M62720GP

VOLTAGE DETECTING, SYSTEM RESETTING IC SERIES

GENERAL 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=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 3-pin package (3-pin SOP)
- Built-in long delay time

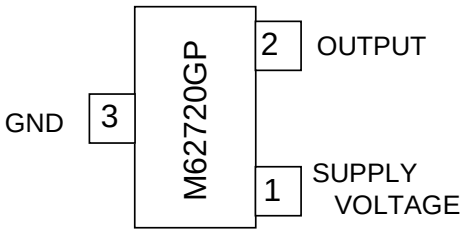
APPLICATION

- 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 …… 1.5to 7.0V

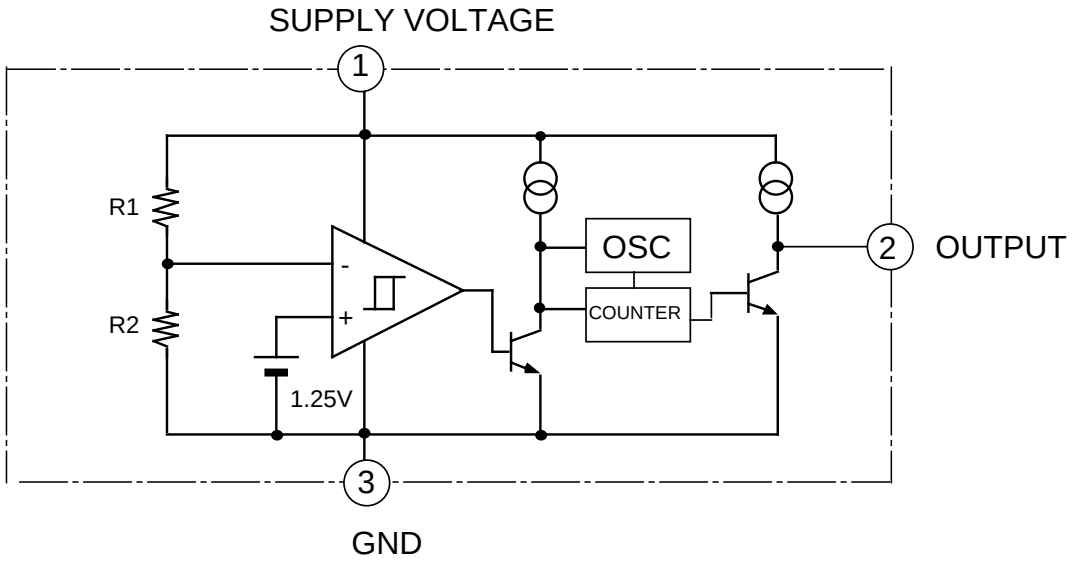
PIN CONFIGURATION (TOP VIEW)



Outline SOT-23

BLOCK DIAGRAM

M62720GP



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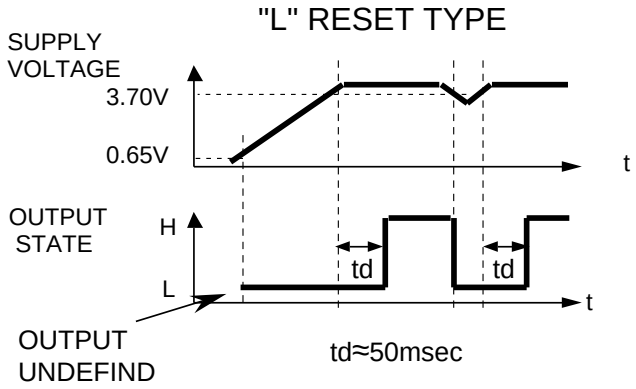
FUNCTION DIAGRAM



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

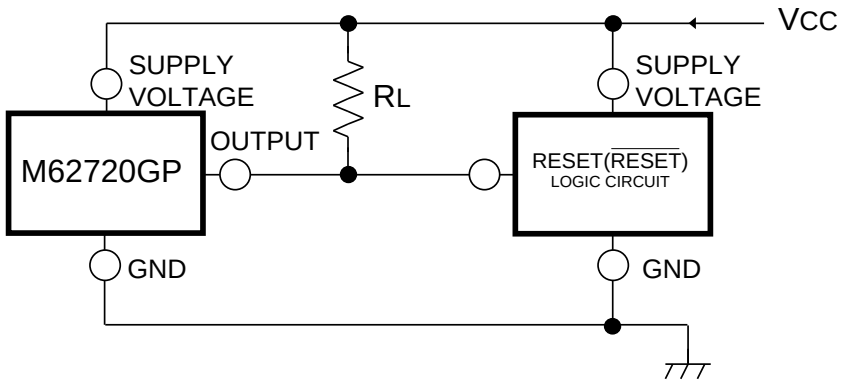
Symbol	Parameter	Test condition		Ratings	Unit
Vcc	Supply Voltage			8	V
Isink	Output Sink Current			6	mA
Vo	Output Voltage	Output with open collector		8	V
Pd	Power Dissipation	3pin SOP(SOT-23)		200	mW
Kθ	Thermal Derating	Ta≥25°C	3pin SOP	2	mW/ °C
Topr	Operating Temperature			-30 to +85	°C
Tstg	Storage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

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

Symbol	Parameter	Test condition		Limits			Unit
				MIN	TYP	MAX	
V_S	Detecting Voltage			3.56	3.70	3.86	V
ΔV_S	Hysteresis Voltage			50	80	110	mV
$V_S/\Delta T$	Detecting Voltage Temperature Coefficient			——	0.01	——	%/°C
I_{CC}	Circuit Current	V_{CC}=5.0V		——	400	600	µA
Vsat	Output Saturation Voltage	V_{CC}=3.5V,Isink=4mA		——	0.2	0.4	V
V_{OPL}	Threshold Operating Voltage	Minimum supply voltage for IC operation	R_L=2.2kΩ,Vsat≤0.4V	——	0.7	0.8	V
			R_L=100kΩ,Vsat≤0.4V	——	0.6	0.7	
I_{OC}	Output Load Current	V_{CC}=5V,V_O=1/2V_{CC}		-40	-25	-17	µA
V_{OH}	Output HIGH Voltage			V_{CC}-0.2	V_{CC}-0.06		V
t_{PD}	Propagation Delay Time			30	50	70	ms

Example of application circuit

Reset Circuit of M62720GP



Note 1.

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

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PACKCAGE OUTLINE

SOT-23

Dimension : mm