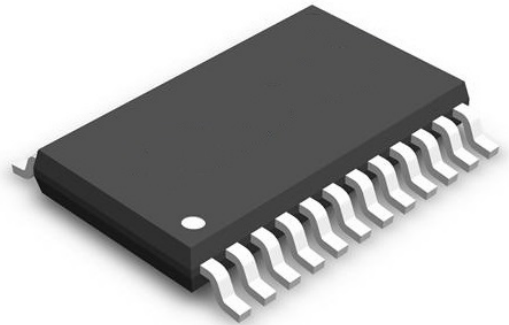


GENERAL DESCRIPTION

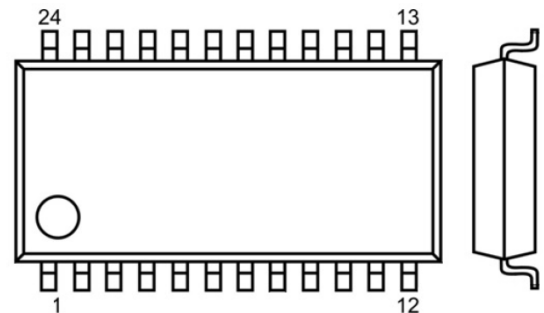
Photoelectric smoke detectors main processor, IK7008SD remove the noise of output signal detect the signal level and transfer the alarm signal to power amp if the signal level found as fire. And main processor check the battery and transfer voice signal to power amp if replacement necessary. It has interworking function with test button as add. Test Button can check the working condition of product when supplied initial power, and check the conditions of darkroom, it sounds 'bee- fire' if it works properly. It can be operated in low voltage and current for the use of batteries, and it is a product designed to work for 10 maximum years if designed for the life of battery by using lithium battery.



TSSOP-24

FEATURES

- Low Voltage Operation. (1.8V-3.6V)
- Built-in voice
- Low voltage alarm (voice) output
- Low power consumption
- Chamber sensitivity test feature
- Built-in digital noise filters
- Lithium battery can be used for 10 years



APPLICATIONS

Photoelectric Smoke Detectors

Pin	Pin Name (Main Function)
1	PC4
2	PC6
3	PE6
4	PE7
5	PA0
6	PA1/NRST
7	PA6
8	PA7
9	VSS, VSSA, VREF-
10	VDD, VDDA, VREF+, VLCD
11	PE1
12	PE2
13	PD0
14	PD1
15	PD2
16	PB3
17	PF0
18	PD4
19	PD5
20	PD6
21	PD7
22	VDDIO
23	VSSIO
24	PC3

Absolute maximum ratings

Stresses above those listed as “absolute maximum ratings” may cause permanent damage to the device. This is a stress rating only and functional operation of the device under these conditions is not implied. Exposure to maximum rating conditions for extended periods may affect device reliability.

Voltage characteristics

Symbol	Ratings	Min	Max	Unit
$V_{DD} - V_{SS}$	External supply voltage (including V_{DDA} and V_{DD2}) ⁽¹⁾	- 0.3	4.0	V
$V_{IN}^{(2)}$	Input voltage on true open-drain pins (PC0 and PC1)	$V_{SS} - 0.3$	$V_{DD} + 4.0$	V
	Input voltage on five-volt tolerant (FT) pins (PA7 and PE0)	$V_{SS} - 0.3$	$V_{DD} + 4.0$	
	Input voltage on 3.6 V tolerant (TT) pins	$V_{SS} - 0.3$	4.0	
	Input voltage on any other pin	$V_{SS} - 0.3$	4.0	

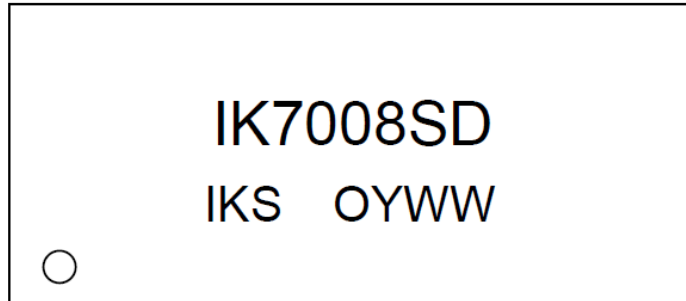
1. All power (V_{DD1} , V_{DD2} , V_{DDA}) and ground (V_{SS1} , V_{SS2} , V_{SSA}) pins must always be connected to the external power supply.
2. V_{IN} maximum must always be respected.

Current characteristics

Symbol	Ratings	Max.	Unit
I_{VDD}	Total current into V_{DD} power line (source)	80	mA
I_{VSS}	Total current out of V_{SS} ground line (sink)	80	
I_{IO}	Output current sunk by IR_TIM pin (with high sink LED driver capability)	80	
	Output current sunk by any other I/O and control pin	25	
	Output current sourced by any I/Os and control pin	- 25	
$I_{INJ(PIN)}$	Injected current on true open-drain pins (PC0 and PC1) ⁽¹⁾	- 5 / +0	mA
	Injected current on five-volt tolerant (FT) pins (PA7 and PE0) ⁽¹⁾	- 5 / +0	
	Injected current on 3.6 V tolerant (TT) pins ⁽¹⁾	- 5 / +0	
	Injected current on any other pin ⁽²⁾	- 5 / +5	
$\Sigma I_{INJ(PIN)}$	Total injected current (sum of all I/O and control pins) ⁽³⁾	± 25	

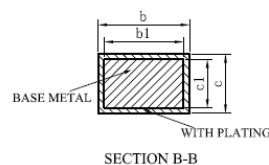
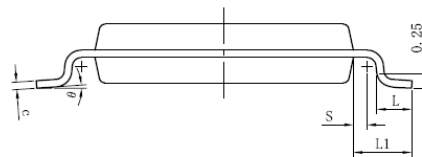
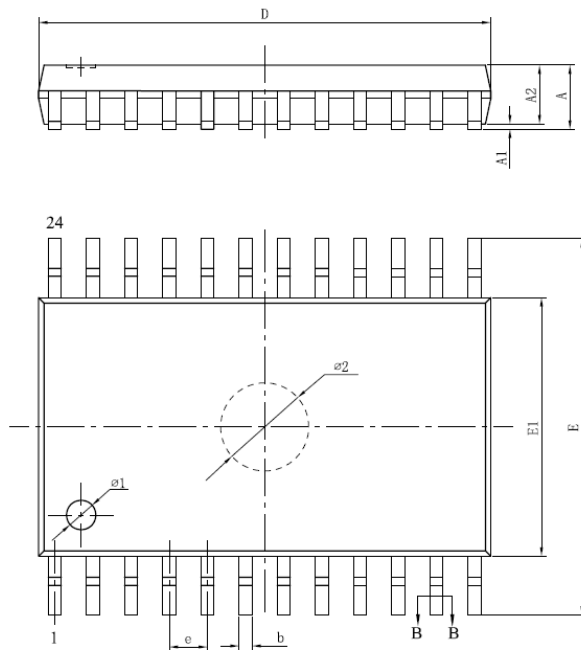
1. Positive injection is not possible on these I/Os. A negative injection is induced by $V_{IN} < V_{SS}$. $I_{INJ(PIN)}$ must never be exceeded.
2. A positive injection is induced by $V_{IN} > V_{DD}$ while a negative injection is induced by $V_{IN} < V_{SS}$. $I_{INJ(PIN)}$ must never be exceeded.
3. When several inputs are submitted to a current injection, the maximum $\Sigma I_{INJ(PIN)}$ is the absolute sum of the positive and negative injected currents (instantaneous values).

MARKING INFORMATION (TOP View)



- Marking Method : Laser
- Character Type : Arial
- Marking Size 및 Instruction
- O (Assembly Site Code) : A, B, C, ... (ex. Integral -> "I")
- Y (Production Year) : 2010 -> A, 2011 -> B, 2012 -> C...
- WW (Production Week) : 01,02,03,...,52.

PACKAGE DIMENSION



SYMBOL	MILLIMETER	
	MIN	MAX
A	—	1.20
A1	0.05	0.15
A2	0.80	1.05
b	0.19	0.30
b1	0.19	0.25
c	0.09	0.20
c1	0.09	0.16
D	7.70	7.90
E	6.20	6.60
E1	4.30	4.50
e	0.65BSC	
L	0.45	0.75
L1	1.00BSC	
S	0.20	—
Ø1	Ø0.830 ±0.10DP	
Ø2	Ø1.500 ±0.15DP	
θ	0	8°

TSSOP24L