

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

Applications

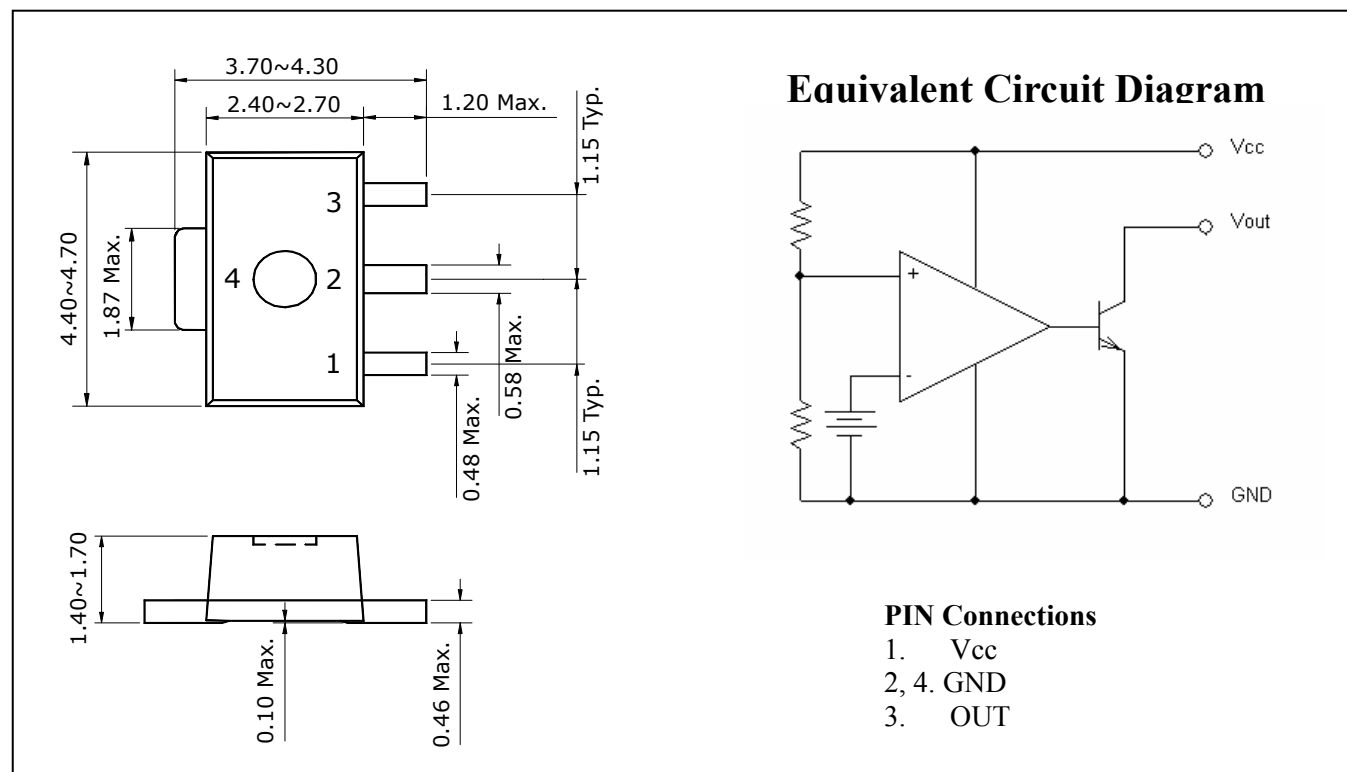
- As Control Circuit of Battery-Backed Memory
- As Measure Against Erroneous Operations at Power On-Off
- As Resetting Function for the CPU-Mounted Equipment --- PC, Printer, VTR, Fax, C-TV etc.
- As Measure Against System Runaway at Instantaneous Break of Power Supply etc.

Ordering Information

Type NO.	Marking	Package Code
S71xxF	S7□□	SOT-89
□□: Detecting Voltage Code		

Outline Dimensions

Unit : mm



Maximum ratings

(Ta=25°C)

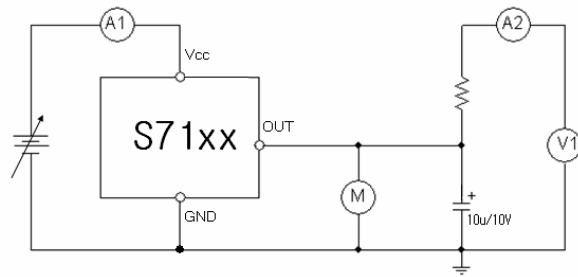
Characteristic	Symbol	Ratings	Unit
Supply Voltage	V _{CC}	-0.3 ~ +15	V
Power Dissipation	P _D	500	mW
Output Voltage	V _{OUT}	-0.3 ~ +15	V
Operating Temperature Range	T _{OPR}	-30 ~ +75	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C

Electrical Characteristics(V_{CC}=5V, Ta=25°C)

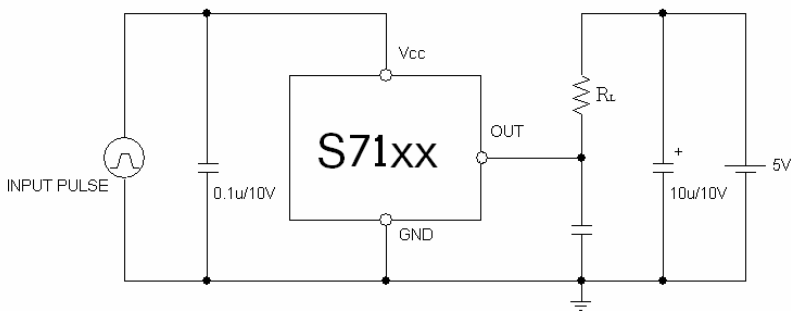
Characteristic	Symbol	Test Circuit	Test Condition		Min.	Typ.	Max.	Unit
Detecting Voltage	V _S	1	R _L =200Ω V _{CC} =H→L V _{OL} ≤0.4V	S7145F	4.35	4.5	4.65	V
				S7142F	4.05	4.2	4.35	
				S7139F	3.75	3.9	4.05	
				S7136F	3.45	3.6	3.75	
				S7133F	3.15	3.3	3.45	
				S7131F	2.95	3.1	3.25	
				S7129F	2.75	2.9	3.05	
				S7127F	2.55	2.7	2.85	
				S7125F	2.35	2.5	2.65	
				S7123F	2.15	2.3	2.45	
Hysteresis Voltage	Δ V _S	1	R _L =200Ω, V _{CC} = L→H→L		30	50	100	mV
Temperature Coefficient of Detecting Voltage	V _S / Δ 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

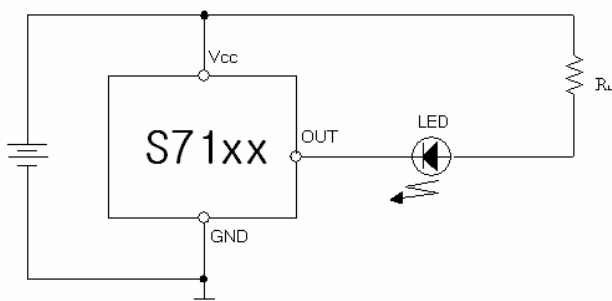


Test Circuit 2



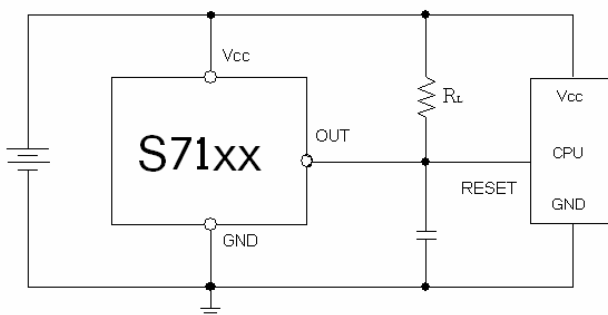
Application Circuit

(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 $V_{OUT} - V_{CC}$

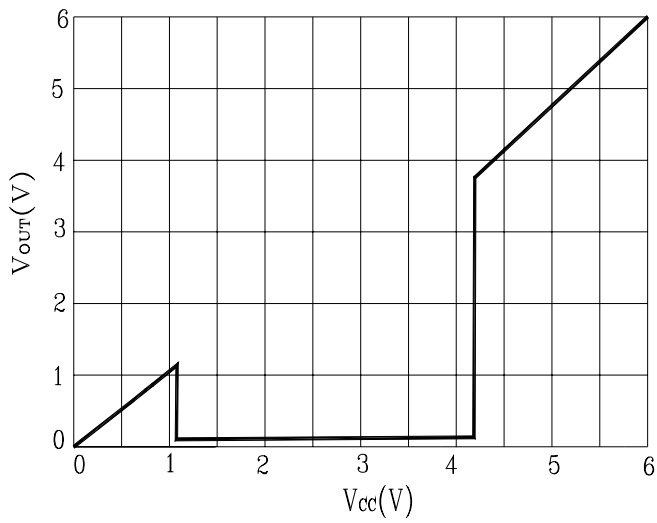


Fig. 2 $I_{CC} - V_{CC}$

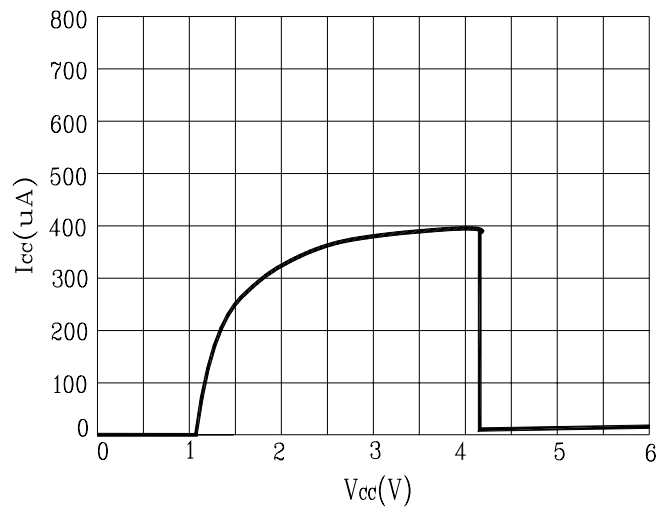


Fig. 3 $I_{CCH} - T_a$

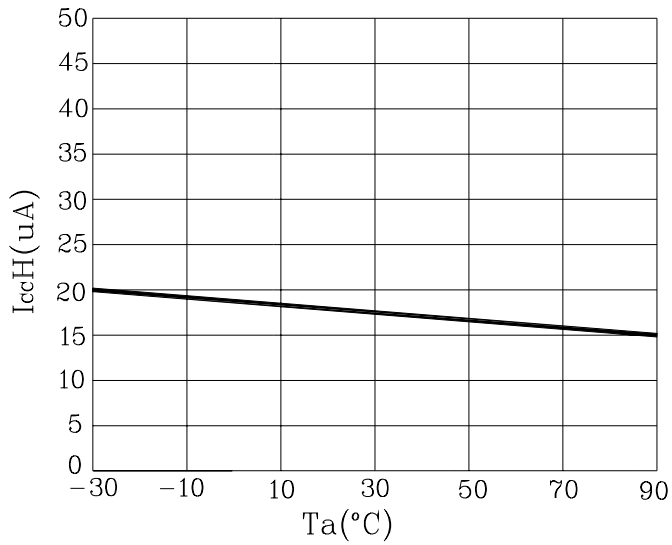
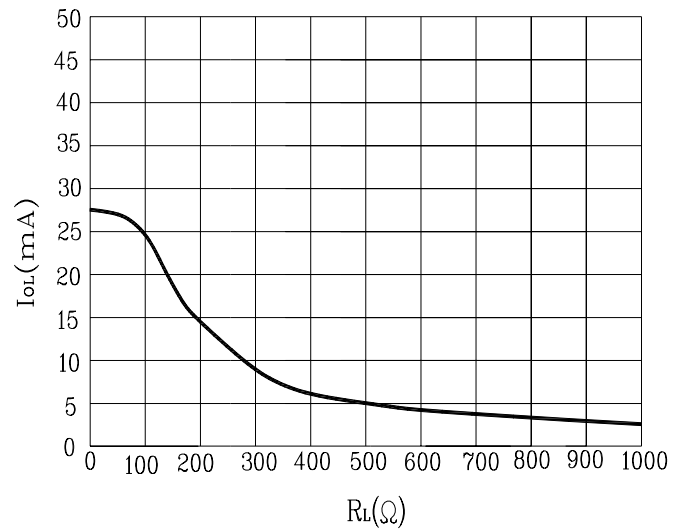


Fig. 4 $I_{OL} - R_L$



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