<M F T>

RT8H072E

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.

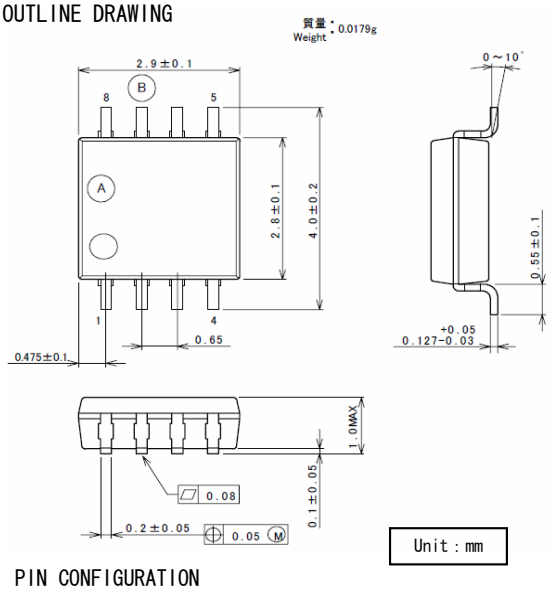
FEATURES

- Miniaturization of a set.
- Open collector output.

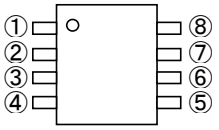
APPLICATION

The protection of IGBT Gate.

OUTLINE DRAWING

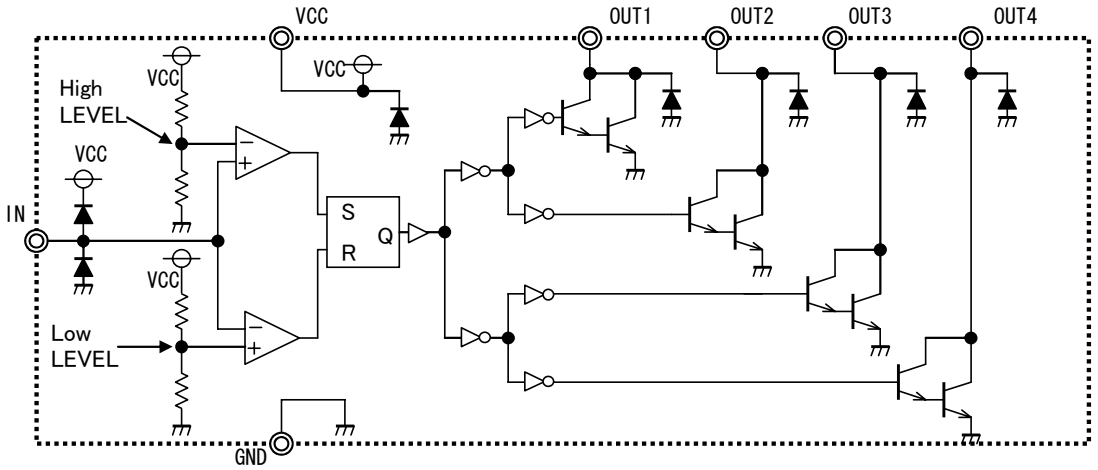


PIN CONFIGURATION



①VCC	⑧OUT4
②IN	⑦OUT3
③GND	⑥OUT2
④N.C.	⑤OUT1

BLOCK DIAGRAM



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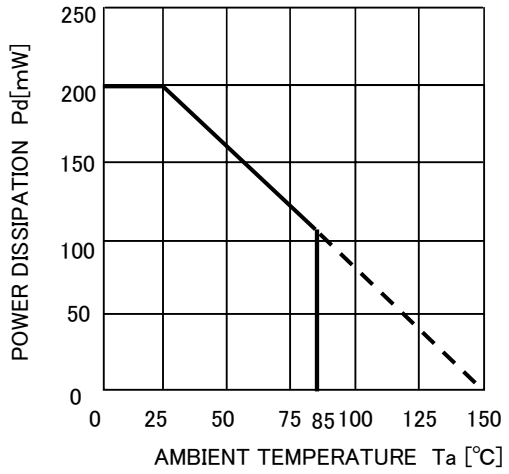
ABSOLUTE MAXIMUM RATINGS (Ta=25℃)

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℃	1.6	mW/℃
Tj	Junction temperature		150	℃
Tstg	Storage temperature	(keep dry)	－40～150	℃
Topr	Operating temperature		-20～85	℃

ELECTRICAL CHARACTERISTIC (Ta=25℃, 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

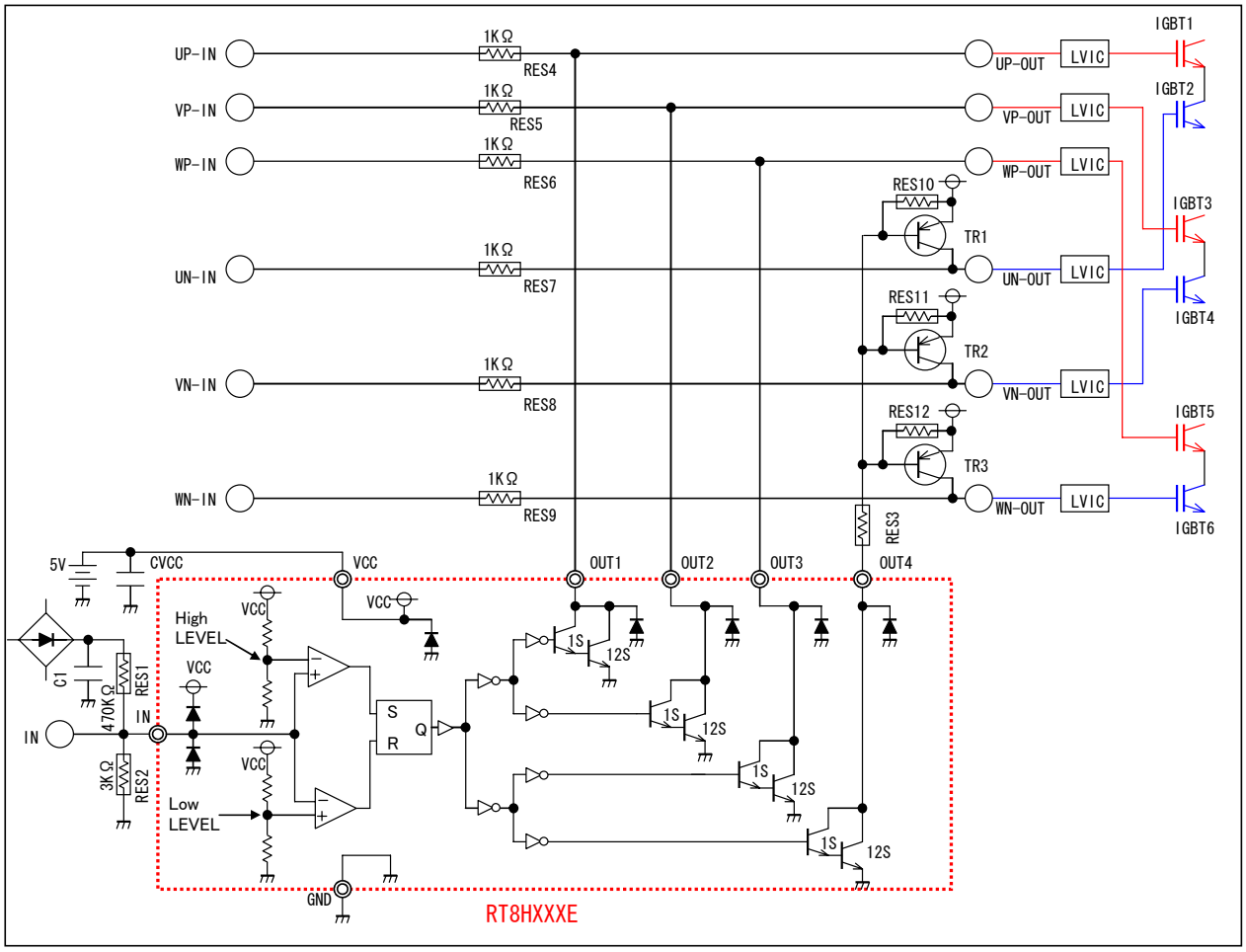
THERMAL DERATING



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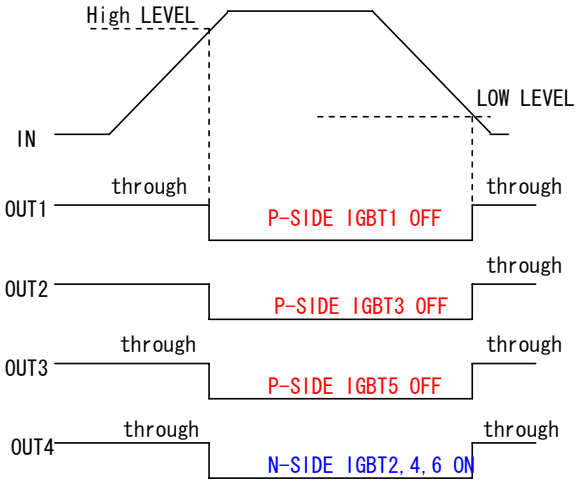
IGBT gate interception circuit

APPLICATION CIRCUIT EXAMPLES



Timing diagram

*OUT1～OUT4, VCC ≧-0.3
*-0.3≦IN≦VCC



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