

Description

- Micro computer circuits in mobile phones, word processors, TVs, VCRs etc
- General logic circuits
- Detection of voltage drop in batteries of note personal computers, mobile phones
- Switching to backup power supply

Features

- Super Low Current Consumption ($I_{CCL}=100\mu A$ Typ. $I_{CH}=1\mu A$ Typ.)
- It has on delay function to supplement the constant of outer C and R
- Low operation voltage
- High current of output transistor
- Hysteresis circuit built in
- Low operation voltage

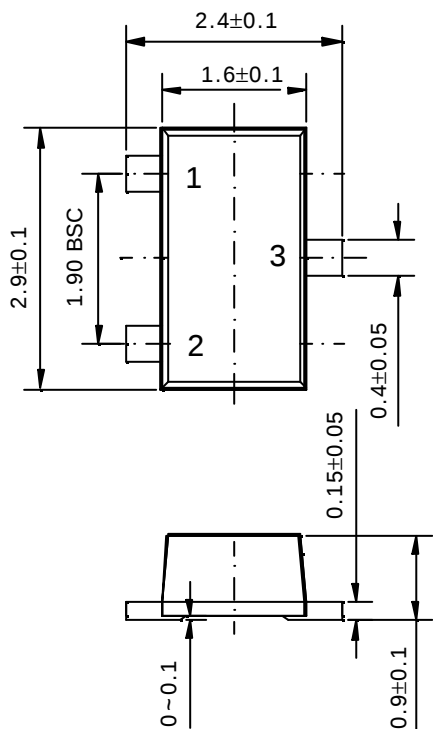
Ordering Information

Type NO.	Marking	Package Code
S71xxLSF	L□□	SOT-23F

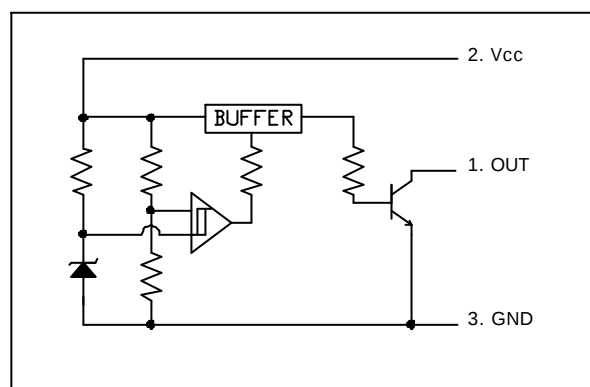
□ □ : Detecting Voltage Code

Outline Dimensions

unit : mm



Equivalent Circuit



PIN Connections

1. OUT
2. Vcc
3. GND

Absolute maximum ratings

(Ta=25°C)

Characteristic	Symbol	Ratings	Unit
Supply voltage	V_{CC}	-0.3 ~ +10	V
Power Dissipation (Package Limitation)	P_D^*	300	mW
Operating Temperature	T_{opr}	-20 ~ +75	
Storage Temperature	T_{stg}	-40 ~ +125	

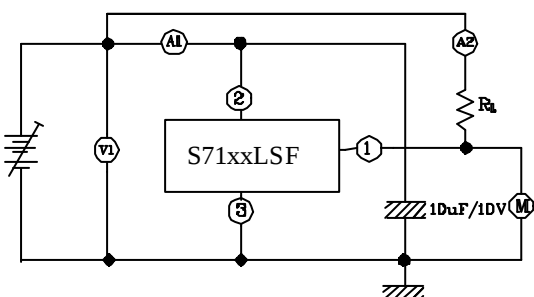
* With PCB(8 × 8 mm Copper Area) at Glass Epoxy Board (t=1.7 mm, Area; 20 × 20 mm)

Electrical Characteristics

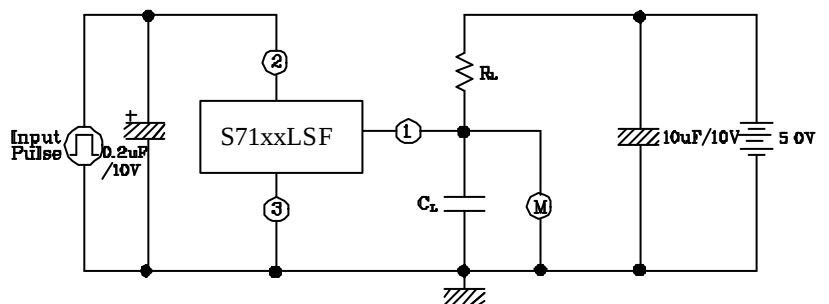
(Ta=25°C)

Characteristic	Symbol	Test Circuit	Test Condition		Min.	Typ.	Max.	Unit
Detecting voltage	V _S	1	R _L = 470 Ω V _{CC} = H → L V _{OL} ≤ 0.4V	S7145LSF	4.30	4.5	4.70	V
				S7142LSF	4.00	4.2	4.40	
				S7139LSF	3.70	3.9	4.10	
				S7136LSF	3.40	3.6	3.80	
				S7133LSF	3.10	3.3	3.50	
				S7131LSF	2.90	3.1	3.30	
				S7129LSF	2.75	2.9	3.05	
				S7127LSF	2.55	2.7	2.85	
				S7125LSF	2.35	2.5	2.65	
				S7123LSF	2.15	2.3	2.45	
Hysteresis Voltage	Δ V _S	1	R _L = 470 Ω, V _{CC} = L → H → L		30	100	300	mV
Temperature Coefficient Of detecting voltage	V _S / Δ T	1	R _L = 470 Ω, Ta = -20 ~ 75		-	±0.01	-	% /
Low Level Output voltage	V _{OL}	1	R _L = 470 Ω, V _{CC} = V _{SMin}		-	0.1	0.4	V
Circuit current at ON	I _{CCL}	1	R _L = ∞ , V _{CC} = V _{SMin}		-	300	500	μA
Circuit current at OFF	I _{CCH}	1	R _L = ∞ , V _{CC} = V _{SMax} +0.1V		-	30	50	μA
Threshold Operating Voltage	V _{opr}	1	R _L = 4.7 kΩ, V _{OL} ≤ 0.4V		-	1.4	1.6	V
Output Current at ON I	I _{OLI}	1	R _L = 0, V _{CC} = V _{SMin}		10	20	-	mA
Output Current at ON II	I _{OLII}	1	R _L = 0, V _{CC} = V _{SMin} , Ta = -20 ~ 75		5	-	-	mA
L → H Transmission delay time	t _{PLH}	2	R _L = 4.7 kΩ, C _L = 100 pF		-	100	-	μs
H → L Transmission delay time	t _{PHL}	2	R _L = 4.7 kΩ, C _L = 100 pF		-	10	-	μs

Test Circuit 1



Test Circuit 2



Electrical Characteristic Curves

Fig. 1 $V_O - V_{CC}$

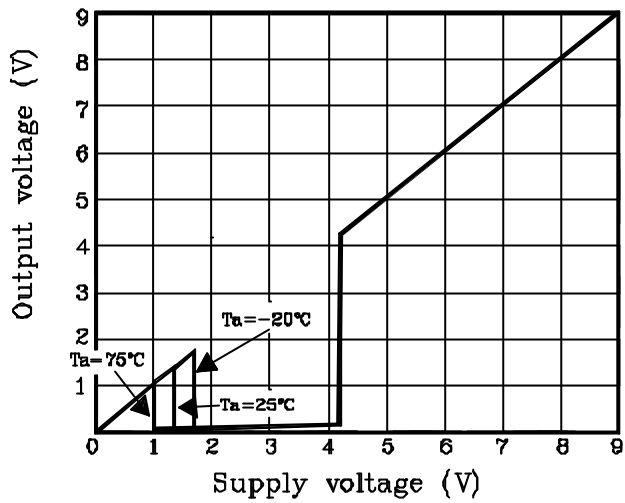


Fig. 2 $V_S - T_a$

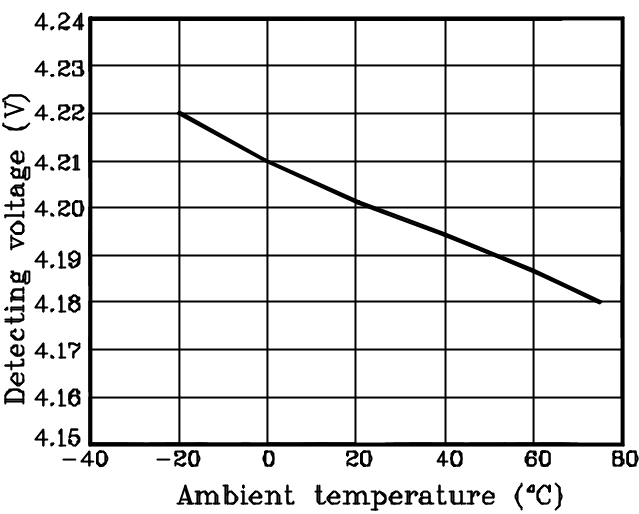


Fig. 3 $I_{CC} - V_{CC}$

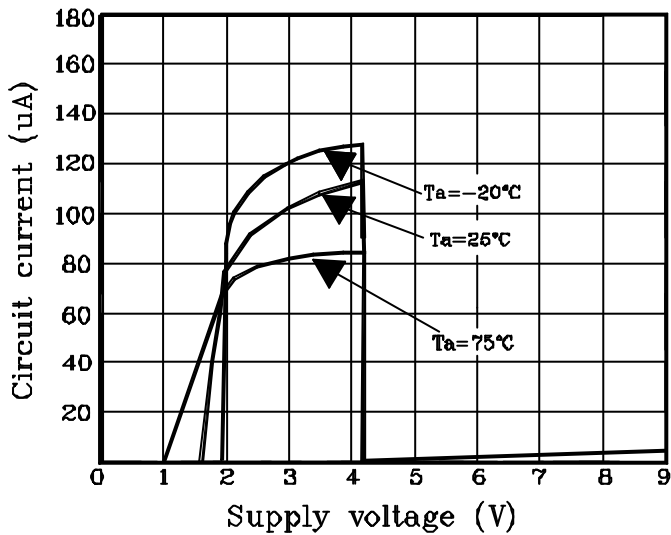


Fig. 4 $V_{OL} - T_a$

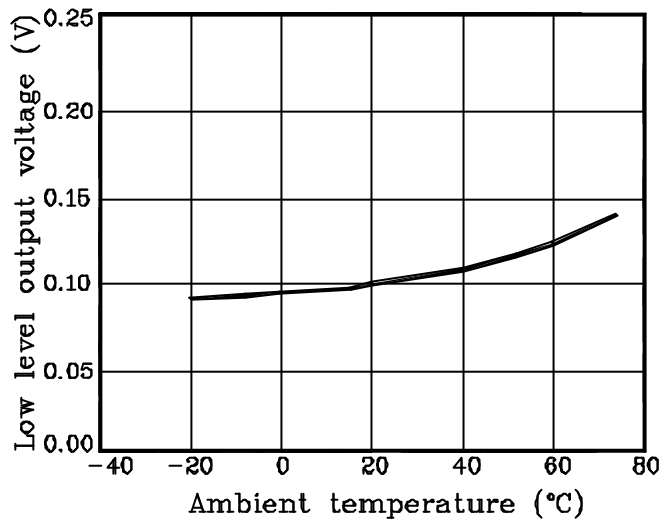


Fig. 5 $V_S - T_a$

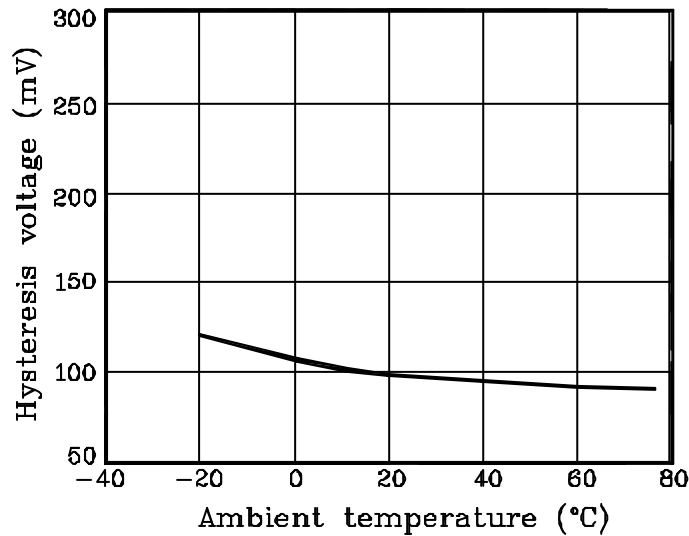


Fig. 6 $I_{CCH} - T_a$

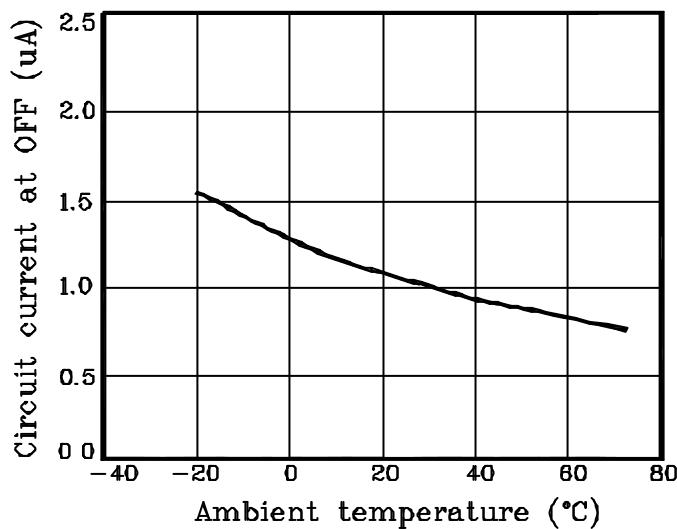


Fig. 7 $I_{OL} - T_a$

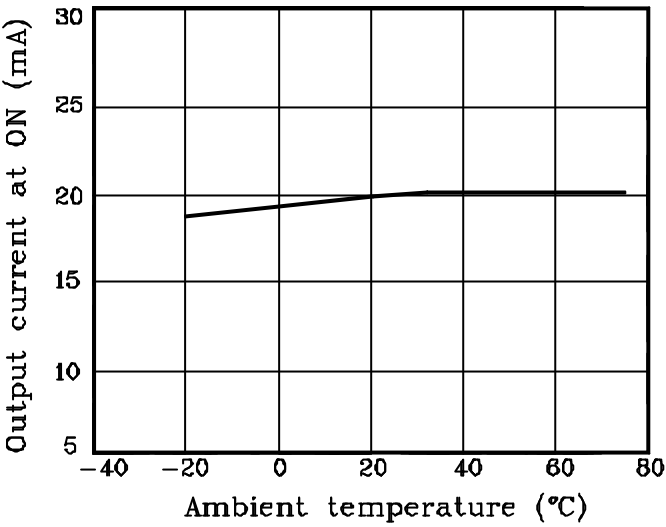


Fig. 8 $C_L - t_{PLH}$

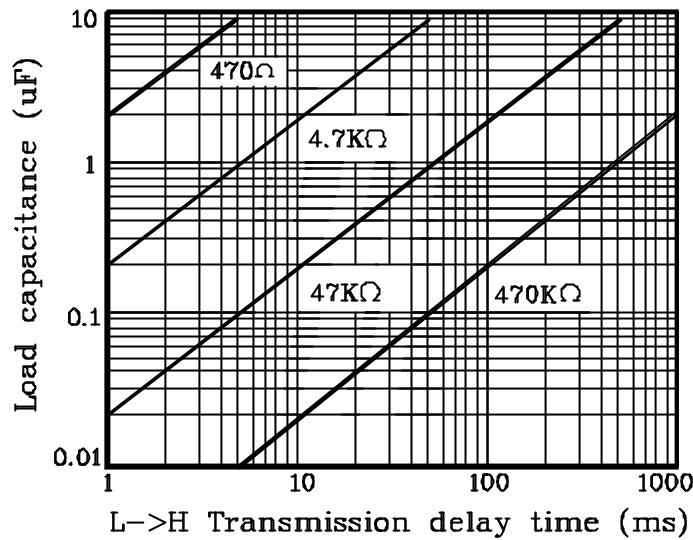
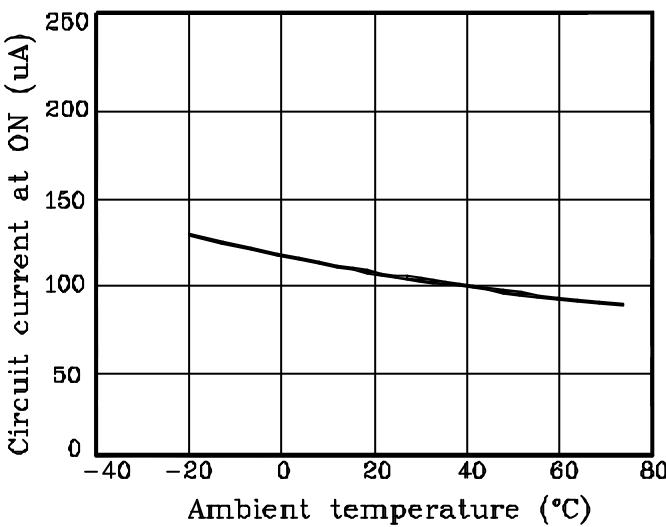


Fig. 9 $I_{CCL} - T_a$



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