RT8H065C

latch circuit

DESCRIPTION

RT8H065C is a NPN transistor, a PNP transistor, and the compound transistor constituted by resistance. This transistor enables a miniaturization of the set and a great reduction in parts and man-hours.
The circuit is composed as a latch function.

FEATURE

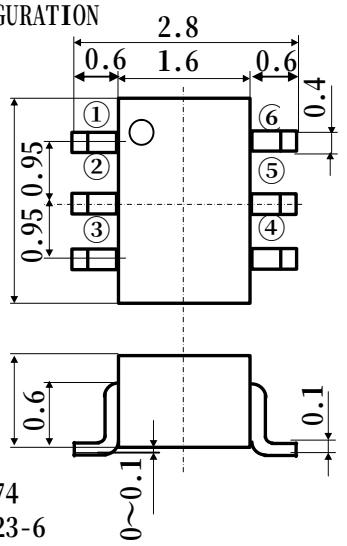
- The miniaturization of a set and high-density mounting are possible.
- The power supply voltage range of operation is wide.

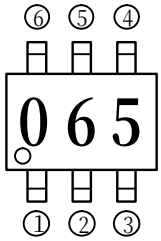
APPLICATION

Latch operation to protect over voltage and over current, such as a AC adapter.

PIN CONFIGURATION

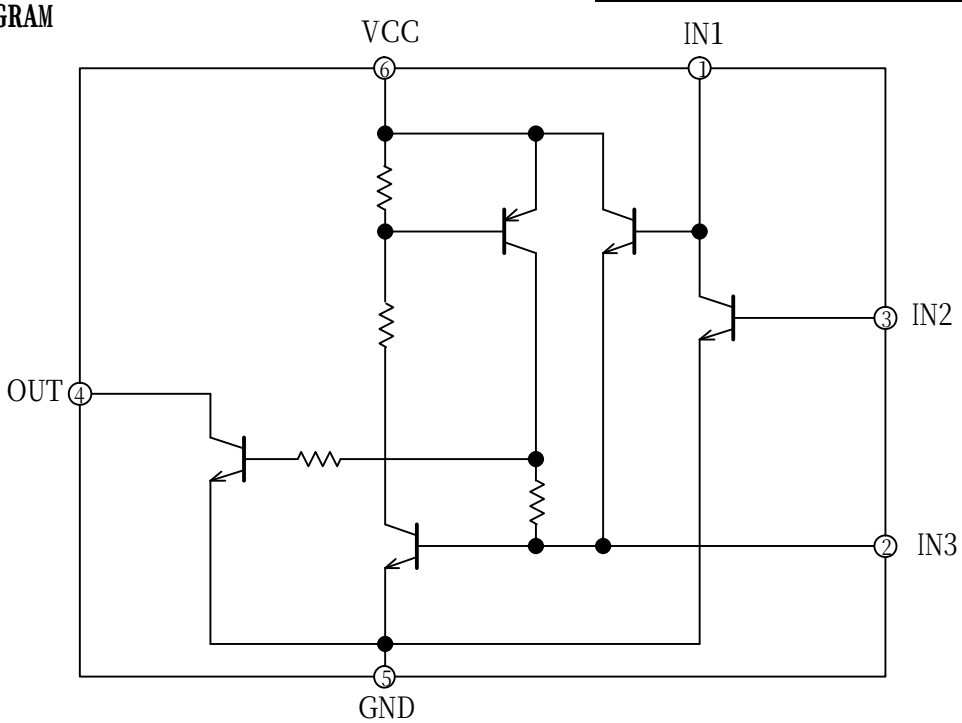
Unit:mm





Out line
① IN1
② IN3
③ IN2
④ OUT
⑤ GND
⑥ VCC

BLOCK DIAGRAM



FUNCTIONAL DESCRIPTION OF TERMINAL

Pin number	Symbol	Functional Description
1	IN1	Input 1
2	IN3	Input 3
3	IN2	Input 2
4	OUT	Output
5	GND	Ground
6	Vcc	Supply voltage

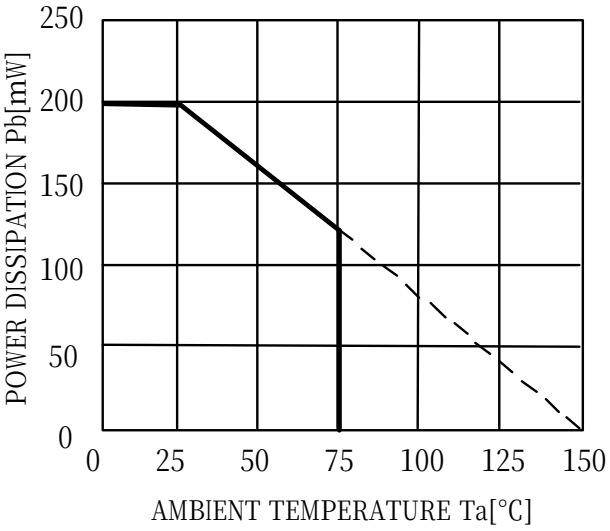
ABSOLUTE MAXIMUM RATINGS (unless otherwise noted, Ta=25°C)

Symbol	Parameter	Conditions	Ratings	Unit
Vcc	Supply voltage		37	V
Isink	Output sink current		15	mA
VOUT	Output voltage		Vcc	V
VIN	Input voltage		-0.4	V
Pd	Power Dissipation		200	mW
KΘ	Thermal derating	Ta≧25°C	1.6	mW/°C
Tj	Junction temperature		150	°C
Tstg	Storage temperature		−40～+150	°C
Topr	Operating temperature		−20～+75	°C

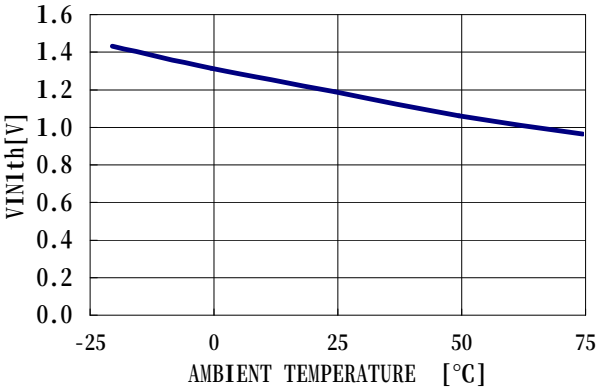
ELECTRICAL CHARACTERISTICS (Vcc=22V、Ta=25°C Unless otherwise noted)

Symbol	Parameter	Test condition	Limits			Unit
			Min	Typ	Max	
Vcc	Supply voltage	Vcc series resistance 82KΩ output pull-up resister 30KΩ	—	22	36	V
Icc (OFF)	Off-state Circuit current	Vcc series resistance 82KΩ output pull-up resister 30KΩ	—	0	1	uA
Icc (ON)	On-state Supply current	Vcc series resistance 82KΩ output pull-up resiste 30KΩ	—	250		uA
VIN1th	IN1 threshold voltage	Vcc series resistance 82KΩ output pull-up resiste 30KΩ	1.0	1.2	1.4	V
VIN2th	IN2 threshold voltage	Vcc series resistance 82KΩ IN1 pull-up resiste 30KΩ	0.54	0.69	0.84	V
VIN3th	IN3 threshold voltage	Vcc series resistance 82KΩ output pull-up resiste 30KΩ	0.5	0.65	0.8	V
Vosat	Output saturation voltage	Vcc series resistance 82KΩ Io=6mA		0.4	0.6	V

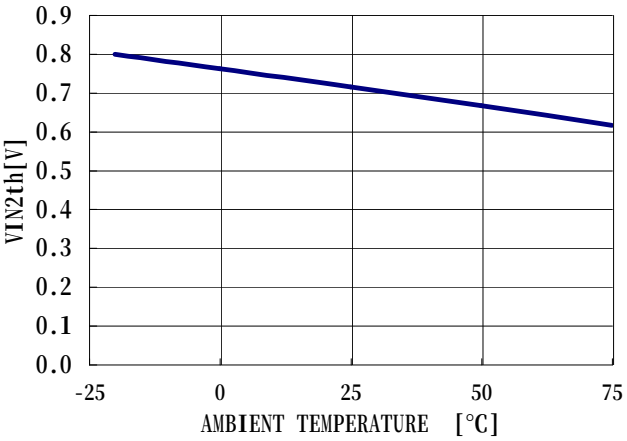
THERMAL DERATING CURVE



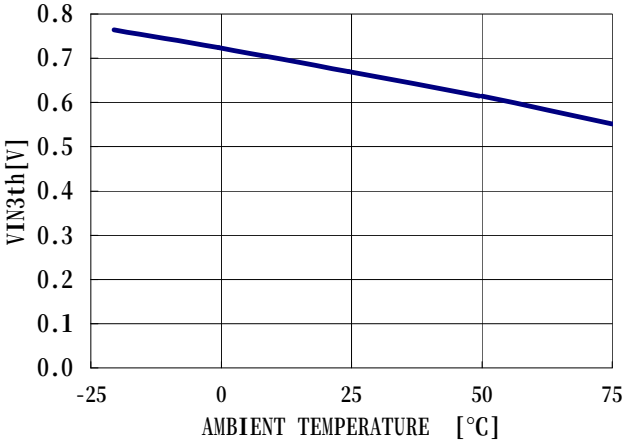
IN1 THRESHOLD VOLTAGE VS AMBIENT TEMPERATURE



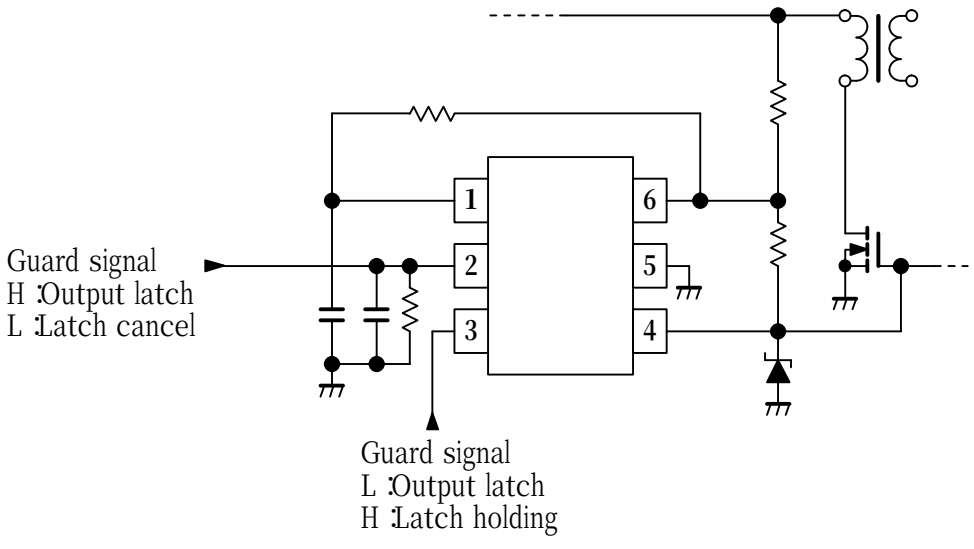
IN2 THRESHOLD VOLTAGE VS AMBIENT TEMPERATURE



IN3 THRESHOLD VOLTAGE VS AMBIENT TEMPERATURE



APPLICATION CIRCUIT EXAMPLE



ISAHAYA ELECTRONICS CORPORATION

6-41 Tsukuba, Isahaya, Nagasaki, 854-0065 Japan

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