

M62781GP

Voltage Detecting, System Resetting IC Series

REJ03D0523-0100

Rev.1.00

May 27, 2005

Description

The M62781GP is a voltage threshold detector designed for detection of a supply voltage and generation of a system reset pulse for almost all logic circuits such as microprocessor.

It also has extensive applications including battery checking, level detecting and waveform shaping circuits.

Features

- Few external parts
- Low threshold operating voltage
(Supply voltage to keep low-state at low supply voltage) 0.65V (Typ.) at $R_L=22k\Omega$
- Wide supply voltage range 1.5V to 7.0V
- Wide application range
- Extra small 3-pin package (3-pin SOP)
- Built-in long delay time

Application

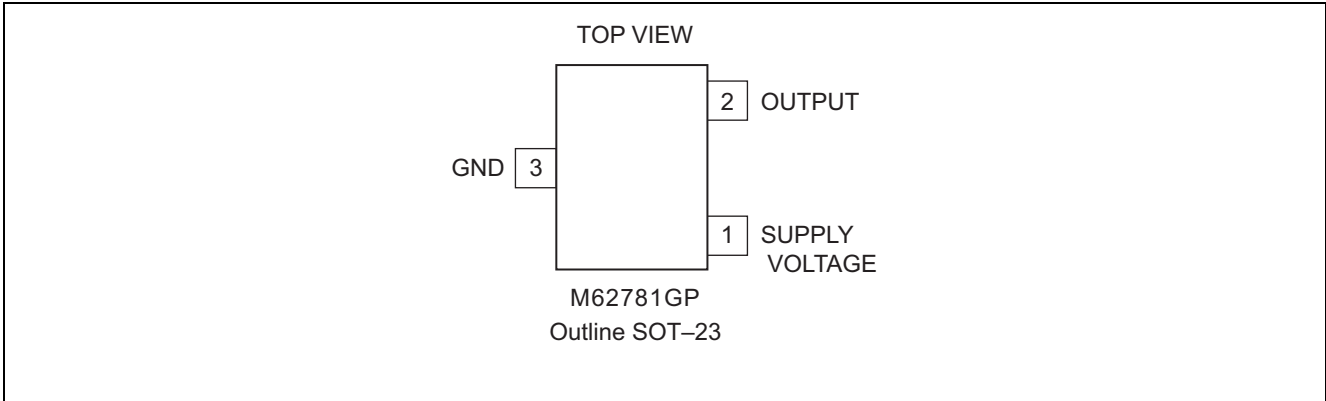
- Reset pulse generation for almost all logic circuits
- Battery checking, level detecting, waveform shaping circuits
- Delayed waveform generator
- Switching circuit to a back-up power supply
- DC/DC converter
- Over voltage protection circuit

Recommended Operating Condition

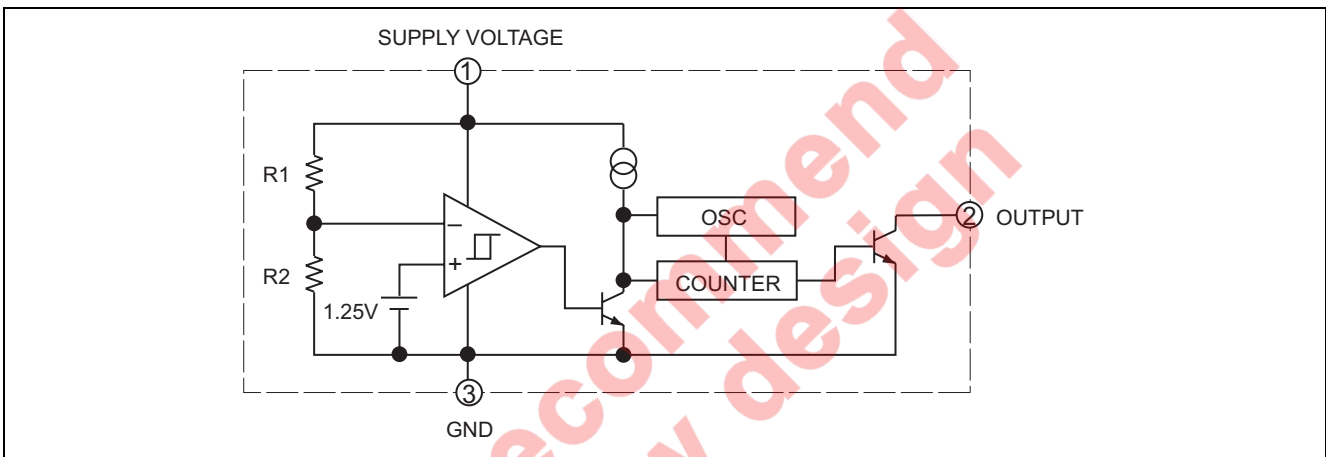
- Supply voltage range 1.5V to 7.0V

Not recommended
for new design

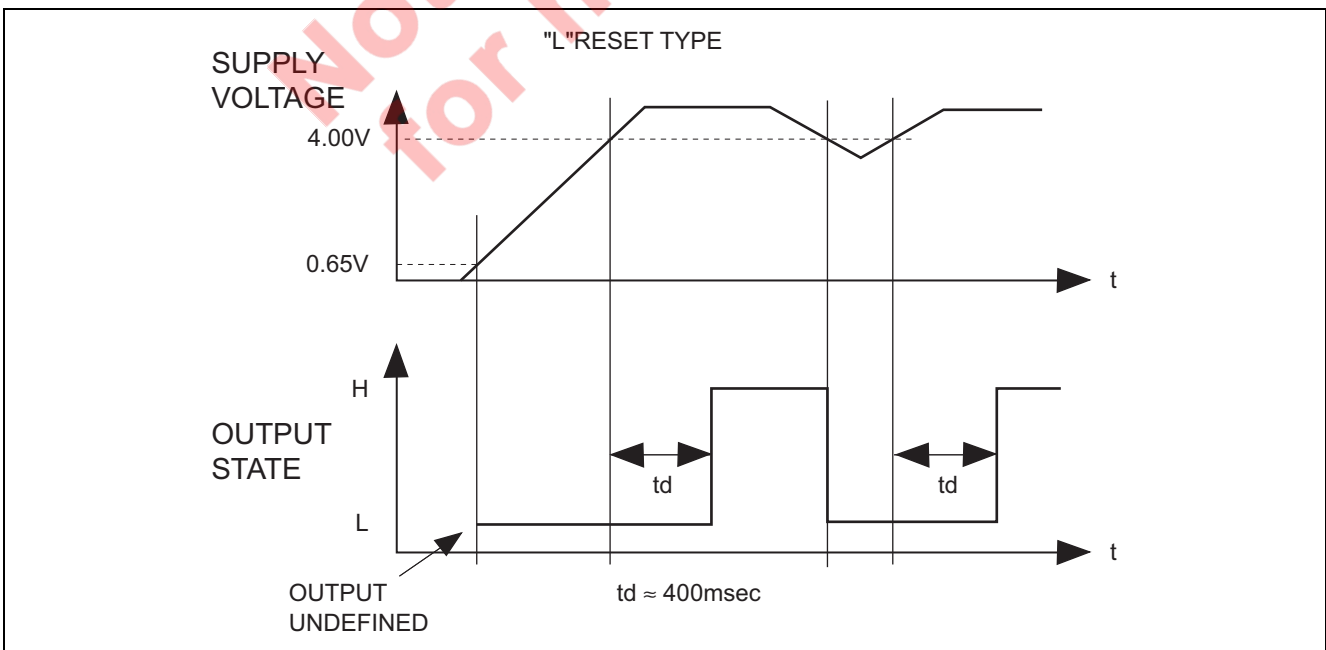
Pin Arrangement



Block Diagram



Function Diagram



Absolute Maximum Ratings

(Ta = 25°C, unless otherwise noted)

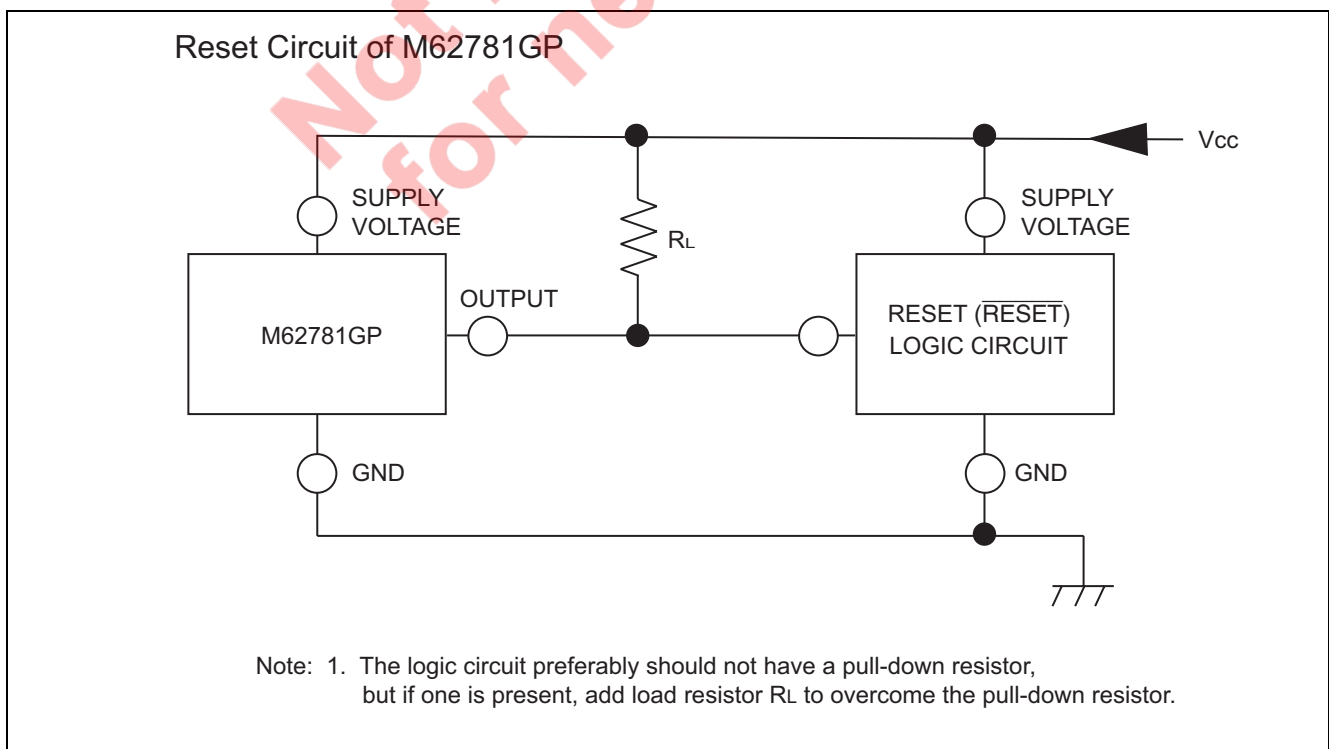
Item	Symbol	Ratings	Unit	Test Conditions	
Supply voltage	V _{CC}	7	V		
Output sink current	I _{sink}	6	mA		
Output voltage	V _O	7	V	Output with open collector	
Power dissipation	P _d	200	mW	3pin SOP (SOT-23)	
Thermal derating	K _θ	2	mW/°C	Ta ≥ 25°C	3pin SOP
Operating temperature	T _{opr}	-30 to +85	°C		
Storage temperature	T _{stg}	-40 to +125	°C		

Electrical Characteristics

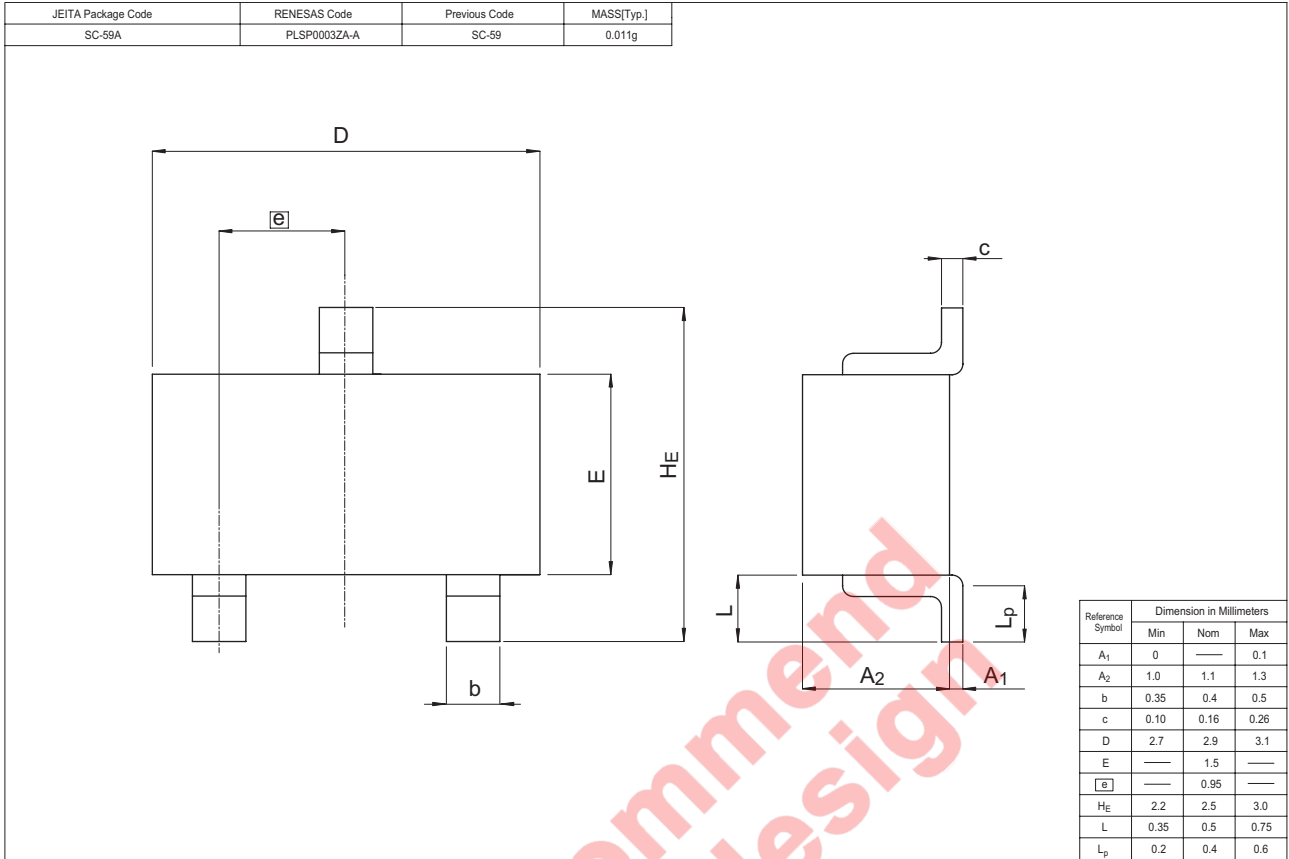
(Ta = 25°C, unless otherwise noted)

Item	Symbol	Min	Typ	Max	Unit	Test condition	
Detecting voltage	V _S	3.84	4.00	4.16	V		
Hysteresis voltage	ΔV _S	50	80	110	mV		
Detecting voltage temperature coefficient	V _S /ΔT	—	0.01	—	%/°C		
Circuit current	I _{CC}	—	400	600	μA	V _{CC} = 5.0V	
Output saturation voltage	V _{sat}	—	0.2	0.4	V	V _{CC} =3.5V, I _{sink} =4mA,	
Threshold operating voltage	V _{OPL}	—	0.7	0.8	V	Minimum supply voltage for operation	R _L =2.2kΩ, V _{sat} ≤0.4V
		—	0.6	0.7			R _L =100kΩ, V _{sat} ≤0.4V
Output leak current	I _{OH}	—	—	30	nA		
		—	—	1	μA	Ta = -30 to +85°C	
delay time	t _{pd}	200	400	800	ms		

Example of Application Circuit



Package Dimensions



Not recommended for new design

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