KODENSHI AUK

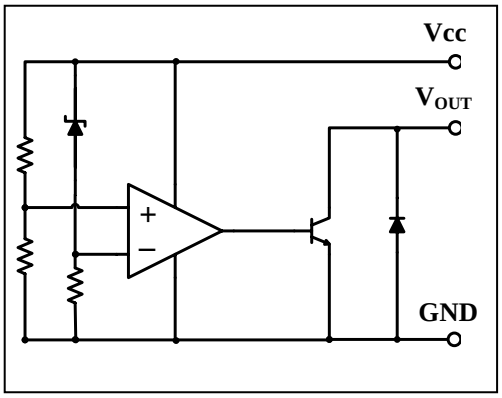
SJ73Lxxx

Standard Voltage Detector

Description

• The SJ73Lxxx prevents the error of system from supply voltage below normal voltage level at the time of the power on and instantaneous power off in systems.

Equivalent Circuit



Features

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

Applications

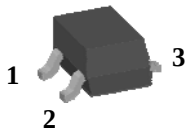
- As Control Circuit of Battery-Backed Memory
- As Measure Against Erroneous Operations at Power On-Off
- As Resetting Function for the CPU-Mounted Equipment --- PC, Printer, DVD, STB, Fax, C-TV etc.
- As Measure Against System Runaway at Instantaneous Break of Power Supply etc.

Ordering Information

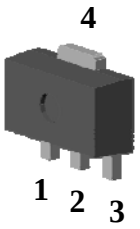
Type NO.	Marking	Package Code
SJ73Lxxx	L □□ □ ① ② ③	SOT-23
	73L □□ □ ① ② ③	SOT-89 TO-92M

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

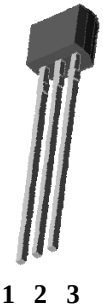
Pin Assignment (Marking Side View)



SJ73LxxS
1. : V_{OUT}
2. : Vcc
3. : GND



SJ73LxxF
1. : Vcc
2. : GND
3. : V_{OUT}
4. : GND



SJ73LxxM
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	SJ73LxxS	P_D	300	mW
	SJ73LxxF		500	
	SJ73LxxM		400	
Output Voltage		V_{OUT}	-0.3 ~ +15	V
Operating Temperature Range		T_{OPR}	-30 ~ +85	℃
Storage Temperature Range		T_{STG}	-55 ~ +150	℃

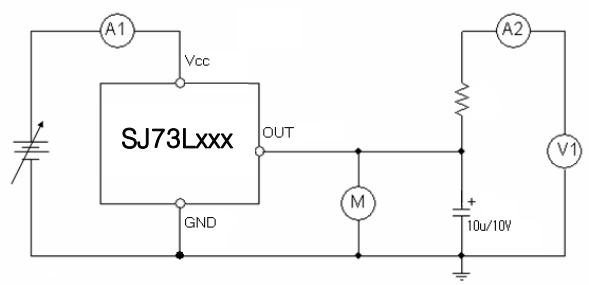
* With PCB(50mm² copper area) at glass epoxy board (t=1.7mm, area=50×50mm)

Electrical Characteristics

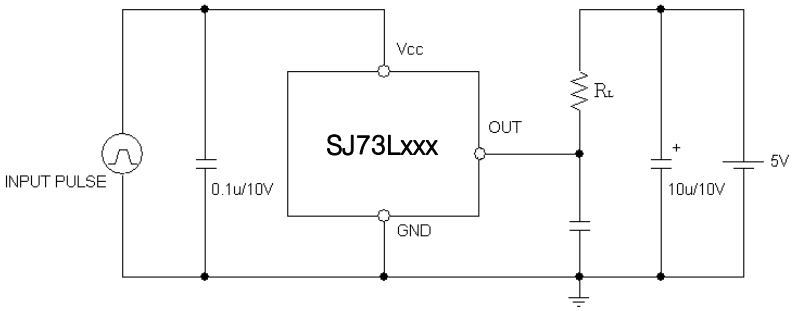
(Ta=25°C)

Characteristic	Symbol	Test Circuit	Test Condition		Min.	Typ.	Max.	Unit
Detecting Voltage	V_S	1	R_L=200Ω V_{CC}=H→L V_{OL}≤0.4V	SJ73L19	1.75	1.90	2.05	V
				SJ73L21	1.95	2.10	2.25	
				SJ73L23	2.15	2.30	2.45	
				SJ73L25	2.35	2.50	2.65	
				SJ73L27	2.55	2.70	2.85	
				SJ73L29	2.75	2.90	3.05	
				SJ73L31	2.95	3.10	3.25	
				SJ73L32	3.05	3.20	3.35	
				SJ73L33	3.15	3.30	3.45	
				SJ73L34	3.25	3.40	3.55	
				SJ73L35	3.35	3.50	3.65	
				SJ73L36	3.45	3.60	3.75	
				SJ73L39	3.75	3.90	4.05	
				SJ73L42	4.05	4.20	4.35	
				SJ73L45	4.35	4.50	4.65	
Hysteresis Voltage	ΔV_S	1	R_L=200Ω, V_{CC} = L→H→L		30	50	100	mV
Temperature Coefficient of Detecting Voltage	V_S /ΔT	1	R_L =200Ω, Ta= -30 ~ +75℃		-	±0.01	-	%/℃
Low Level Output voltage	V_{OL}	1	R_L=200Ω, V_{CC}=V_S Min-0.05V		-	-	0.4	V
Output Leakage Current	I_{LEAK}	1	V_{OUT}=15V		-	-	0.1	μA
Circuit Current at ON	I_{CCL}	1	V_{CC} = V_S Min – 0.05V		-	300	500	μA
Circuit Current at OFF	I_{CCH}	1	V_{CC} = 5.25V		-	30	50	μA
Threshold Operating Voltage	V_{OPR}	1	R_L =200Ω, V_{OL}≤0.4V		-	0.8	1.6	V
Output Current at ON I	I_{OL} I	1	R_L =0Ω, V_{CC} = V_S Min - 0.05V		20	-	-	mA
Output Current at ON II	I_{OL} II	1	R_L =0Ω, V_{CC} = V_S Min - 0.05V Ta= -30 ~ +75℃		16	-	-	mA
L→H Transmission delay time	t_{PLH}	2	R_L =1.0 kΩ, C_L=100 pF		-	15	-	μs
H→L Transmission delay time	t_{PHL}	2	R_L =1.0 kΩ, C_L=100 pF		-	10	-	μs

Test Circuit 1

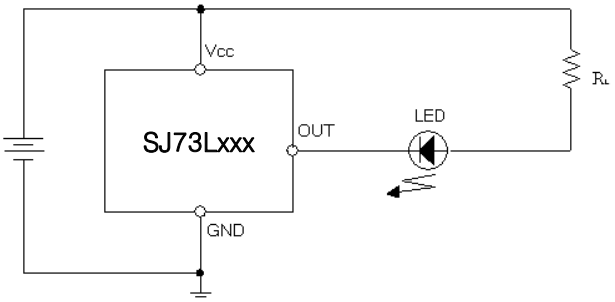


Test Circuit 2



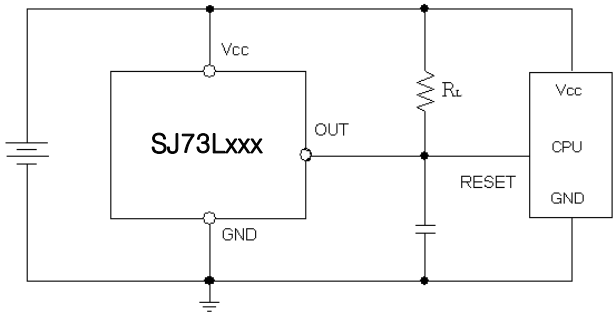
Application Circuit

(1) Battery Low Indicator



Note 1. : Connecting of LED and R2 obtains a voltage drop indicator.

(2) Resetting for CPU



Electrical Characteristic Curves

Fig. 1 V_{OUT} – V_{CC}

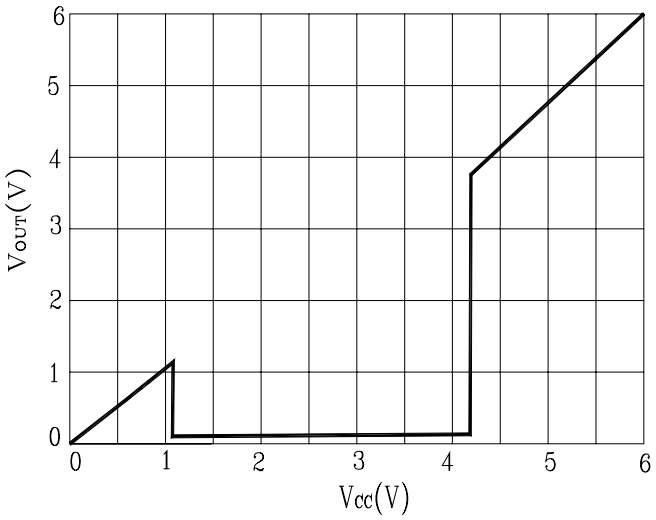


Fig. 2 I_{CC} - V_{CC}

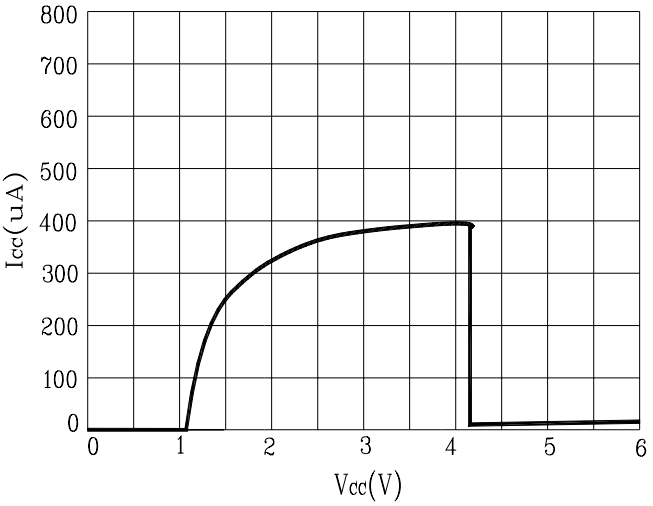


Fig. 3 I_{CCH} – Ta

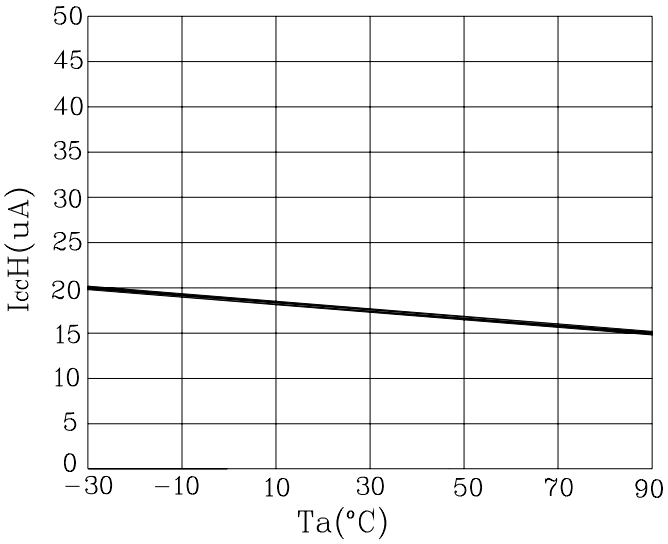
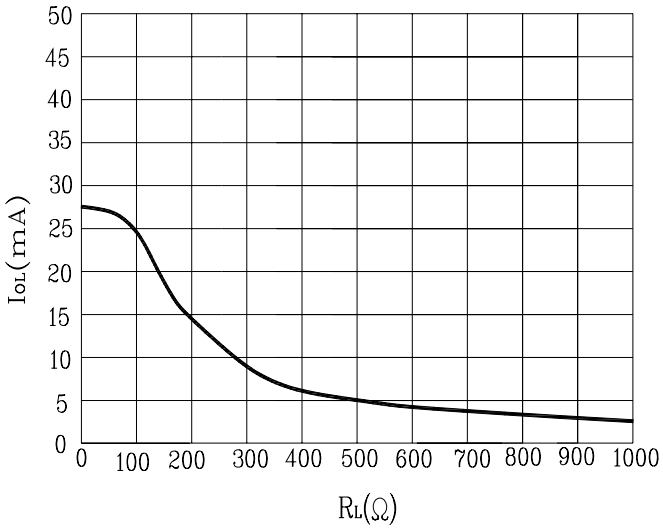
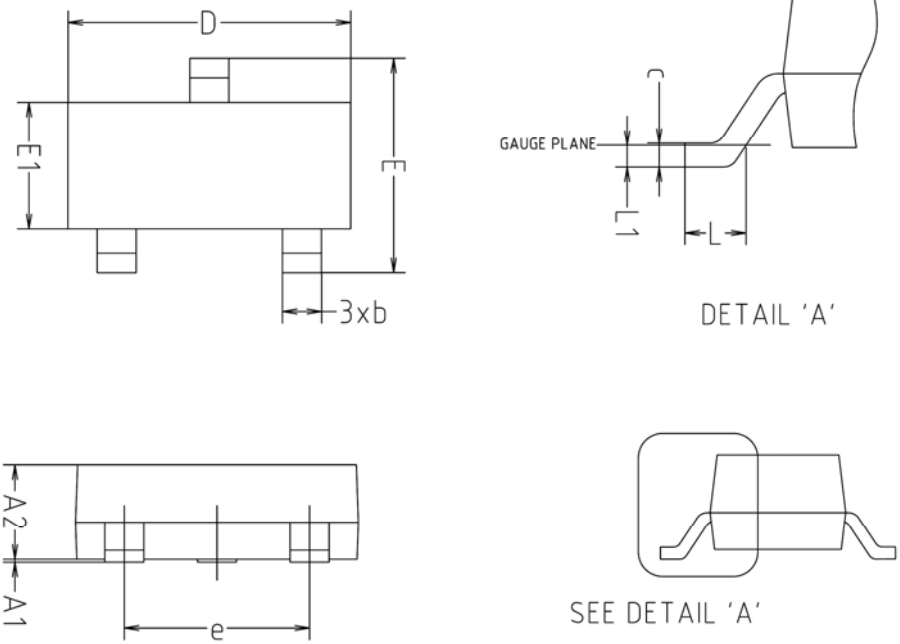


Fig. 4 I_{OL} – R_L

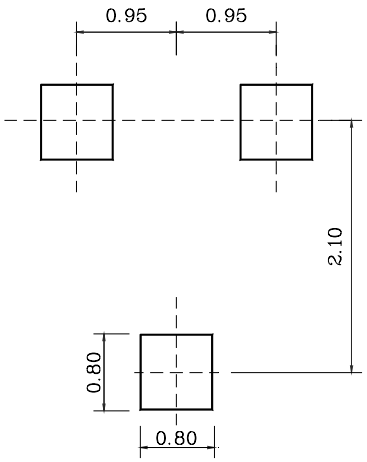


Outline Dimension (Unit : mm)

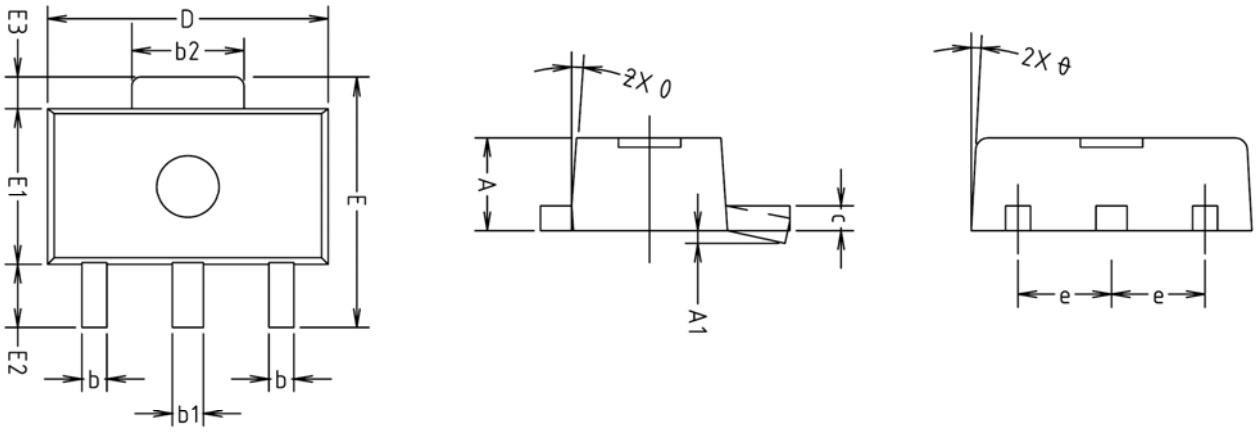


SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A1	0.00	-	0.10	
A2	0.82	-	1.02	
b	0.39	0.42	0.45	
c	0.09	0.12	0.15	
D	2.80	2.90	3.00	
E	2.20	2.40	2.60	
E1	1.20	1.30	1.40	
e	1.90BSC			
L	0.20	-	-	
L1	0.12BSC			

Recommend PCB Solder Land Dimension (Unit : mm)

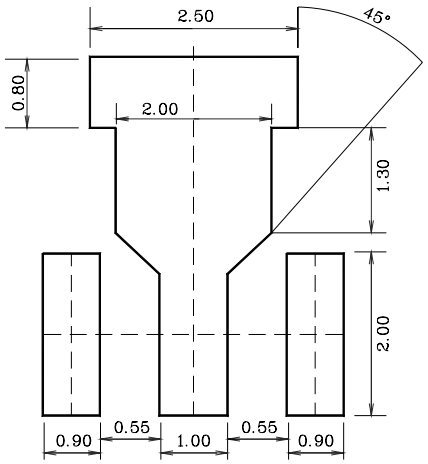


Outline Dimension

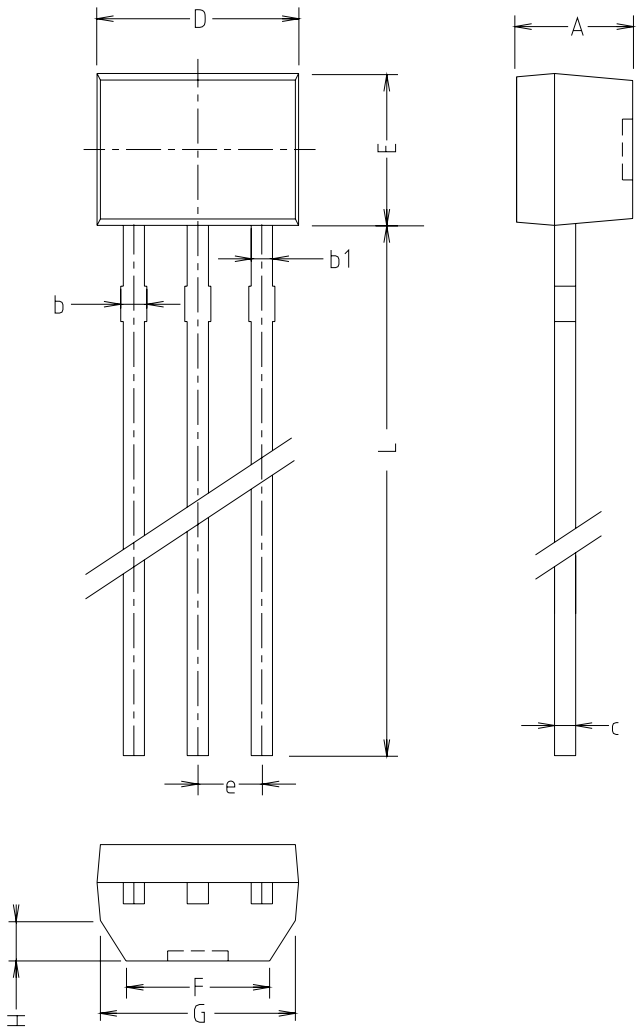


SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	1.40	1.50	1.60	
A1	0.00	–	0.10	
b	0.38	0.42	0.48	
b1	0.48	0.52	0.58	
b2	1.79	1.82	1.87	
c	0.40	0.42	0.46	
D	4.40	4.50	4.70	
E	3.70	4.00	4.30	
E1	2.40	2.50	2.70	
E2	0.80	1.00	1.20	
E3	0.40	0.50	0.60	
e	1.50 TYP.			
θ	4° TYP.			

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	–

The AUK Corp. products are intended for the use as components in general electronic equipment (Office and communication equipment, measuring equipment, home appliance, etc.).

Please make sure that you consult with us before you use these AUK Corp. products in equipments which require high quality and / or reliability, and in equipments which could have major impact to the welfare of human life(atomic energy control, airplane, spaceship, transportation, combustion control, all types of safety device, etc.). AUK Corp. cannot accept liability to any damage which may occur in case these AUK Corp. products were used in the mentioned equipments without prior consultation with AUK Corp..

Specifications mentioned in this publication are subject to change without notice.