

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.

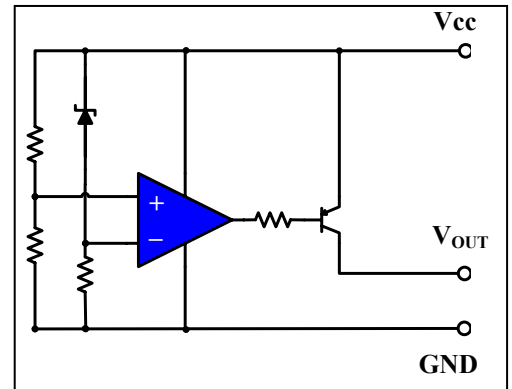
Features

- Current Consumption is Low ($I_{CCL}=30 \mu A$ Typ. $I_{CCH}=300 \mu A$ Typ.)
- Resetting Output Minimum Guarantee Voltage is Low (0.8V Typ.)
- Hysteresis Voltage is Provided (50 mV 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.

Equivalent Circuit



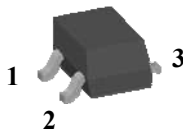
Ordering Information

Type NO.	Marking	Package Code
SJ76Hxxx	$\frac{H}{\textcircled{1}}$ $\frac{\square\square}{\textcircled{2}}$ $\frac{\square}{\textcircled{3}}$	SOT-23
	$\frac{76H}{\textcircled{1}}$ $\frac{\square\square}{\textcircled{2}}$ $\frac{\square}{\textcircled{3}}$	SOT-89 TO-92M

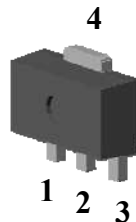
①Device Code ②Detecting Voltage Code ----- (First Line)

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

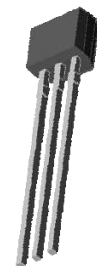
Pin Assignment (Marking Side View)



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



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



SJ76HxxM
1. : V_{CC}
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	°C
Storage Temperature Range		T _{STG}	-55 ~ +150	°C

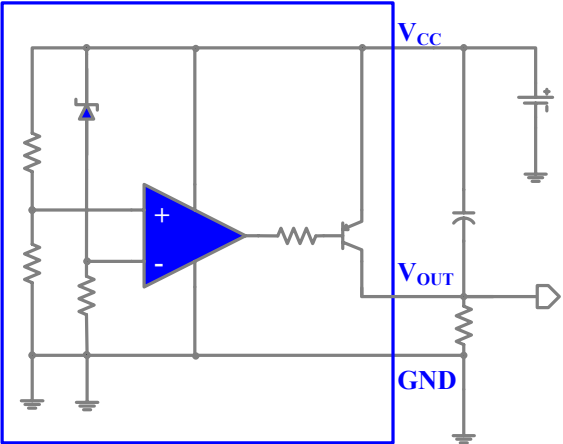
* With PCB(50mm² copper area) at glass epoxy board (t=1.7mm, area=50×50mm)

Electrical Characteristics

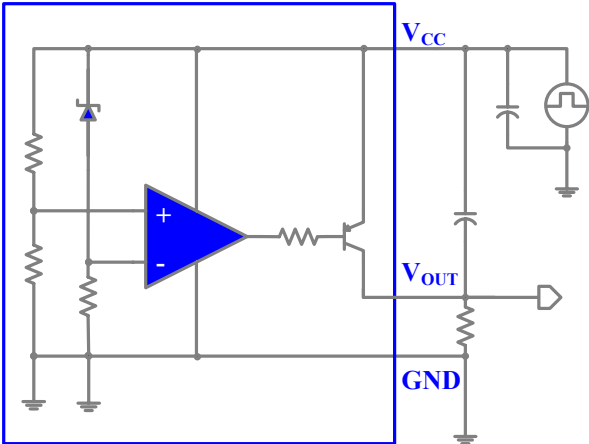
(Ta=25°C)

Characteristic	Symbol	Test Circuit	Test Condition	Min.	Typ.	Max.	Unit	
Detecting Voltage	V _S	1	R _L =4.7kΩ V _{OH} ≥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 °C	-	±0.01	-	%/°C	
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} ≥ V _{CC} -0.4V	-	0.8	-	V	
Output Current at ON I	I _{OH}	1	R _L =0Ω, V _{CC} =V _S Min-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	

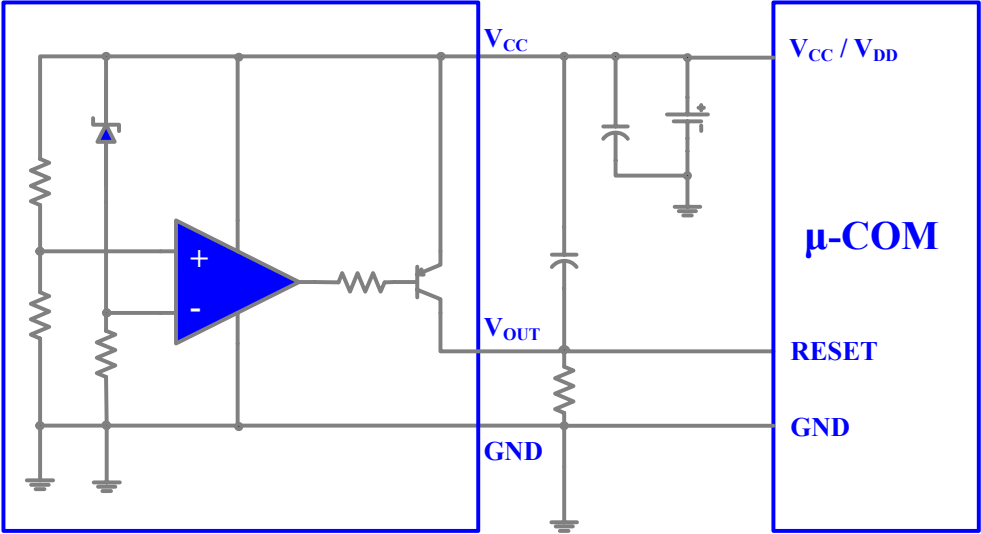
Test Circuit 1



Test Circuit 2



Typical Application Circuit for System Reset



Electrical Characteristic Curves

Fig. 1 $V_{OUT} - V_{CC}$

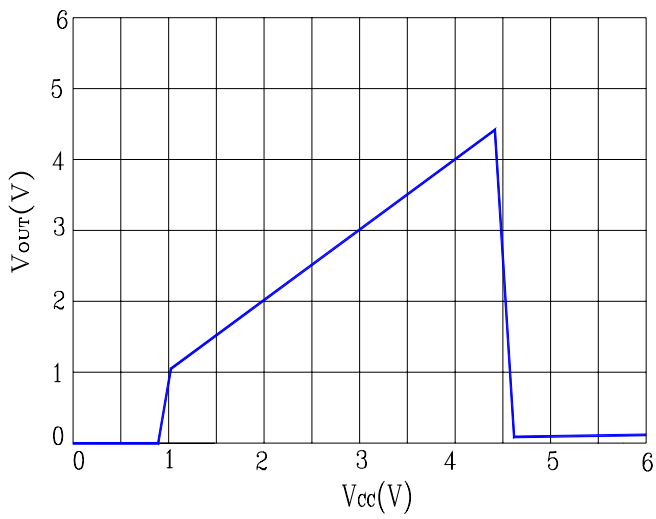


Fig. 2 $I_{CC} - V_{CC}$

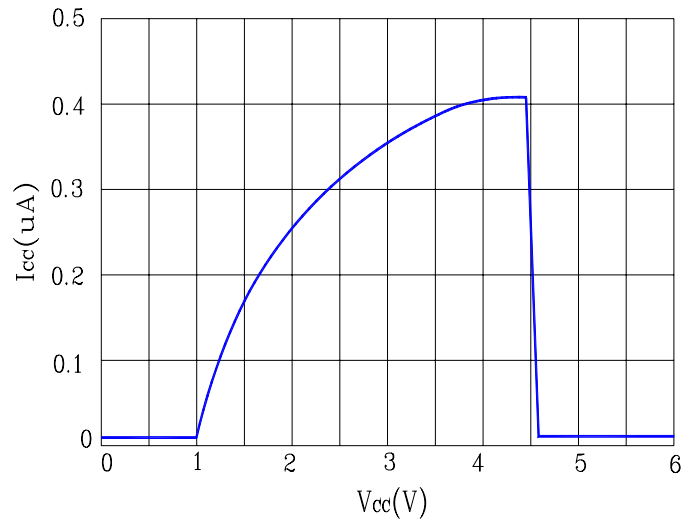


Fig. 3 $I_{CCH} - T_a$

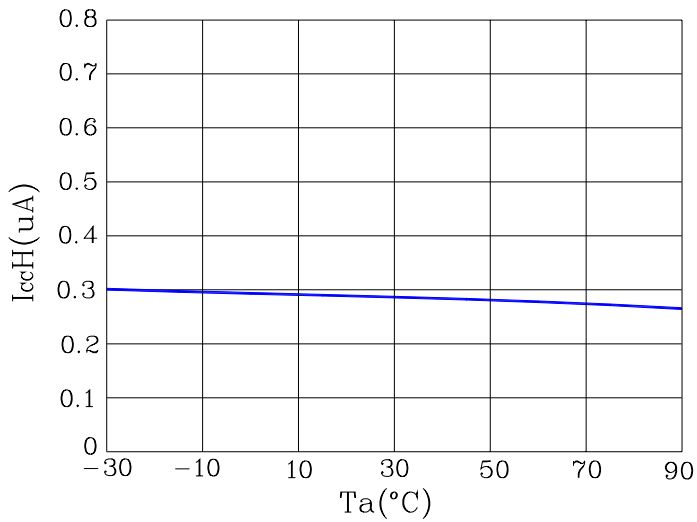
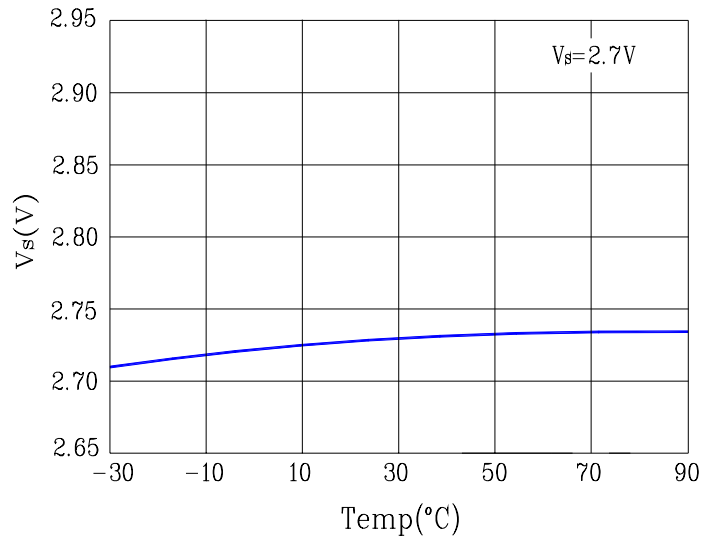
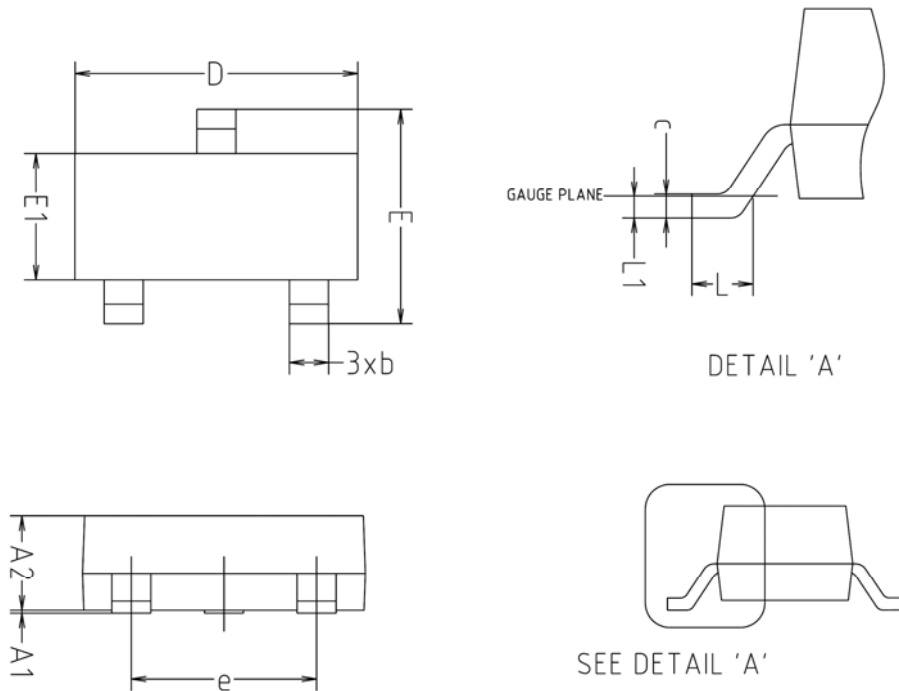


Fig. 4 $V_S - T_a$

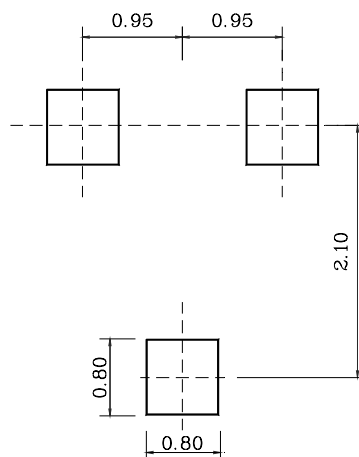


Outline Dimension

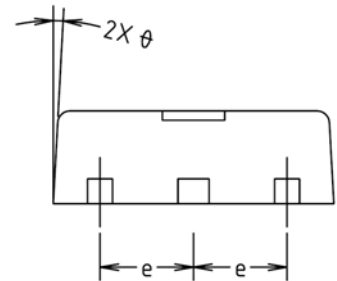
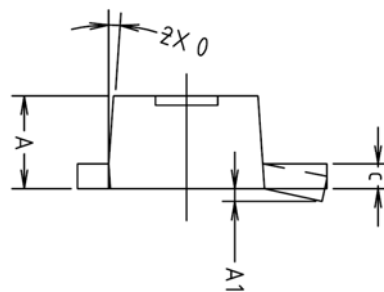
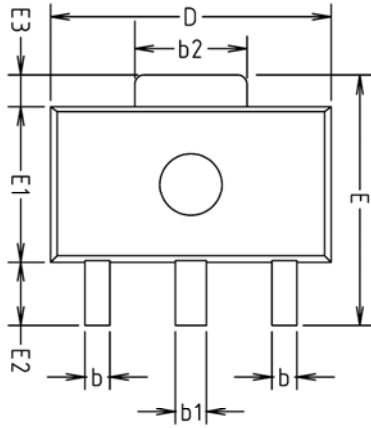


SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A1	0.00	-	0.10	
A2	0.82	-	1.02	
b	0.39	0.42	0.45	
c	0.09	0.12	0.15	
D	2.80	2.90	3.00	
E	2.20	2.40	2.60	
E1	1.20	1.30	1.40	
e	1.90BSC			
L	0.20	-	-	
L1	0.12BSC			

Recommend PCB Solder Land Dimension (Unit : mm)

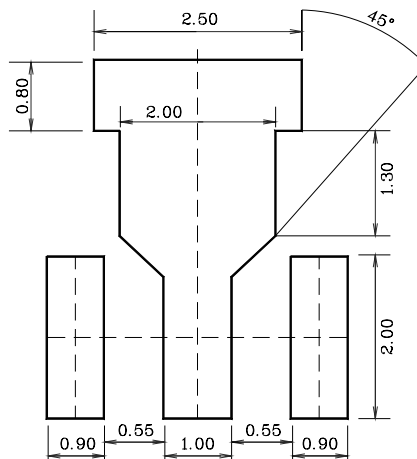


Outline Dimension

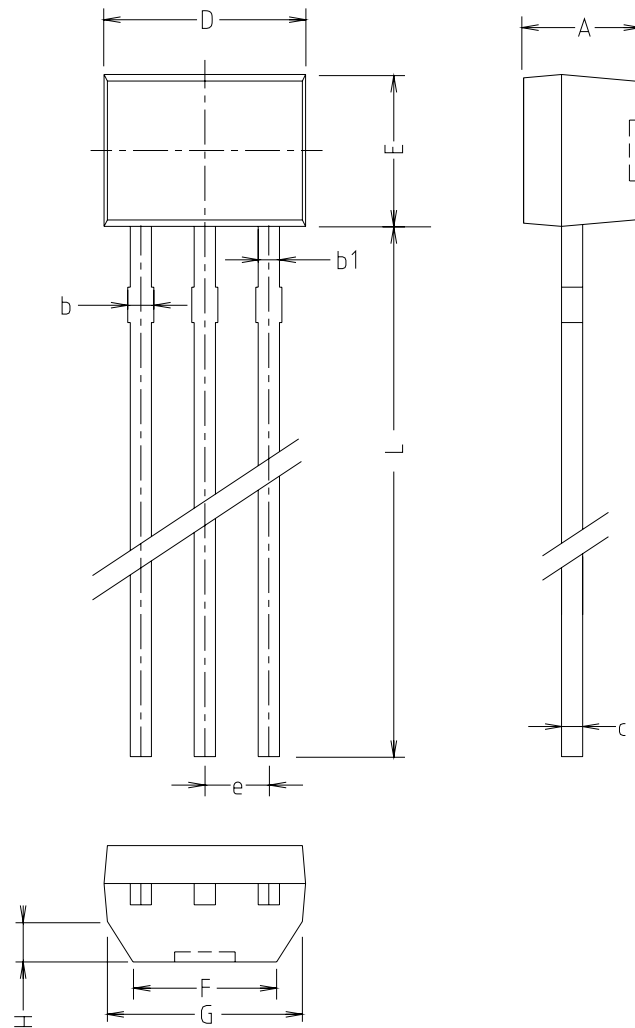


SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	1.40	1.50	1.60	
A1	0.00	-	0.10	
b	0.38	0.42	0.48	
b1	0.48	0.52	0.58	
b2	1.79	1.82	1.87	
c	0.40	0.42	0.46	
D	4.40	4.50	4.70	
E	3.70	4.00	4.30	
E1	2.40	2.50	2.70	
E2	0.80	1.00	1.20	
E3	0.40	0.50	0.60	
e	1.50 TYP.			
theta	4° TYP.			

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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