

# Preliminary

\*This is tentative specification.

## IGBT gate interception circuit

### DESCRIPTION

RT8H072E is composed by NPN transistors, PNP transistors and resistors. It can miniaturization of a set and reduce parts or time necessary for completion. Connected This MFT with the level-shift circuit of IPM, It can prevent the fault that IGBT gate turn on at the same time.

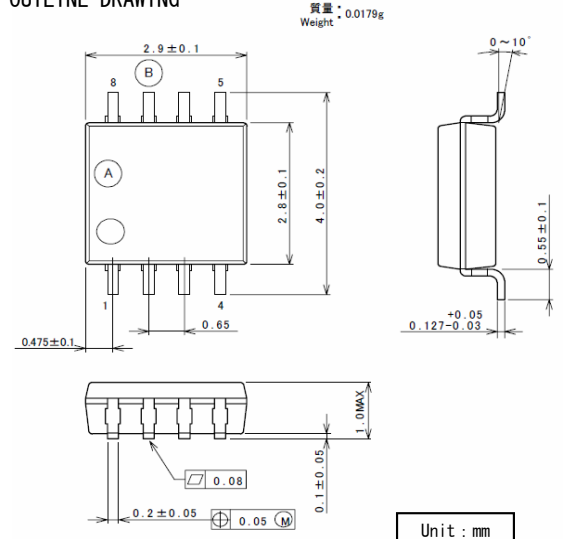
### FEATURES

- Miniaturization of a set.
- Open collector output.

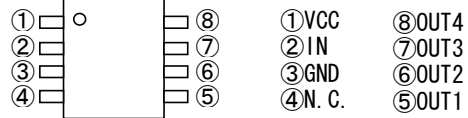
### APPLICATION

The protection of IGBT Gate.

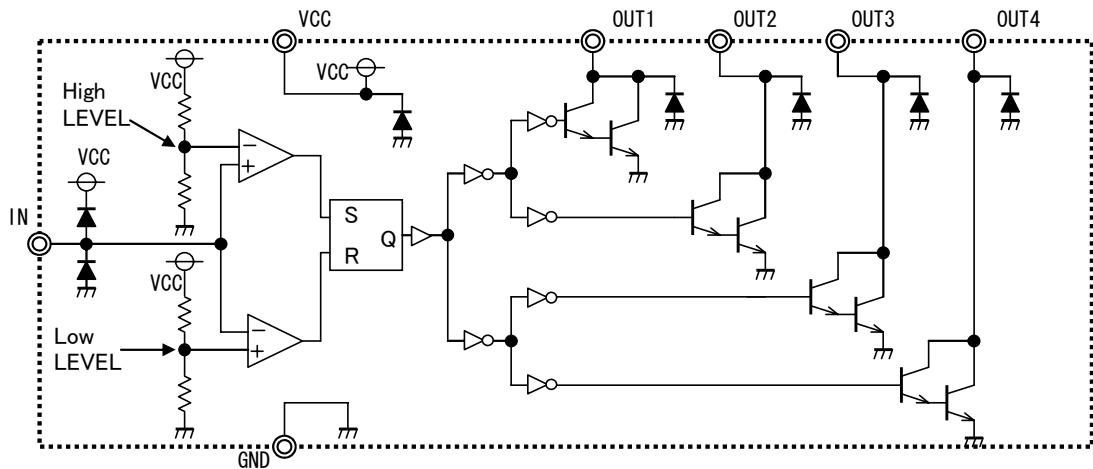
### OUTLINE DRAWING



### PIN CONFIGURATION



### BLOCK DIAGRAM



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## IGBT gate interception circuit

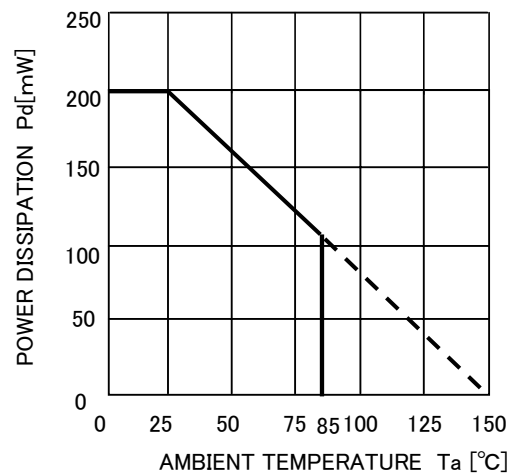
### ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Symbol	Parameter	Conditions	Ratings	Unit
Vcc	Supply voltage		10	V
IOUT	Output current	OUT1~4 common	10	mA
VOUT	Output voltage	OUT1~4 common	-0.3~VCC	V
VIN	Input voltage		-0.3~VCC	V
Pd	Internal power dissipation		200	mW
Kθ	Thermal derating	Ta ≥ 25°C	1.6	mW/°C
Tj	Junction temperature		150	°C
Tstg	Storage temperature	(keep dry)	-40~150	°C
Topr	Operating temperature		-20~85	°C

### ELECTRICAL CHARACTERISTIC (Ta=25°C, VCC=5V unless otherwise noted.)

Symbol	Parameter	Test conditions	Designed value			Unit
			Min	Typ	Max	
VCC	Operating supply voltage range		3	5	9	V
ICC_ON	Circuit current in on states	IN=5V	-	400	600	uA
ICC_OFF	Circuit current in off states	IN=0V	-	400	600	uA
VTHH	Threshold voltage in level HI	IN=0V→HIGH	3.03	3.16	3.28	V
VTHL	Threshold voltage in level Low	IN=3.5V→LOW	2.43	2.53	2.63	V
IIN	IN input current	IN=VTHL(MIN)	-1	-0.3	-	uA
VOL	OUT saturation voltage	IN=5V, IOUT=5mA OUT1, OUT2, OUT3, OUT4 common	-	0.85	1.5	V
ILO	OUT leak current	IN=0V, VOUT=5V OUT1, OUT2, OUT3, OUT4 common	-	0	1	uA

### THERMAL DERATING

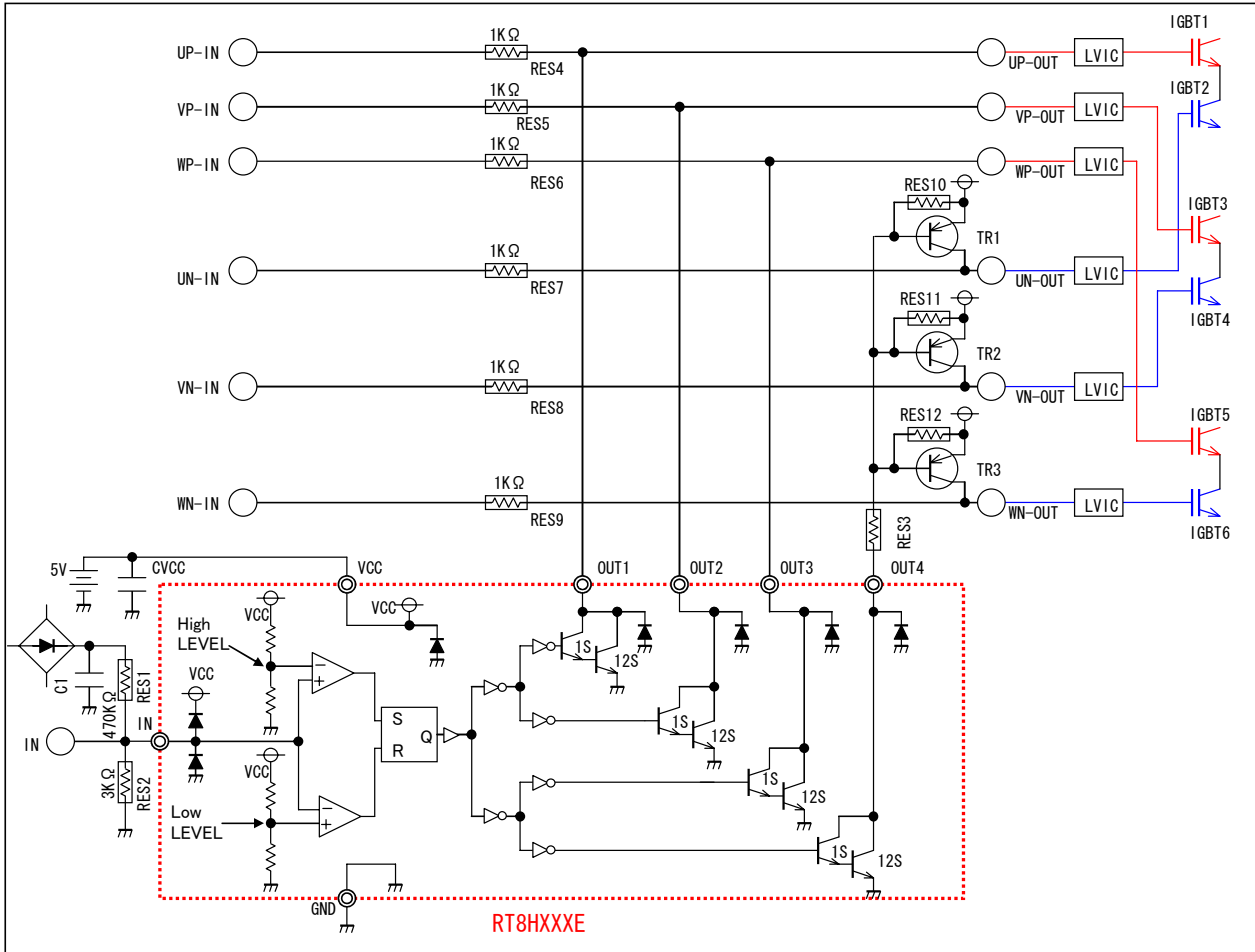


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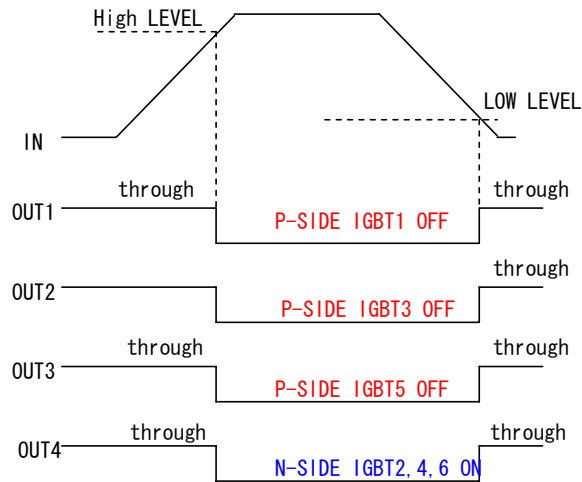
**IGBT gate interception circuit**

**APPLICATION CIRCUIT EXAMPLES**



**Timing diagram**

\*OUT1 ~ OUT4, VCC ≥ -0.3  
\*-0.3 ≤ IN ≤ VCC





**Keep safety first in your circuit designs!**

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