

# M62720GP

## Voltage Detecting, System Resetting IC Series

REJ03D0522-0100

Rev.1.00

May 27, 2005

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### Description

The M62720GP 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

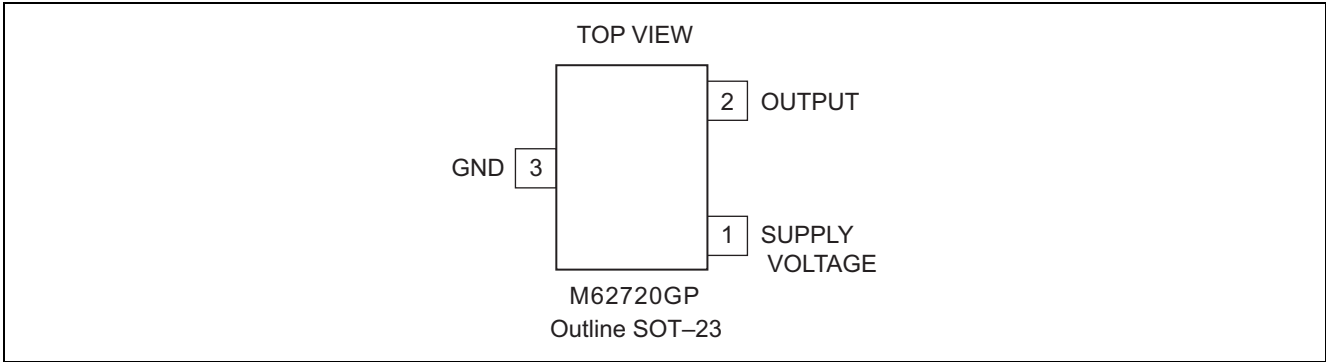
- Reset pulse generation for almost all logic circuits
- Battery checking, level detecting, waveform shaping circuits
- Delayed waveform generator
- Switching circuit to a back-up power supply
- DC/DC converter
- Over voltage protection circuit

### Recommended Operating Condition

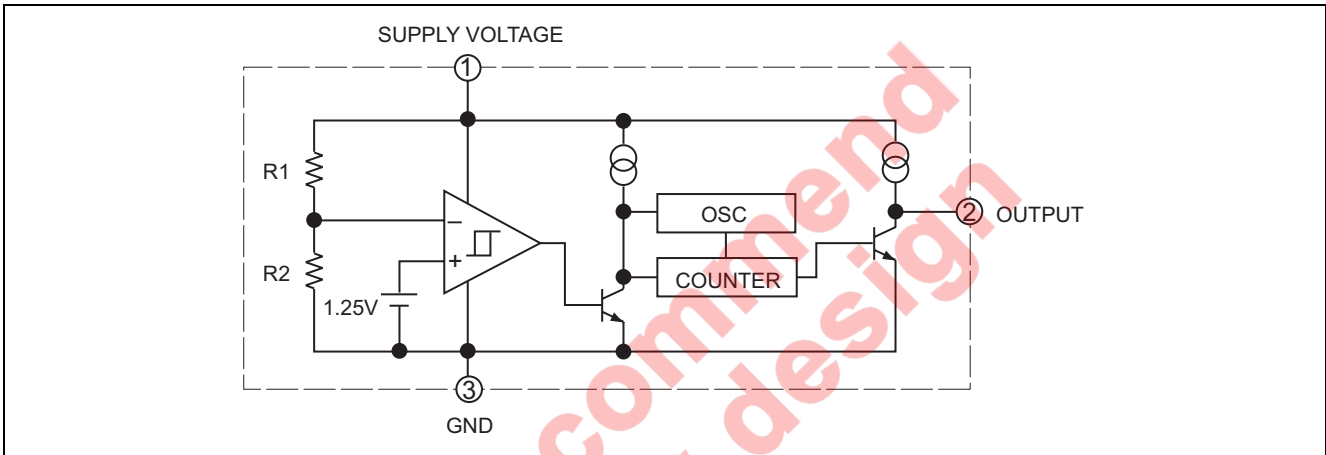
- Supply voltage range 1.5V to 7.0V

Not recommended  
for new design

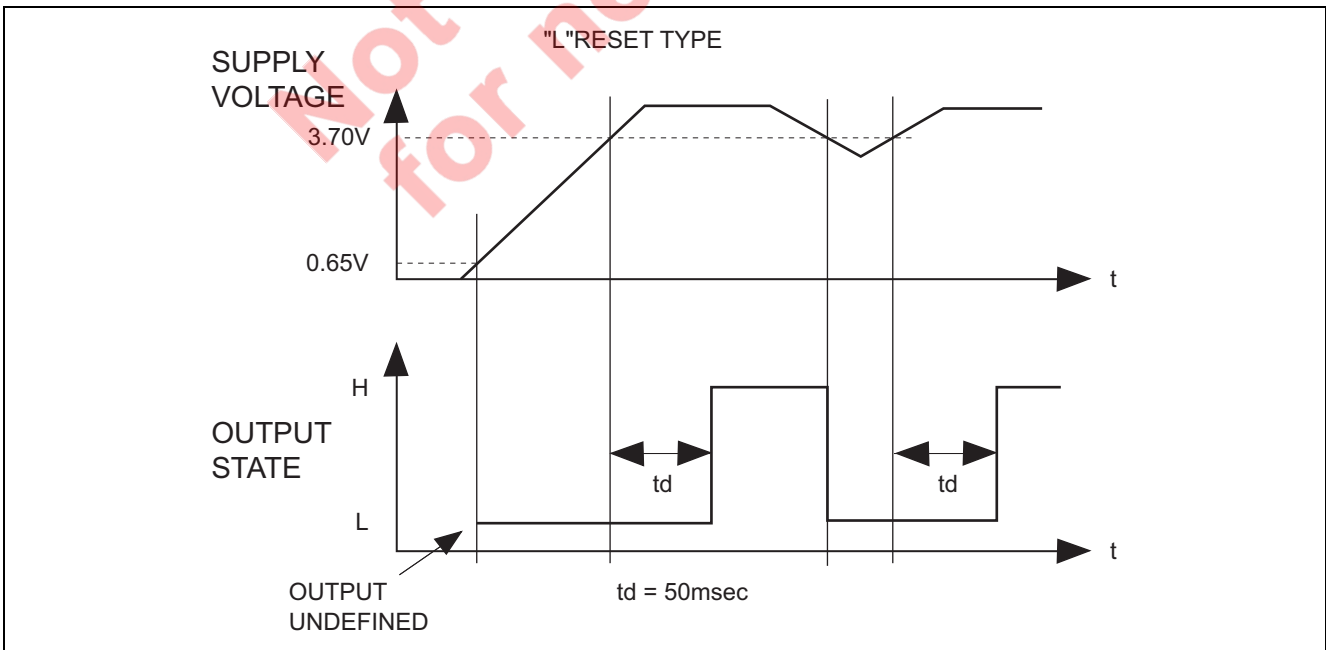
### Pin Arrangement



### Block Diagram



### Function Diagram



## Absolute Maximum Ratings

(Ta = 25°C, unless otherwise noted)

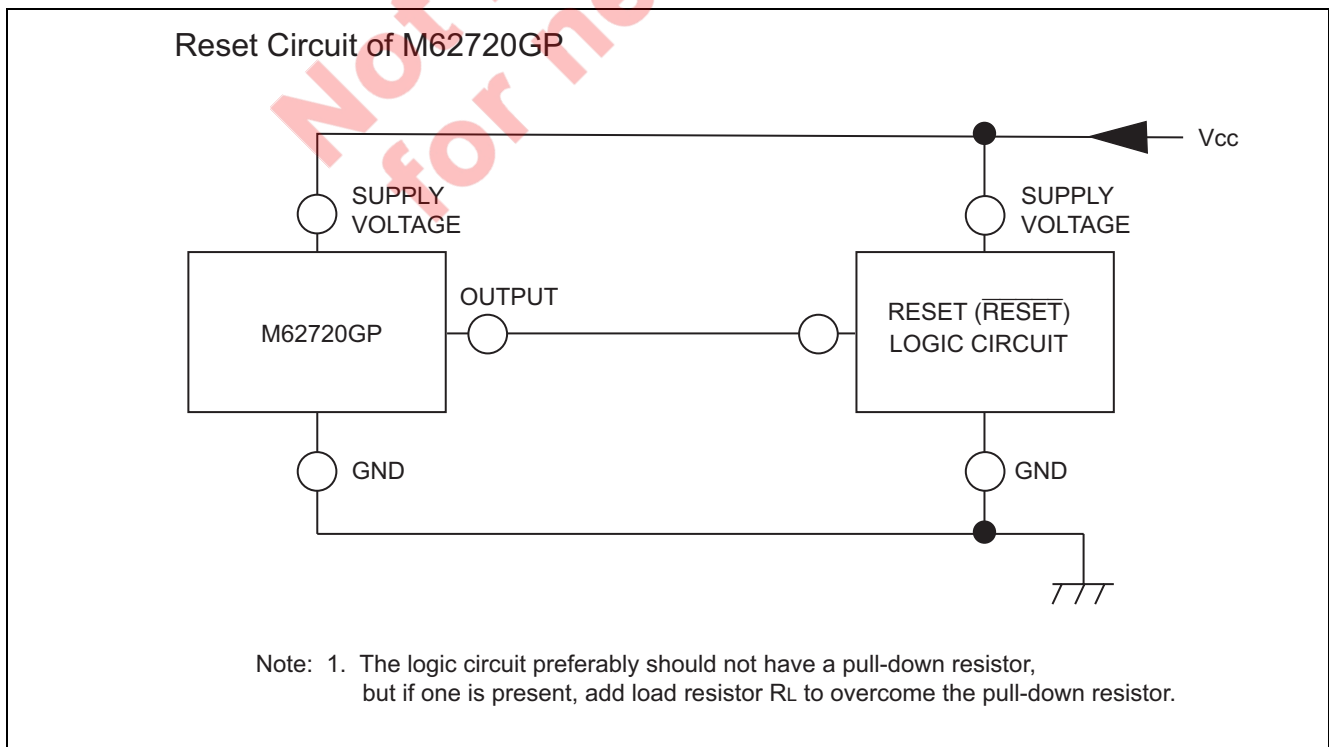
Item	Symbol	Ratings	Unit	Test Conditions
Supply voltage	V <sub>CC</sub>	7	V	
Output sink current	I <sub>sink</sub>	6	mA	
Output voltage	V <sub>O</sub>	V <sub>CC</sub>	V	Output with constant current load
Power dissipation	P <sub>d</sub>	200	mW	3pin SOP (SOT-23)
Thermal derating	K <sub>θ</sub>	2	mW/°C	Ta ≥ 25°C      3pin SOP
Operating temperature	T <sub>opr</sub>	-30 to +85	°C	
Storage temperature	T <sub>stg</sub>	-40 to +125	°C	

## Electrical Characteristics

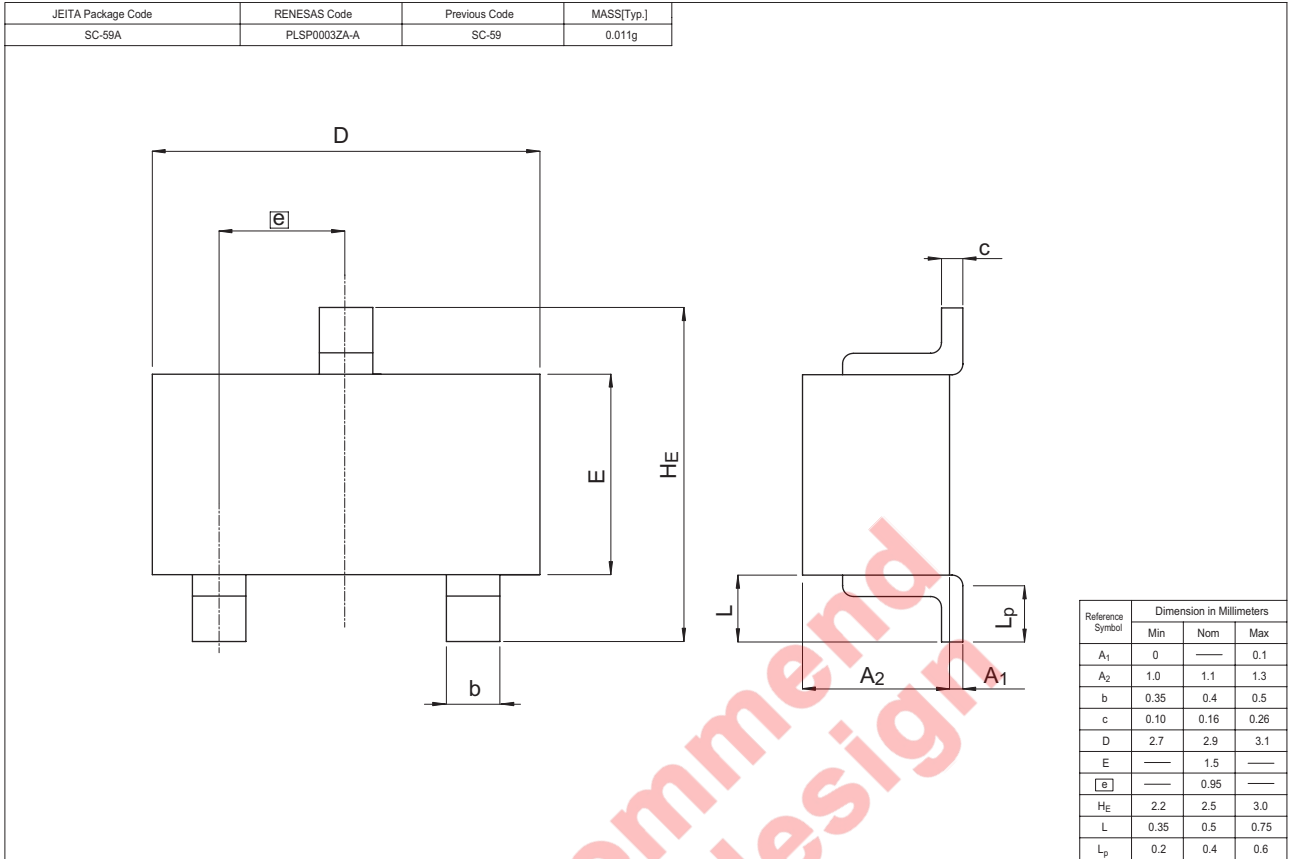
(Ta = 25°C, unless otherwise noted)

Item	Symbol	Min	Typ	Max	Unit	Test condition
Detecting voltage	V <sub>S</sub>	3.56	3.70	3.86	V	
Hysteresis voltage	ΔV <sub>S</sub>	50	80	110	mV	
Detecting voltage temperature coefficient	V <sub>S</sub> /ΔT	—	0.01	—	%/°C	
Circuit current	I <sub>CC</sub>	—	400	600	μA	V <sub>CC</sub> = 5.0V
Output saturation voltage	V <sub>sat</sub>	—	0.2	0.4	V	V <sub>CC</sub> =3.5V, I <sub>sink</sub> =4mA,
Threshold operating voltage	V <sub>OPL</sub>	—	0.7	0.8	V	Minimum supply voltage for operation
		—	0.6	0.7		R <sub>L</sub> =2.2kΩ, V <sub>sat</sub> ≤0.4V R <sub>L</sub> =100kΩ, V <sub>sat</sub> ≤0.4V
Output load current	I <sub>OC</sub>	-40	-25	-17	μA	V <sub>CC</sub> = 5.0V, V <sub>O</sub> =1/2V <sub>CC</sub>
Output high voltage	V <sub>OH</sub>	V <sub>CC</sub> -0.2	V <sub>CC</sub> -0.06	—	V	
Propagation delay time	t <sub>pd</sub>	30	50	70	ms	

## Example of Application Circuit



Package Dimensions



Not recommended for new design

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