KODENSHI AUK

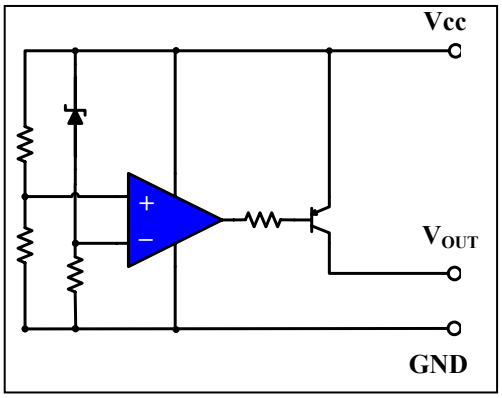
SJ76Hxxx

Standard Voltage Detector (Active High)

Description

• The SJ76Hxxx has the function of detecting the supply voltage at the time of power reset during the power initializing and instantaneous break in power supply voltage and this series are designed as high resetting output type.

Equivalent Circuit



Features

- Current Consumption is Low (I_{CCL}=30 ㎂ Typ. I_{CCH}=300 ㎂ Typ.)
- Resetting Output Minimum Guarantee Voltage is Low (0.8V Typ.)
- Hysteresis Voltage is Provided (50 ㎷ Typ.)
- Open Emitter Output Configuration

Applications

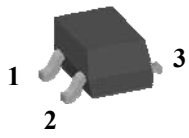
- As Control Circuit of Battery-Backed Memory
- As Measure Against Erroneous Operations at Power On-Off
- As Resetting Function for the CPU-Mounted Equipment --- PC, Printer, DVD, STB, Fax, C-TV etc.
- As Measure Against System Runaway at Instantaneous Break of Power Supply etc.

Ordering Information

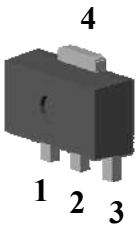
Type NO.	Marking	Package Code
SJ76Hxxx	H □□ □ ① ② ③	SOT-23
	76H □□ □ ① ② ③	SOT-89 TO-92M

①Device Code ②Detecting Voltage Code ------- (First Line)
③Year&Week Code ---------- (SOT-23: First Line, SOT-89/TO-92M : Second Line)

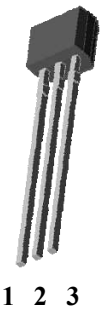
Pin Assignment (Marking Side View)



SJ76HxxS
1. : V_{OUT}
2. : Vcc
3. : GND



SJ76HxxF
1. : Vcc
2. : GND
3. : V_{OUT}
4. : GND



SJ76HxxM
1. : Vcc
2. : GND
3. : V_{OUT}

Maximum ratings

(Ta=25°C)

Characteristic		Symbol	Ratings	Unit
Supply Voltage		V_{CC}	-0.3 ~ +15	V
Power Dissipation	SJ76HxxS	P_D	300	mW
	SJ76HxxF		500	
	SJ76HxxM		400	
Output Voltage		V_{OUT}	-0.3 ~ +15	V
Operating Temperature Range		T_{OPR}	-30 ~ +85	℃
Storage Temperature Range		T_{STG}	-55 ~ +150	℃

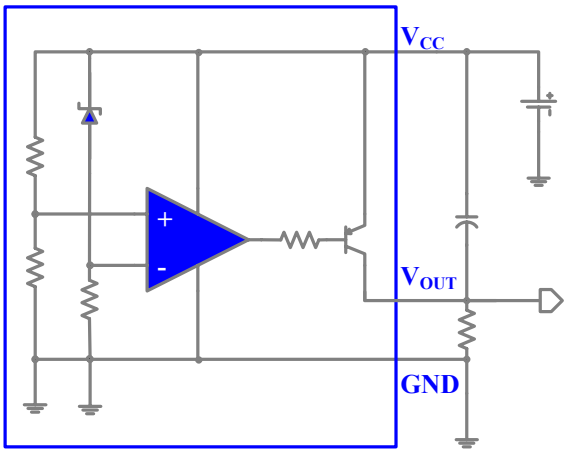
* With PCB(50mm² copper area) at glass epoxy board (t=1.7mm, area=50×50mm)

Electrical Characteristics

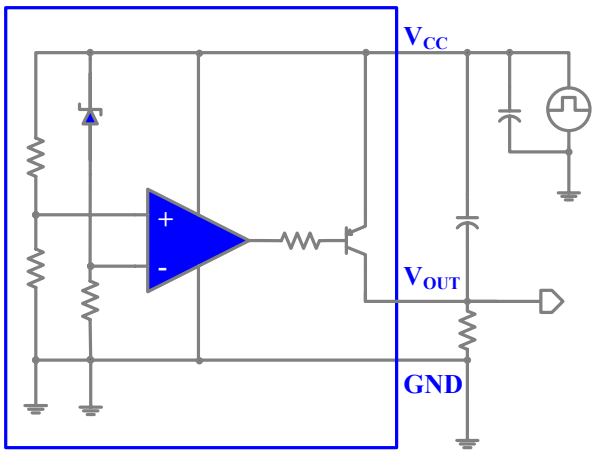
(Ta=25°C)

Characteristic	Symbol	Test Circuit	Test Condition		Min.	Typ.	Max.	Unit
Detecting Voltage	V_S	1	R_L=4.7kΩ $V_{OH} \geq V_{OL}$-0.4V	SJ76H19x	1.75	1.90	2.05	V
				SJ76H21x	1.95	2.10	2.25	
				SJ76H23x	2.15	2.30	2.45	
				SJ76H25x	2.35	2.50	2.65	
				SJ76H27x	2.55	2.70	2.85	
				SJ76H29x	2.75	2.90	3.05	
				SJ76H31x	2.95	3.10	3.25	
				SJ76H32x	3.05	3.20	3.35	
				SJ76H33x	3.15	3.30	3.45	
				SJ76H34x	3.25	3.40	3.55	
				SJ76H35x	3.35	3.50	3.65	
				SJ76H36x	3.45	3.60	3.75	
				SJ76H39x	3.75	3.90	4.05	
				SJ76H42x	4.05	4.20	4.35	
				SJ76H45x	4.35	4.50	4.65	
Hysteresis Voltage	ΔV_S	1	R_L=4.7kΩ, V_{CC} = L→H→L		20	50	100	mV
Temperature Coefficient of Detecting Voltage	V_S /ΔT	1	R_L =4.7kΩ, Ta= -30 ~ +85℃		-	±0.01	-	%/℃
Low Level Output voltage	V_{OL}	1	R_L=4.7kΩ V_{CC}=V_S Min-0.05V		V_{CC}-0.4	-	-	V
Output Leakage Current	I_{LEAK}	1	V_{OUT}=15V, V_{OUT}=15V		-	0.01	0.1	uA
Circuit Current at OFF	I_{CCL}	1	V_{CC} = 5.25V		-	30	70	uA
Circuit Current at ON	I_{CCH}	1	V_{CC} = V_S Min – 0.05V		-	300	500	uA
Threshold Operating Voltage	V_{OPR}	1	R_L =4.7kΩ, $V_{OH} \geq V_{CC}$ -0.4V		-	0.8	-	V
Output Current at ON I	I_{OH}	1	R_L=0Ω, V_{CC}=V_SMin-0.05V		20	-	-	mA
L→H Transmission delay time	t_{PLH}	2	R_L =4.7 kΩ, C_L=100 pF		-	10	-	us
H→L Transmission delay time	t_{PHL}	2	R_L =4.7 kΩ, C_L=100 pF		-	10	-	us

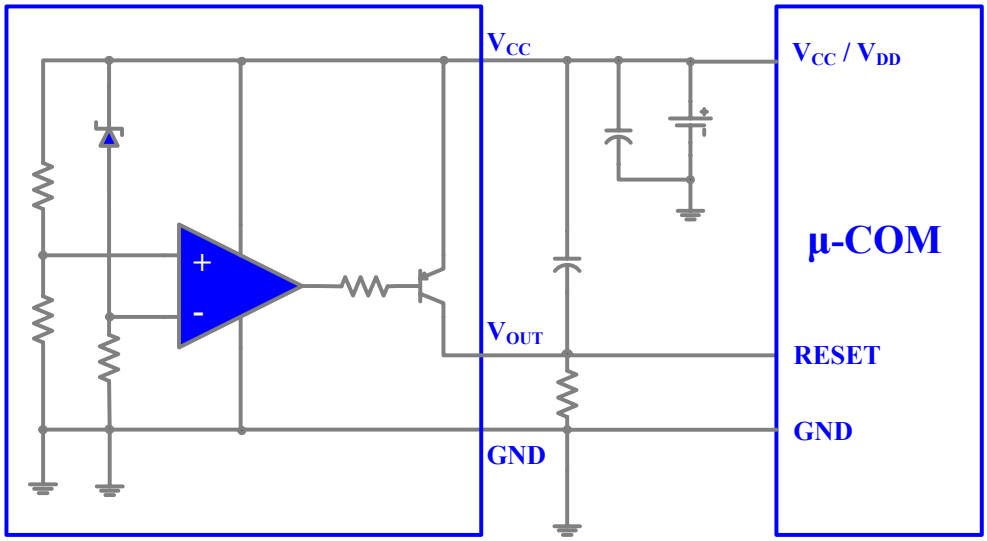
Test Circuit 1



Test Circuit 2



Typical Application Circuit for System Reset



Electrical Characteristic Curves

Fig. 1 V_{OUT} – V_{CC}

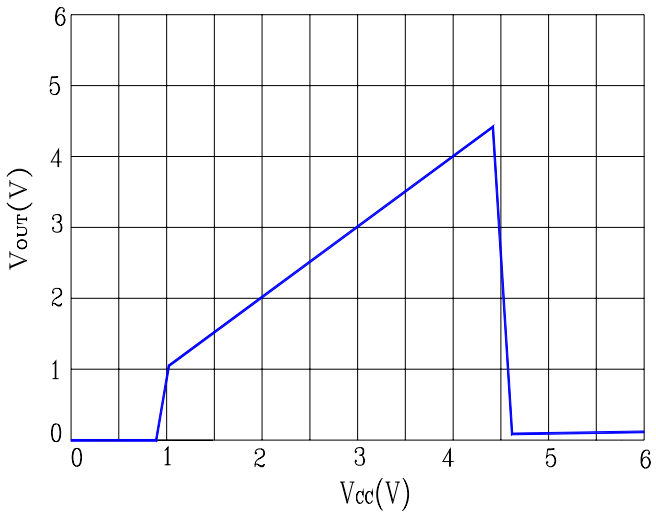


Fig. 2 I_{CC} - V_{CC}

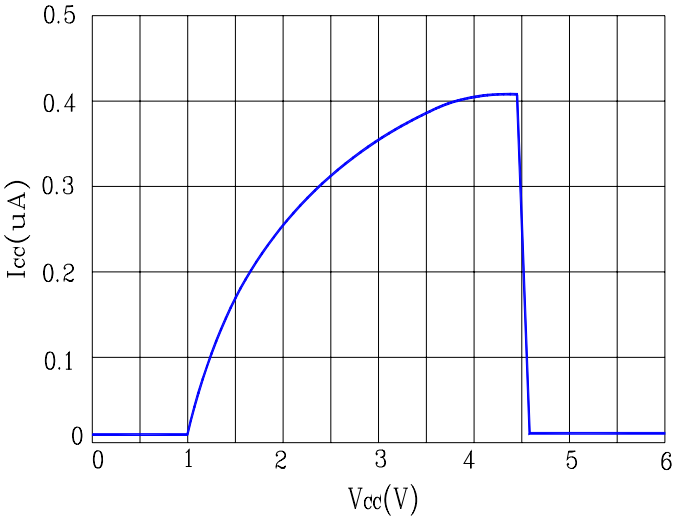


Fig. 3 I_{CCH} – Ta

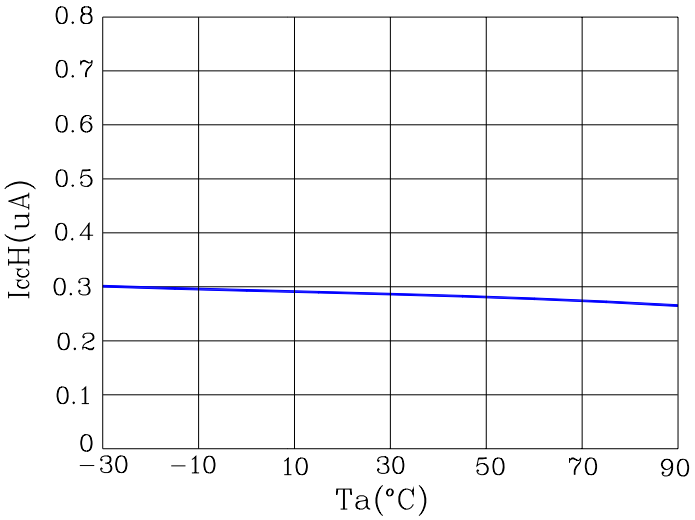
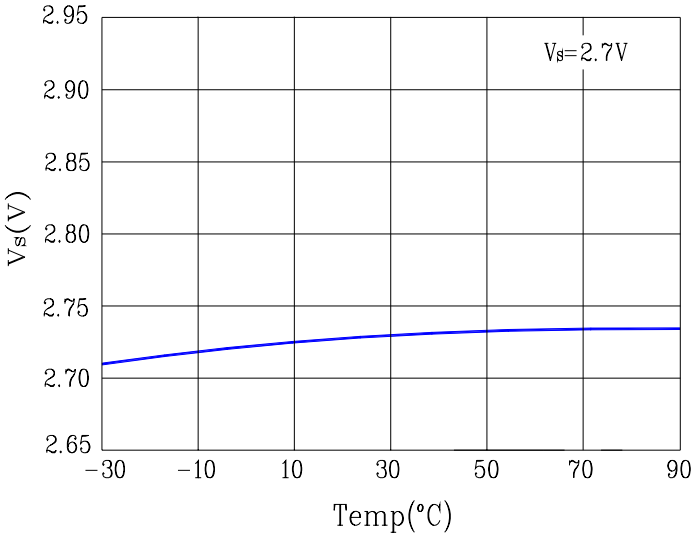
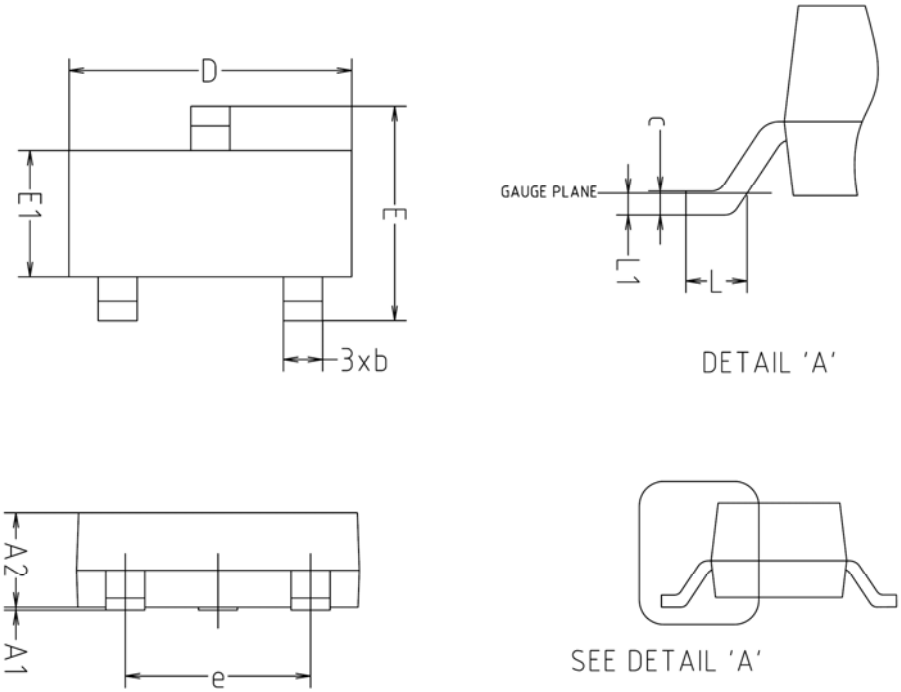


Fig. 4 V_S – Ta

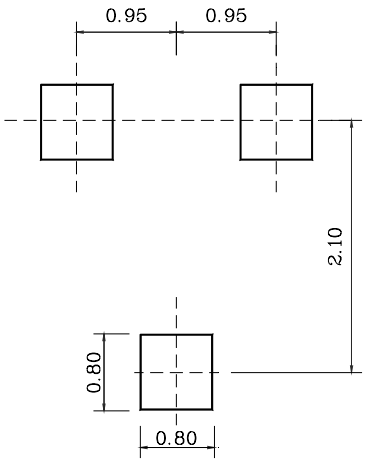


Outline Dimension

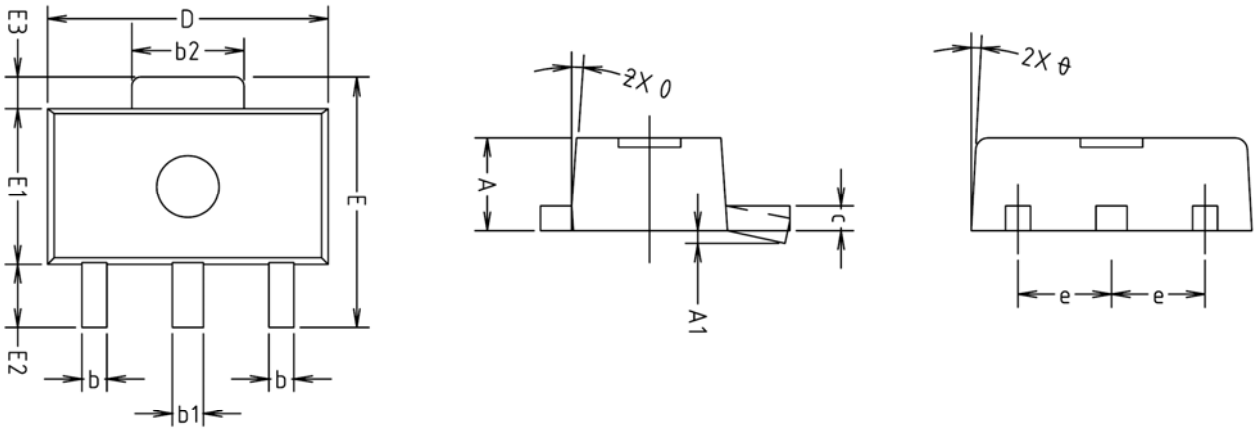


SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A1	0.00	-	0.10	
A2	0.82	-	1.02	
b	0.39	0.42	0.45	
c	0.09	0.12	0.15	
D	2.80	2.90	3.00	
E	2.20	2.40	2.60	
E1	1.20	1.30	1.40	
e	1.90BSC			
L	0.20	-	-	
L1	0.12BSC			

Recommend PCB Solder Land Dimension (Unit : mm)

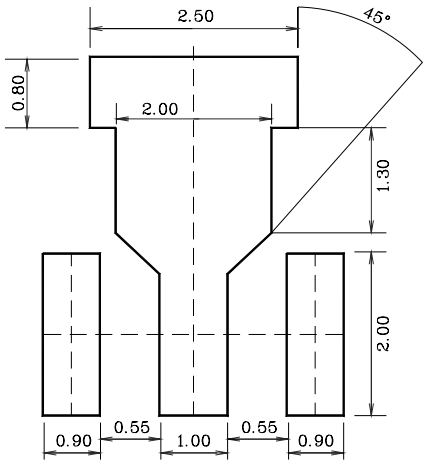


Outline Dimension

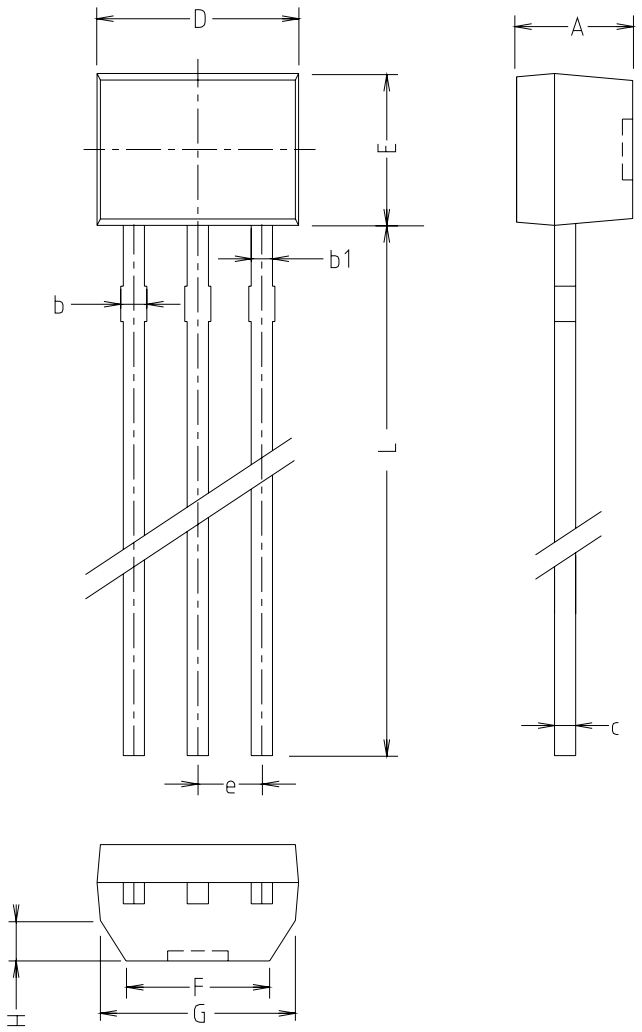


SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	1.40	1.50	1.60	
A1	0.00	–	0.10	
b	0.38	0.42	0.48	
b1	0.48	0.52	0.58	
b2	1.79	1.82	1.87	
c	0.40	0.42	0.46	
D	4.40	4.50	4.70	
E	3.70	4.00	4.30	
E1	2.40	2.50	2.70	
E2	0.80	1.00	1.20	
E3	0.40	0.50	0.60	
e	1.50 TYP.			
θ	4° TYP.			

Recommend PCB Solder Land Dimension (Unit : mm)



Outline Dimension



SYMBOL	MILLMETERS(mm)		
	MINIMUM	NOMINAL	MAXIMUM
A	2.20	2.30	2.40
b	–	0.50	–
b1	–	0.44	–
c	–	0.42	–
D	3.90	4.00	4.10
E	2.90	3.00	3.10
e	–	1.27	–
L	–	14.50	15.00
F	2.80	2.85	2.90
G	3.80	–	–
H	–	0.70	–

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