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Renesas Electronics website: <http://www.renesas.com>

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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Not recommended
for new design

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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

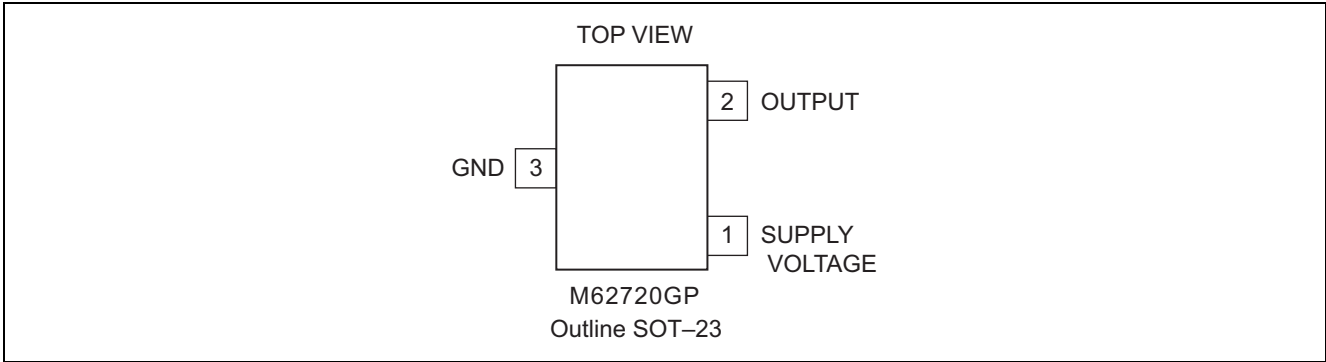
- Reset pulse generation for almost all logic circuits
- Battery checking, level detecting, waveform shaping circuits
- Delayed waveform generator
- Switching circuit to a back-up power supply
- DC/DC converter
- Over voltage protection circuit

Recommended Operating Condition

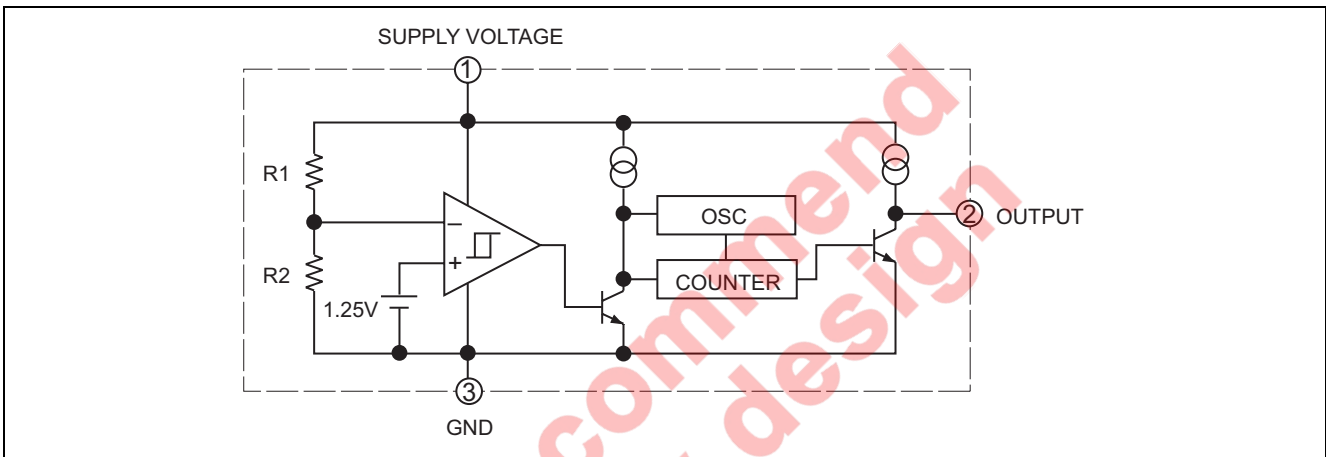
- Supply voltage range 1.5V to 7.0V

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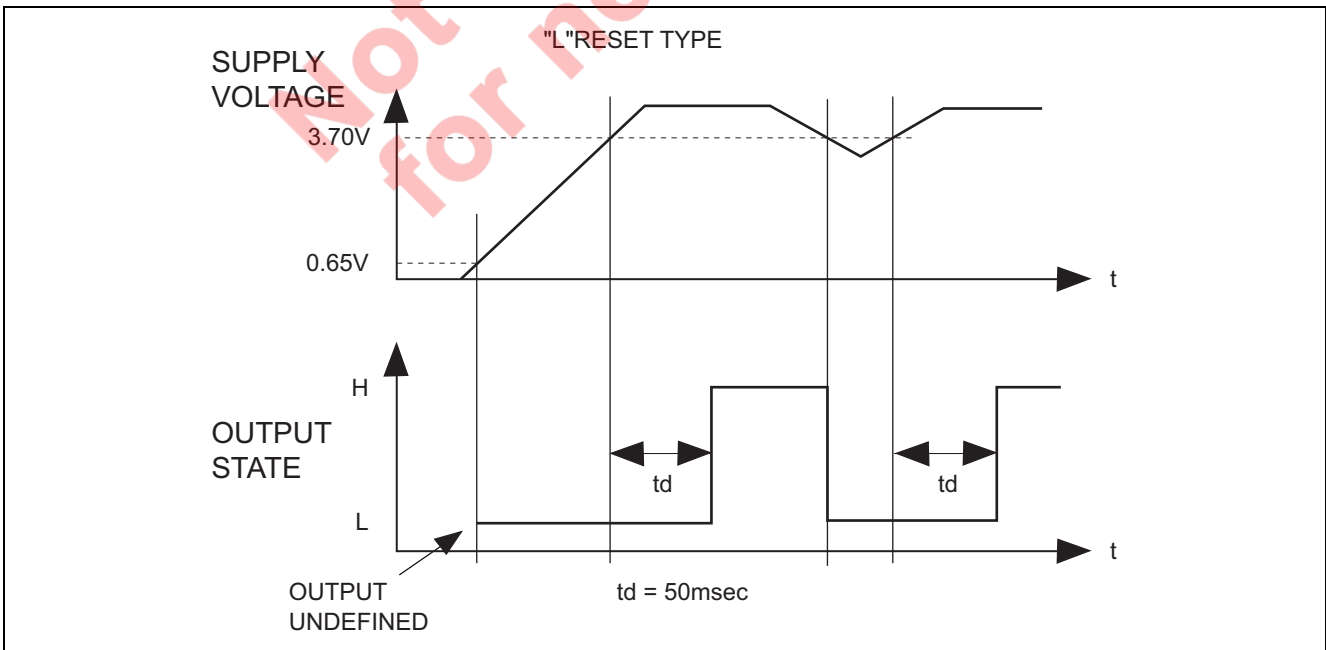
Pin Arrangement



Block Diagram



Function Diagram



Absolute Maximum Ratings

(Ta = 25°C, unless otherwise noted)

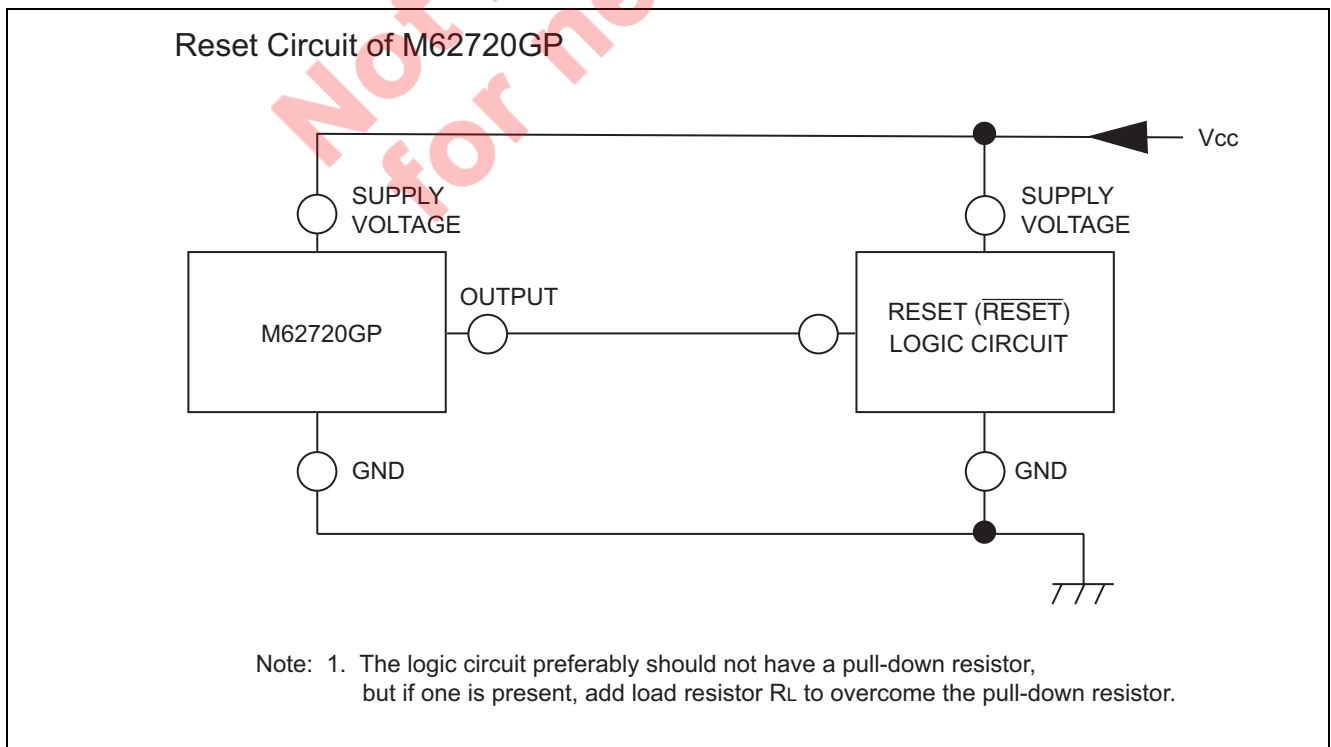
Item	Symbol	Ratings	Unit	Test Conditions
Supply voltage	V _{CC}	7	V	
Output sink current	I _{sink}	6	mA	
Output voltage	V _O	V _{CC}	V	Output with constant current load
Power dissipation	P _d	200	mW	3pin SOP (SOT-23)
Thermal derating	K _θ	2	mW/°C	Ta ≥ 25°C 3pin SOP
Operating temperature	T _{opr}	-30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

Electrical Characteristics

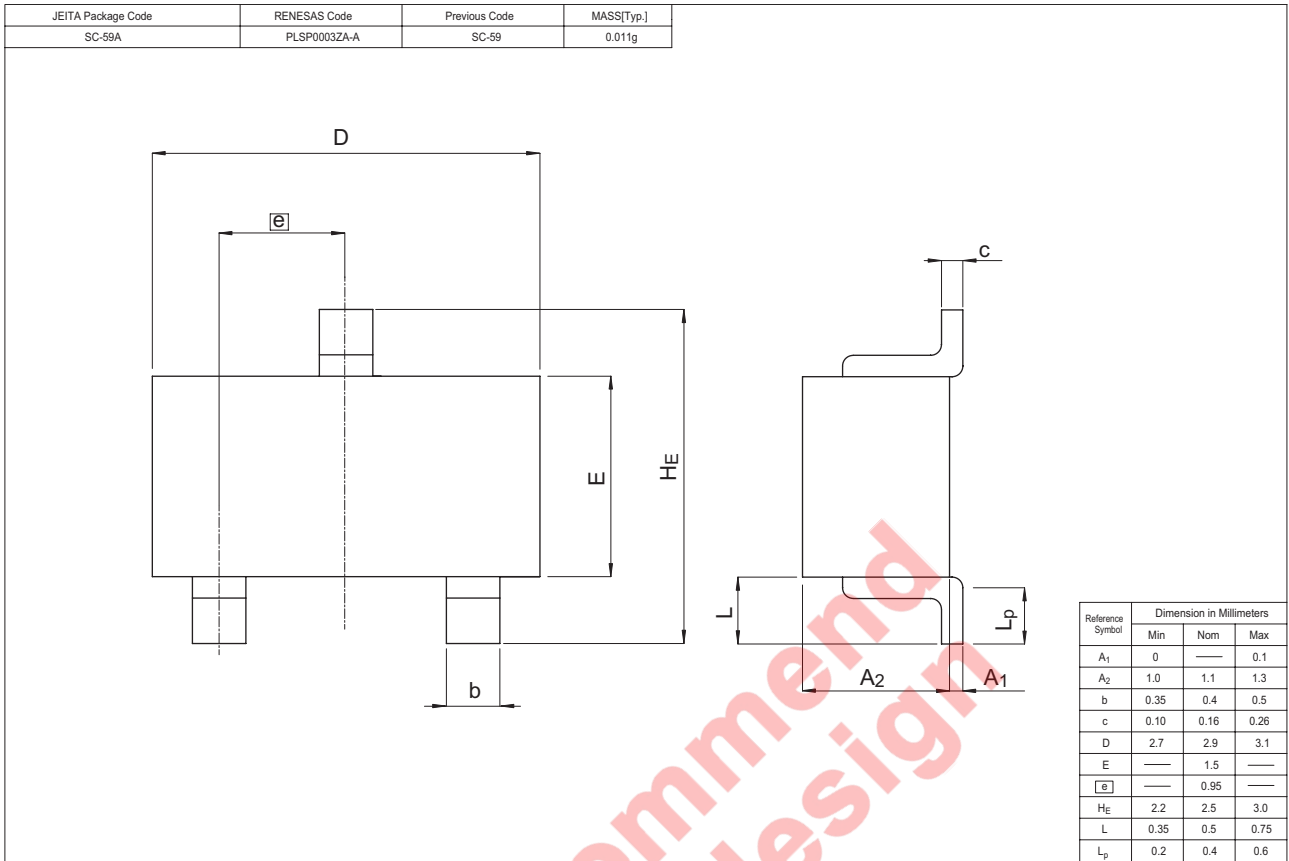
(Ta = 25°C, unless otherwise noted)

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



Not recommended for new design

Keep safety first in your circuit designs!

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Remember to give due consideration to safety when making your circuit designs, with appropriate measures such as (i) placement of substitutive, auxiliary circuits, (ii) use of nonflammable material or (iii) prevention against any malfunction or mishap.

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Renesas Technology America, Inc.

450 Holger Way, San Jose, CA 95134-1368, U.S.A
Tel: <1> (408) 382-7500, Fax: <1> (408) 382-7501

Renesas Technology Europe Limited

Dukes Meadow, Millboard Road, Bourne End, Buckinghamshire, SL8 5FH, U.K.
Tel: <44> (1628) 585-100, Fax: <44> (1628) 585-900

Renesas Technology Hong Kong Ltd.

7th Floor, North Tower, World Finance Centre, Harbour City, 1 Canton Road, Tsimshatsui, Kowloon, Hong Kong
Tel: <852> 2265-6688, Fax: <852> 2730-6071

Renesas Technology Taiwan Co., Ltd.

10th Floor, No.99, Fushing North Road, Taipei, Taiwan
Tel: <886> (2) 2715-2888, Fax: <886> (2) 2713-2999

Renesas Technology (Shanghai) Co., Ltd.

Unit2607 Ruijing Building, No.205 Maoming Road (S), Shanghai 200020, China
Tel: <86> (21) 6472-1001, Fax: <86> (21) 6415-2952

Renesas Technology Singapore Pte. Ltd.

1 Harbour Front Avenue, #06-10, Keppel Bay Tower, Singapore 098632
Tel: <65> 6213-0200, Fax: <65> 6278-8001