

M62720GP

Voltage Detecting, System Resetting IC Series

REJ03D0522-0100

Rev.1.00

May 27, 2005

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

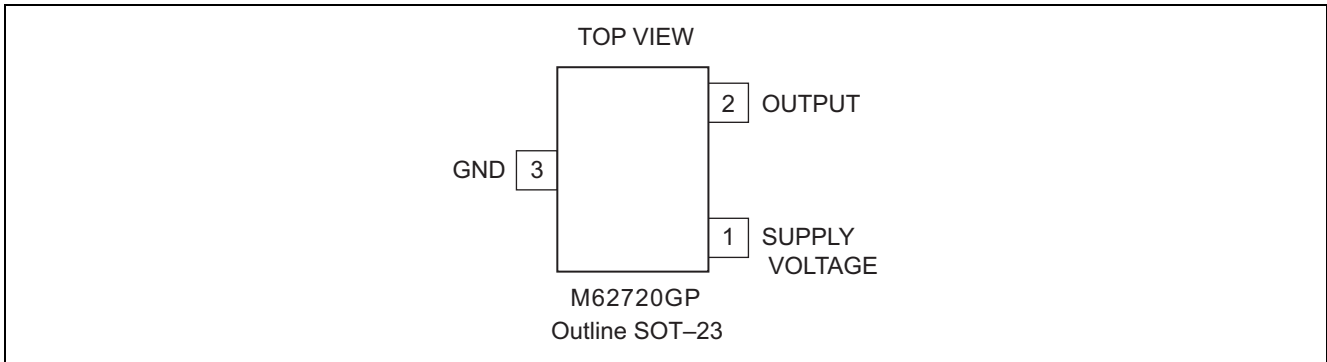
- Reset pulse generation for almost all logic circuits
- Battery checking, level detecting, waveform shaping circuits
- Delayed waveform generator
- Switching circuit to a back-up power supply
- DC/DC converter
- Over voltage protection circuit

Recommended Operating Condition

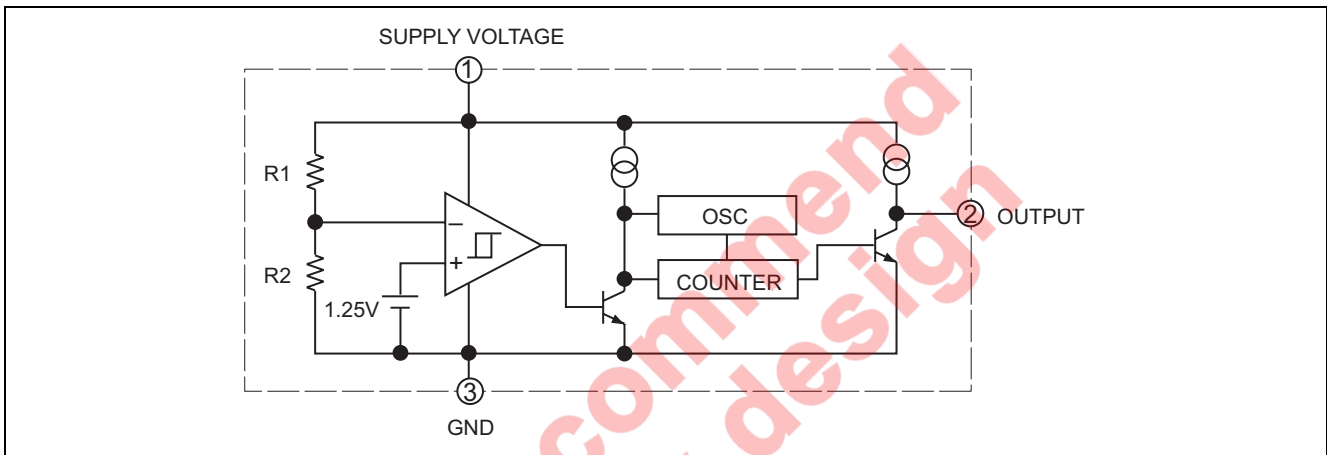
- Supply voltage range 1.5V to 7.0V

Not recommended
for new design

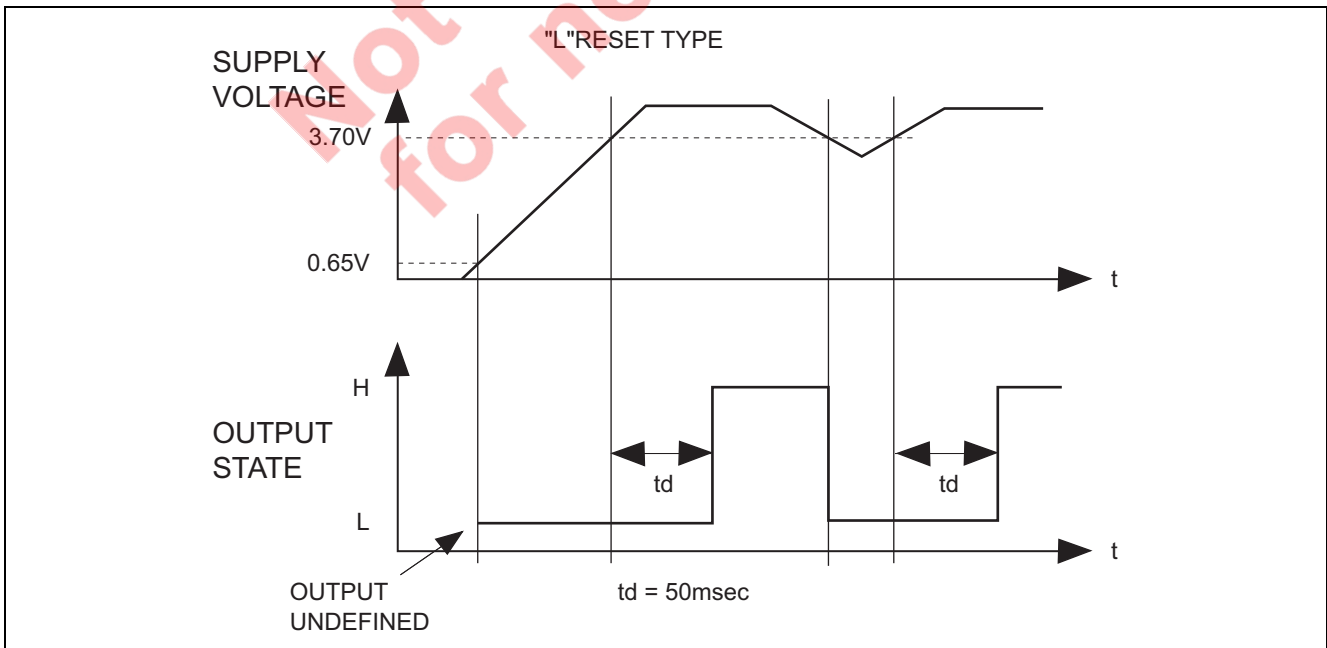
Pin Arrangement



Block Diagram



Function Diagram



Absolute Maximum Ratings

(Ta = 25°C, unless otherwise noted)

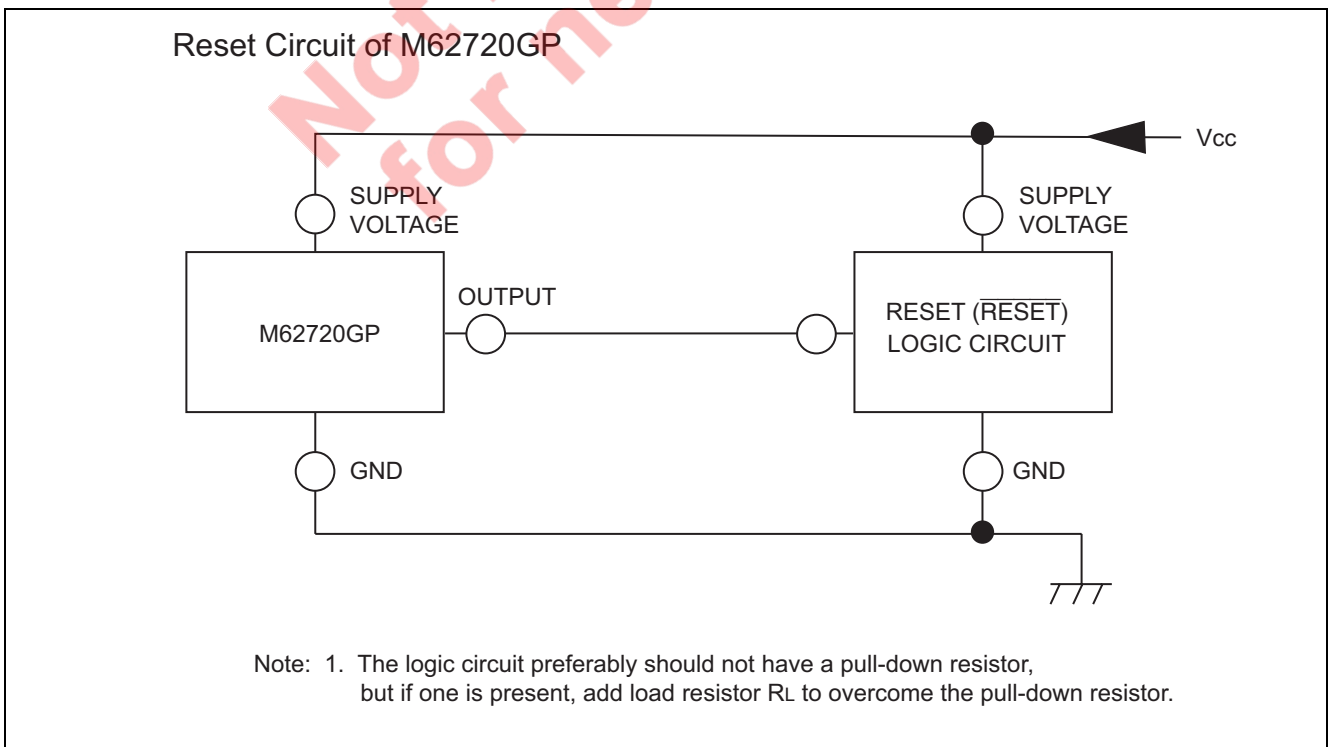
Item	Symbol	Ratings	Unit	Test Conditions
Supply voltage	V _{CC}	7	V	
Output sink current	I _{sink}	6	mA	
Output voltage	V _O	V _{CC}	V	Output with constant current load
Power dissipation	P _d	200	mW	3pin SOP (SOT-23)
Thermal derating	K _θ	2	mW/°C	Ta ≥ 25°C 3pin SOP
Operating temperature	T _{opr}	-30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

Electrical Characteristics

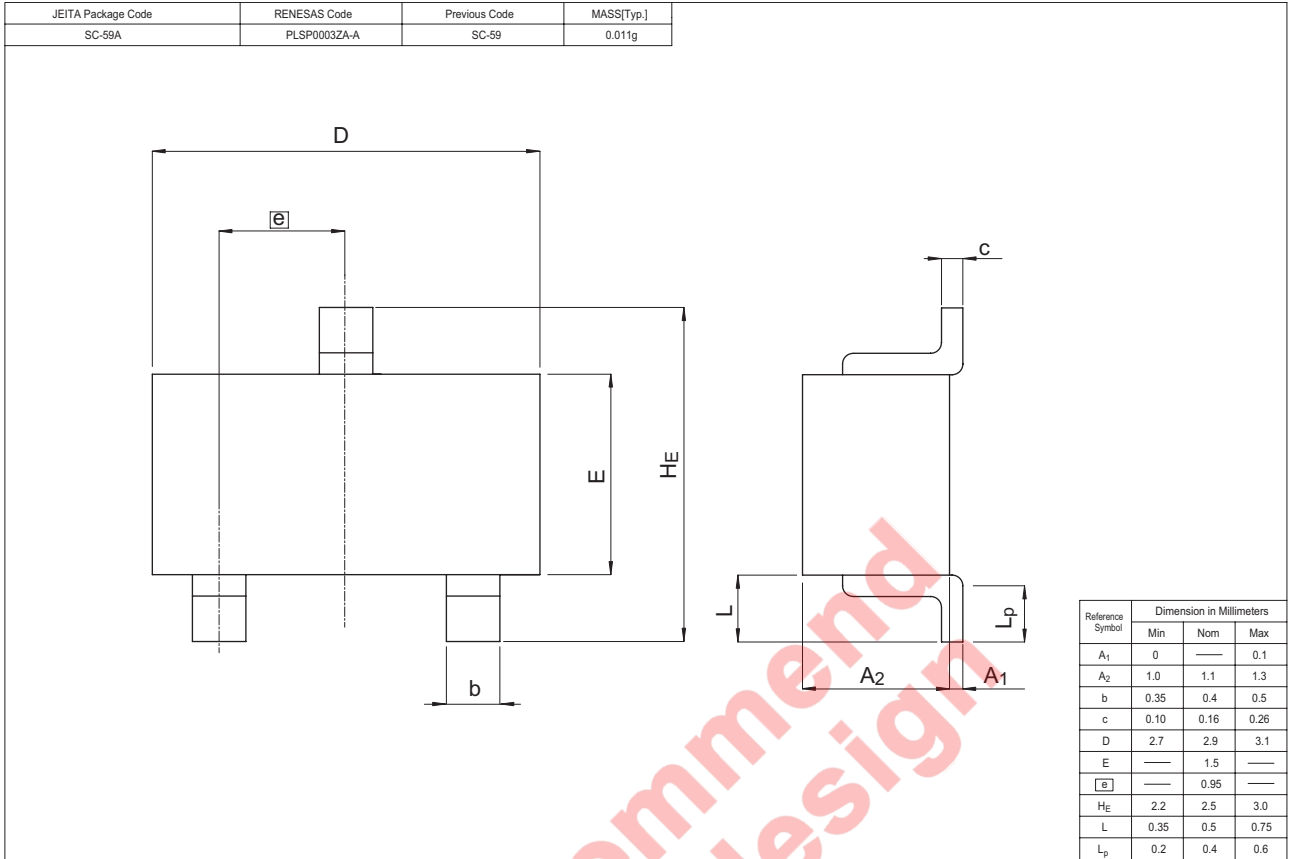
(Ta = 25°C, unless otherwise noted)

Item	Symbol	Min	Typ	Max	Unit	Test condition
Detecting voltage	V _S	3.56	3.70	3.86	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
		—	0.6	0.7		
Output load current	I _{OC}	-40	-25	-17	μA	V _{CC} = 5.0V, V _O =1/2V _{CC}
Output high voltage	V _{OH}	V _{CC} -0.2	V _{CC} -0.06	—	V	
Propagation delay time	t _{pd}	30	50	70	ms	

Example of Application Circuit



Package Dimensions



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