To all our customers

Regarding the change of names mentioned in the document, such as Mitsubishi Electric and Mitsubishi XX, to Renesas Technology Corp.

The semiconductor operations of Hitachi and Mitsubishi Electric were transferred to Renesas Technology Corporation on April 1st 2003. These operations include microcomputer, logic, analog and discrete devices, and memory chips other than DRAMs (flash memory, SRAMs etc.) Accordingly, although Mitsubishi Electric, Mitsubishi Electric Corporation, Mitsubishi Semiconductors, and other Mitsubishi brand names are mentioned in the document, these names have in fact all been changed to Renesas Technology Corp. Thank you for your understanding. Except for our corporate trademark, logo and corporate statement, no changes whatsoever have been made to the contents of the document, and these changes do not constitute any alteration to the contents of the document itself.

Note : Mitsubishi Electric will continue the business operations of high frequency & optical devices and power devices.

Renesas Technology Corp.
Customer Support Dept.
April 1, 2003

NEW PRODUCT

M62782GP

VOLTAGE DETECTING, SYSTEM RESETTING IC SERIES

GENERAL DESCRIPTION

The M62782GP 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=22kΩ
- Wide supply voltage range 1.5to 7.0V
- Sudden change in power supply has minimal effect on the ICs
- Wide application range
- Extra small 5-pin package (5-pin SOP) …SOT-25
- Built-in long delay time ..... 100 ms

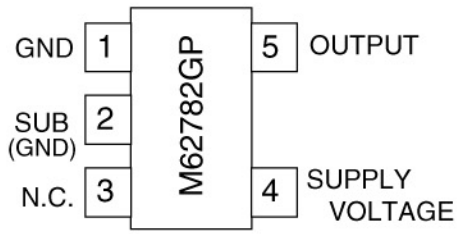
APPLICATION

- 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 1.5to 7.0V

PIN CONFIGURATION (TOP VIEW)

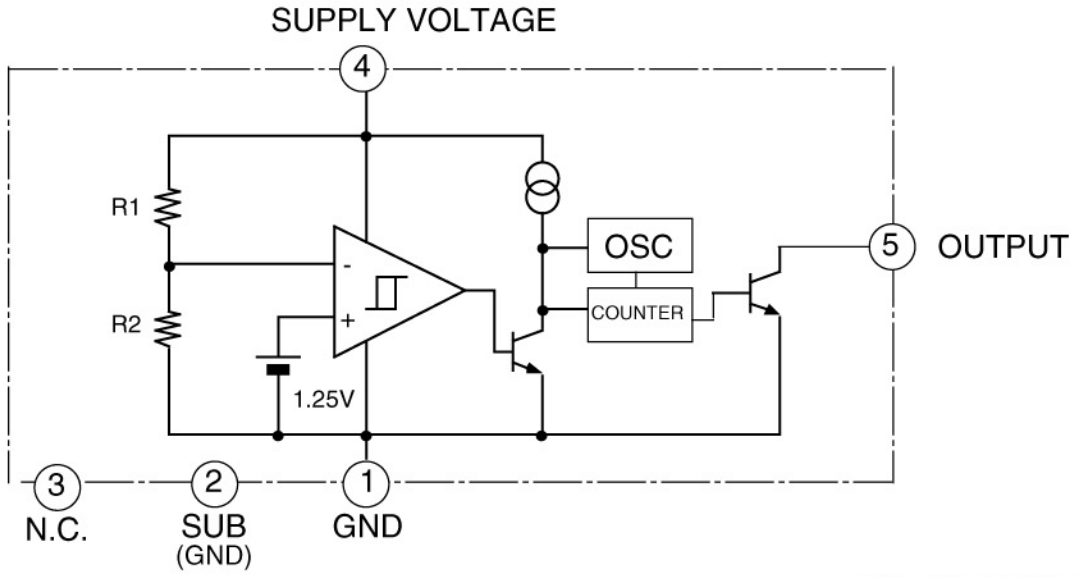


Outline SOT-25

N.C. :NO CONNECTION

BLOCK DIAGRAM

M62782GP



N.C. :NO CONNECTION

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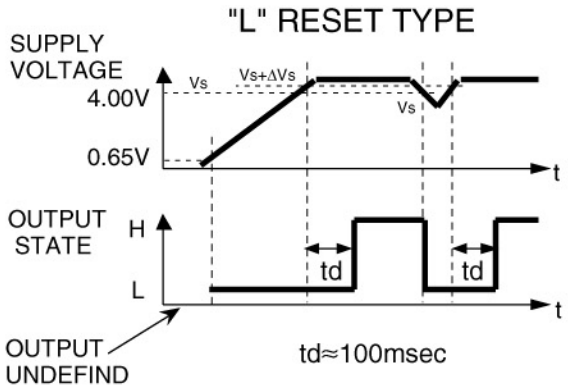
FUNCTION DIAGRAM



ABSOLUTE MAXINUM RATINGS (Ta=25°C Unless otherwise noted)

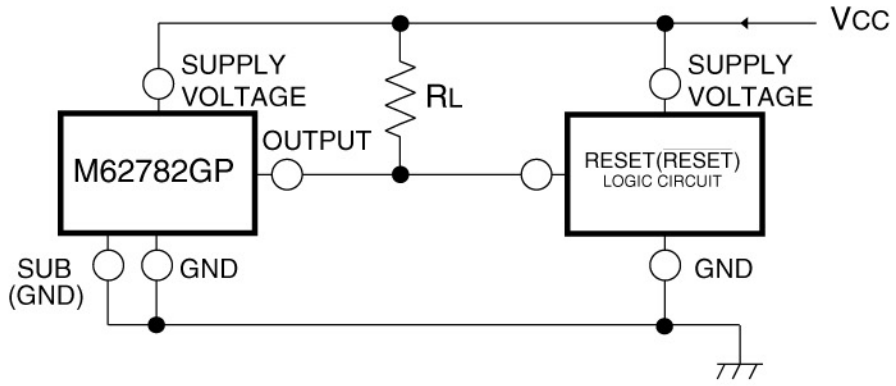
Symbol	Parameter	Test condition	Ratings	Unit
Vcc	Supply Voltage		8	V
Isink	Output Sink Current		6	mA
Vo	Output Voltage	Output with open collector	8	V
Pd	Power Dissipation	3pin SOP(SOT-23)	200	mW
Kθ	Thermal Derating	Ta≥25°C	2	mW/ °C
Topr	Operating Temperature		-30 to +85	°C
Tstg	Storage Temperature		-40 to +125	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C, Unless otherwise noted)

Symbol	Parameter	Test condition		Limits			Unit
				MIN	TYP	MAX	
Vs	Detecting Voltage			3.84	4.00	4.16	V
ΔVs	Hysterisis Voltage			50	80	110	mV
Vs/ΔT	Detecting Voltage Temperature Coefficient			—	0.01	—	%/ °C
Icc	Circut Current	Vcc=5V		—	400	600	μA
Vsat	Output Saturation Voltage	Vcc=3.5V,Isink=4mA		—	0.2	0.4	V
VOPL	Threshold Operating Voltage	Minimum supply voltage for IC operation	RL=2.2kΩ,Vsat≤0.4V	—	0.7	0.8	V
			RL=100kΩ,Vsat≤0.4V	—	0.6	0.7	
IOH	Output Leak Current			—	—	30	nA
		Ta= - 30 to + 85 °C		—	—	1	μA
tPD	Deray Time			60	100	140	ms

Example of application circuit

Reset Circuit of M62782GP



Note 1.

The logic circuit preferably should not have a pull-down resistor,but if one is present,add load resistor RL to overcome the pull-down resistor.

PACKCAGE OUTLINE

SOT-25

Dimension : mm