Description

• The S71xx prevents the error of system from supply voltage below normal voltage level at the time the power on and instantaneous power off in systems.

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.)

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, VTR, Fax, C-TV etc.
- As Measure Against System Runaway at Instantaneous Break of Power Supply etc.

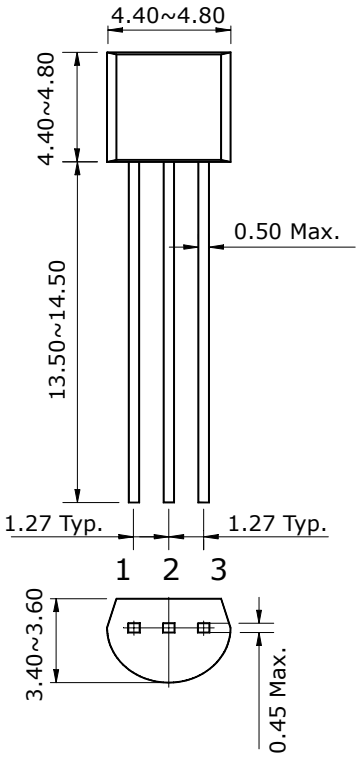
Ordering Information

Type NO.	Marking	Package Code
S71xx	S71□□	TO-92

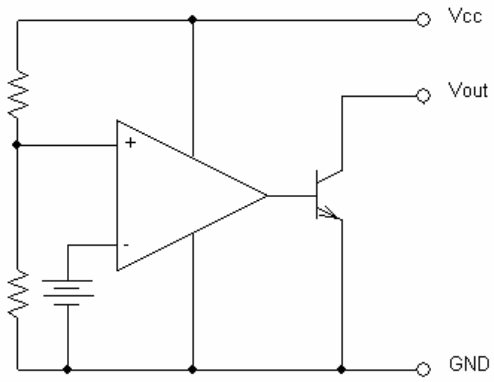
□□: Detecting Voltage Code

Outline Dimensions

Unit : mm



Equivalent Circuit Diagram



PIN Connections
1. Vcc
2. GND
3. OUT

Maximum ratings

(Ta=25°C)

Characteristic	Symbol	Ratings	Unit
Supply Voltage	V_{CC}	-0.3 ~ +15	V
Power Dissipation	P_D	625	mW
Output Voltage	V_{OUT}	-0.3 ~ +15	V
Operating Temperature Range	T_{OPR}	-30 ~ +75	℃
Storage Temperature Range	T_{STG}	-55 ~ +150	℃

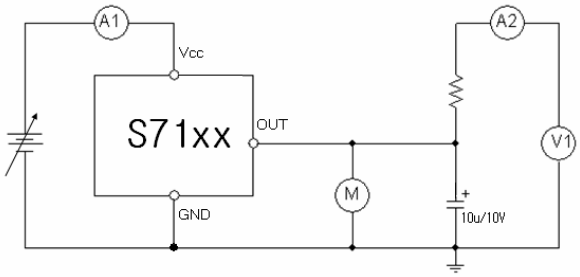
Electrical Characteristics

(V_{CC}=5V, Ta=25°C)

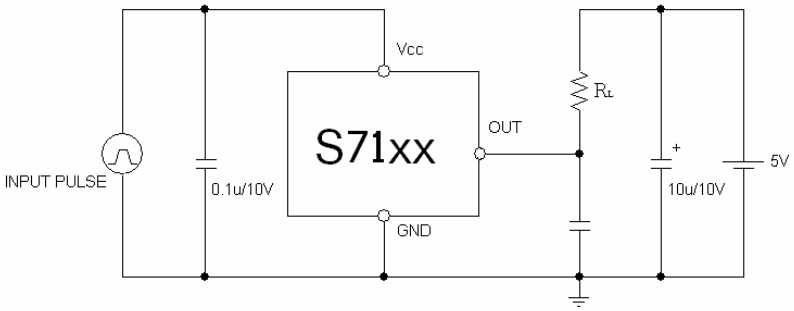
Characteristic	Symbol	Test Circuit	Test Condition		Min.	Typ.	Max.	Unit
Detecting Voltage	V_S	1	R_L=200Ω V_{CC}=H→L V_{OL}≤0.4V	S7145	4.35	4.5	4.65	V
				S7142	4.05	4.2	4.35	
				S7139	3.75	3.9	4.05	
				S7136	3.45	3.6	3.75	
				S7133	3.15	3.3	3.45	
				S7131	2.95	3.1	3.25	
				S7129	2.75	2.9	3.05	
				S7127	2.55	2.7	2.85	
				S7125	2.35	2.5	2.65	
				S7123	2.15	2.3	2.45	
Hysteresis Voltage	ΔV_S	1	R_L=200Ω, V_{CC}= L→H→L		30	50	100	mV
Temperature Coefficient of Detecting Voltage	$V_S / \Delta T$	1	R_L =200Ω, Ta= -30 ~ +75℃		-	±0.01	-	%/℃
Low Level Output voltage	V_{OL}	1	R_L =200Ω, V_{CC} = V_S Min		-	-	0.4	V
Leakage Current When OFF	I_{LEAK}	1	V_{CC}=15V, R_L=200Ω		-	-	0.1	μA
Circuit current at ON	I_{CCL}	1	V_{CC} = V_S Min		-	300	500	μA
Circuit current at OFF	I_{CCH}	1	V_{CC} = V_S Max +0.1V		-	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

V_S : Standard Detection Voltage

Test Circuit 1

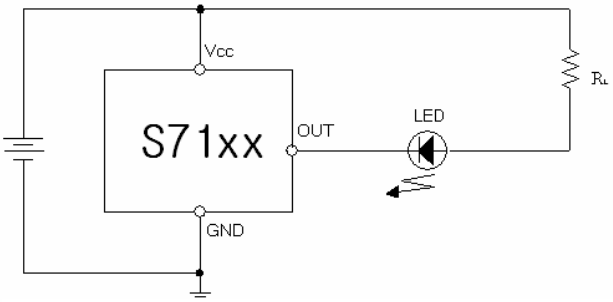


Test Circuit 2



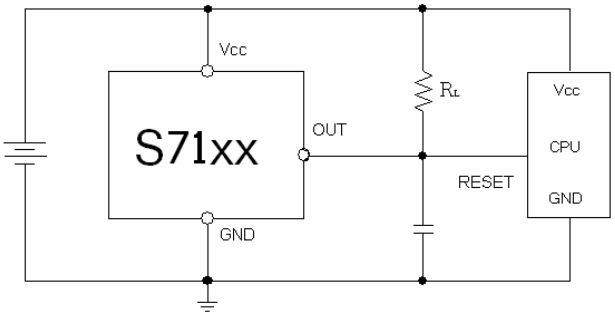
Application Circuit

(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}

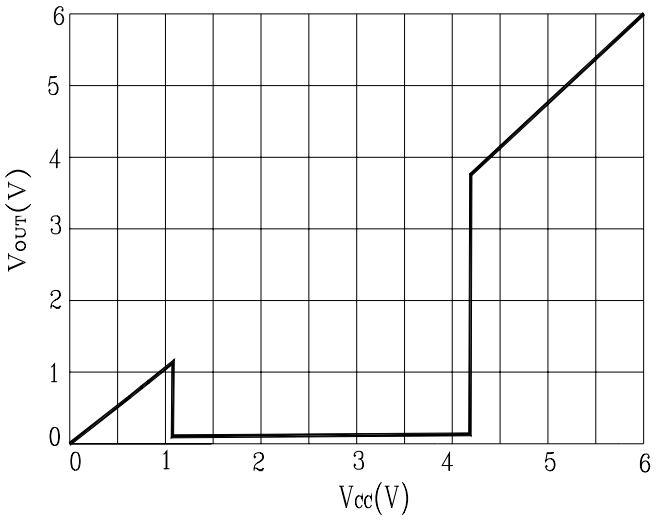


Fig. 2 I_{CC} - V_{CC}

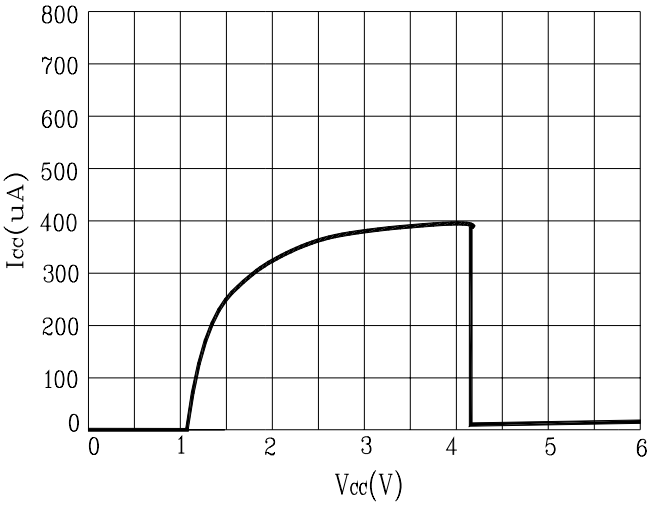


Fig. 3 I_{CCH} – Ta

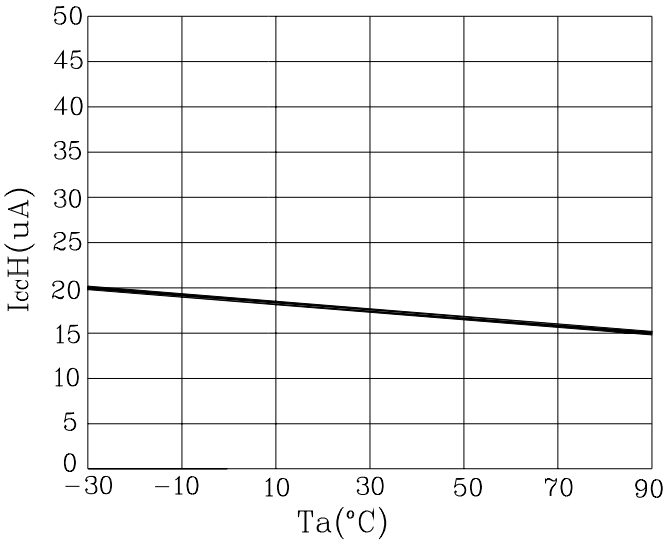
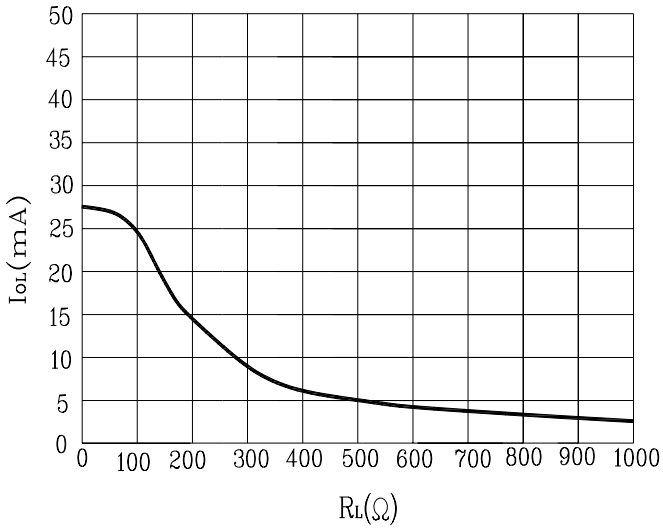


Fig. 4 I_{OL} – R_L



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