RT8H255C

IGBT Gate Driver

DESCRIPTION

RT8H255C is a integrating IGBT gate drive circuit.
This product can drive IGBT with two external transistors.
GATEIN terminal have hysteresis input voltage.
Case of "L→H" propagation, B terminal output low signal at over 2.80V. Case of "H→L" propagation, B terminal output high signal at under 2.48V.

FEATURE

The miniaturization of a set and high-density mounting are possible.

APPLICATION

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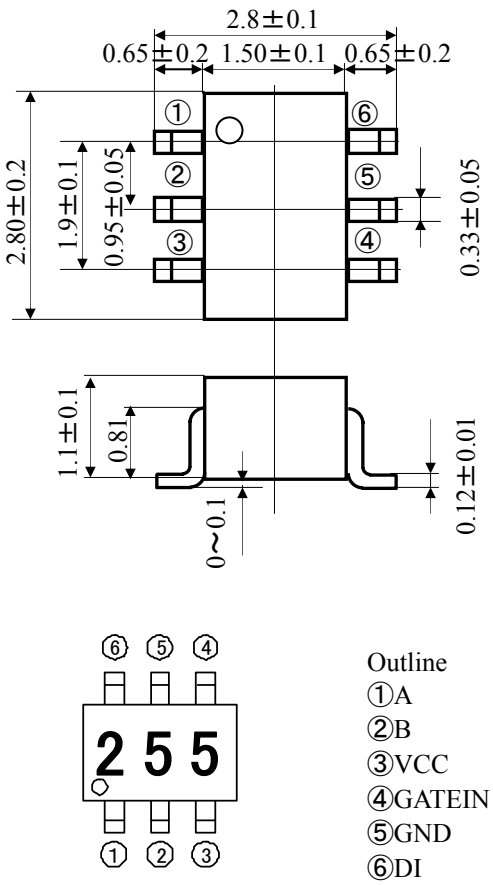
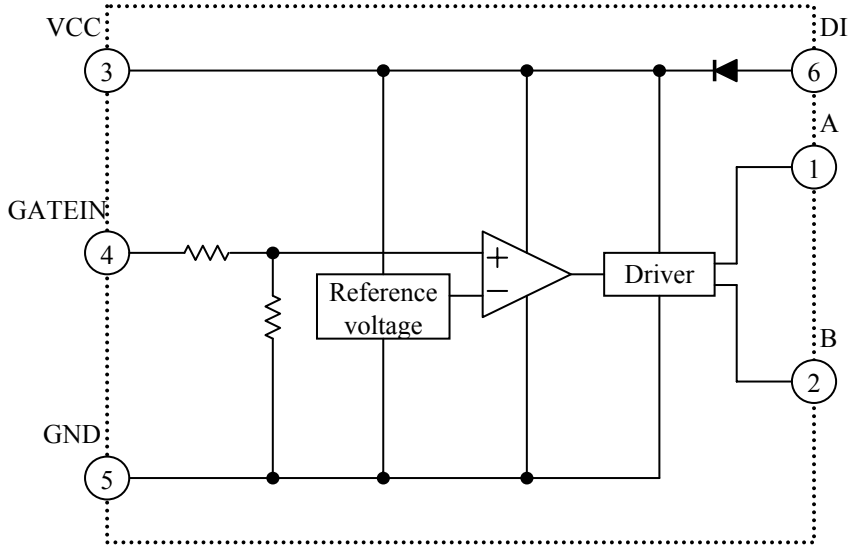
PIN CONFIGURATION Unit:mm



Outline
①A
②B
③VCC
④GATEIN
⑤GND
⑥DI

BLOCK DIAGRAM



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

Symbol	Parameter	Conditions	Ratings	Unit
Vcc	Supply voltage		30	V
VGIN	IN terminal voltage		10	V
Pd	Power Dissipation	Ta≧25℃	200	mW
Kθ	Thermal derating factor		1.6	mW/℃
Tj	Junction temperature		150	℃
Tstg	Storage temperature	Non condensing	－40～150	℃
Topr	Operating temperature	Non condensing	－20～75	℃

ELECTRICAL CHARACTERISTICS（ Ta=25℃,VCC=20V,Terminal is open, unless otherwise notec ）

Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
Vcc	Operating supply voltage range		10	20	25	V
ICC1	Circuit current 1	GATEIN=0V	-	490	735	uA
ICC2	Circuit current 2	GATEIN=5V	-	500	750	uA
VOB2	B terminal output low voltage 2	GATEIN=5V	-	0	0.28	V
Vth1	GATEIN terminal threshold voltage 1（Low→High）	GATEIN：0→5V VMB：Low	2.54	2.80	3.10	V
Vth2	GATEIN terminal threshold voltage 2（High→Low）	GATEIN：5→0V VMB：High	2.24	2.48	2.74	V
IOUTA1	A terminal output current 1	GATEIN=0V、A=B=0.7V IMA	-1	0	1	uA
IOUTA2	A terminal output current 2	GATEIN=5V、A=18V IMA	-810	-600	-390	uA
IINB	B terminal sink current	GATEIN=5V、B=0.3V IMB	700	1080	1460	uA
IOUTB	B terminal source current	GATEIN=0V、B=0.7V IMB	-1120	-830	-540	uA

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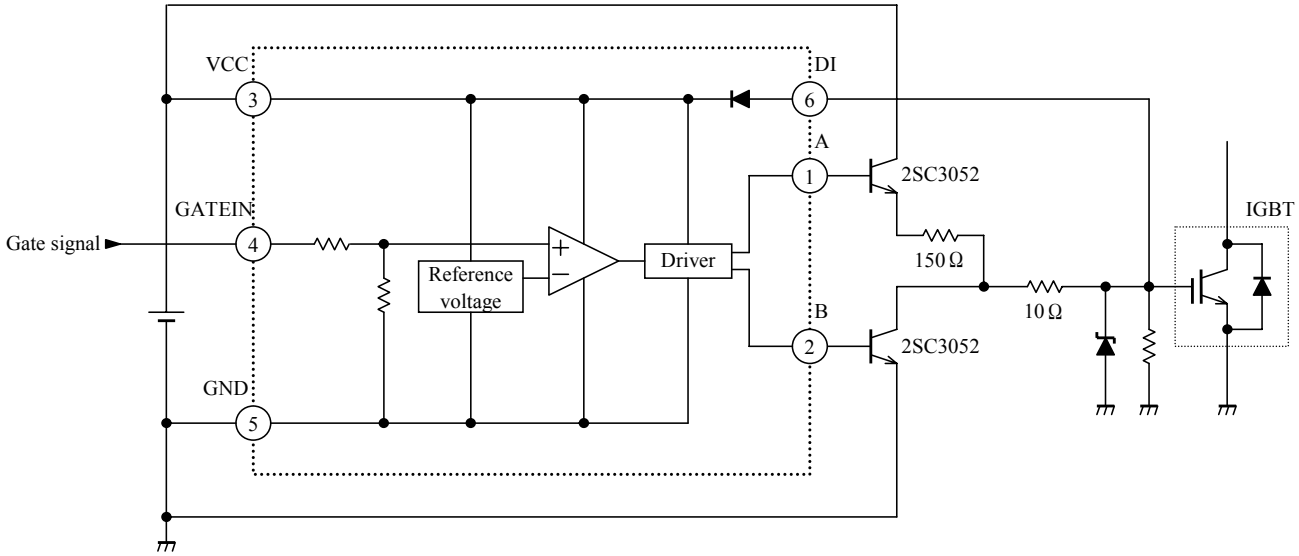
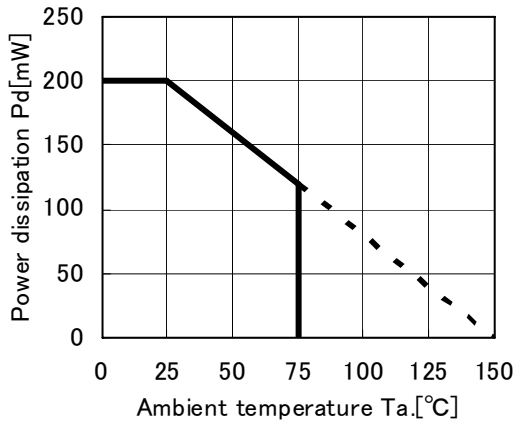
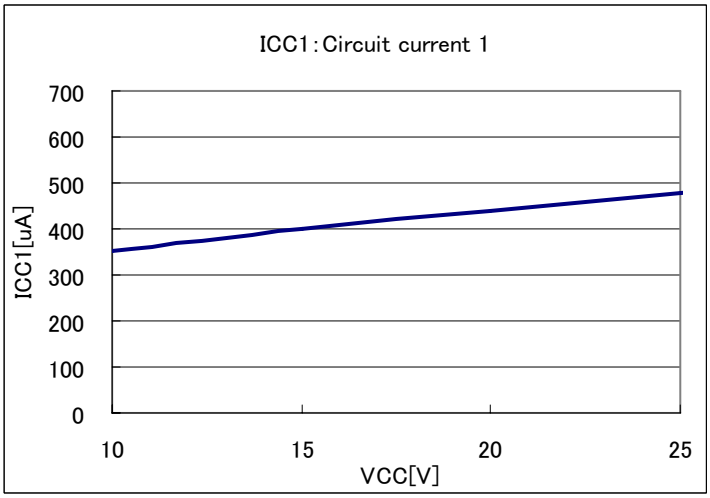
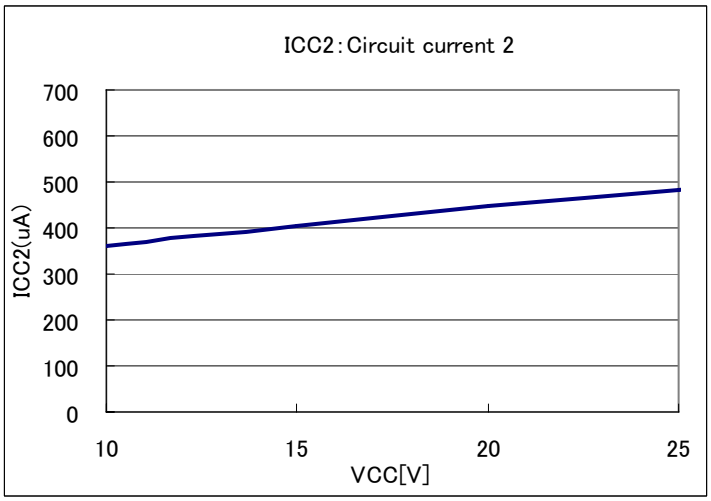
Application circuit

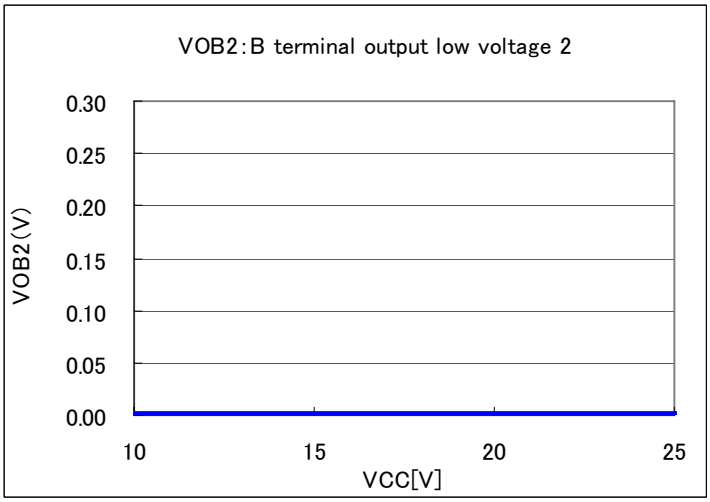


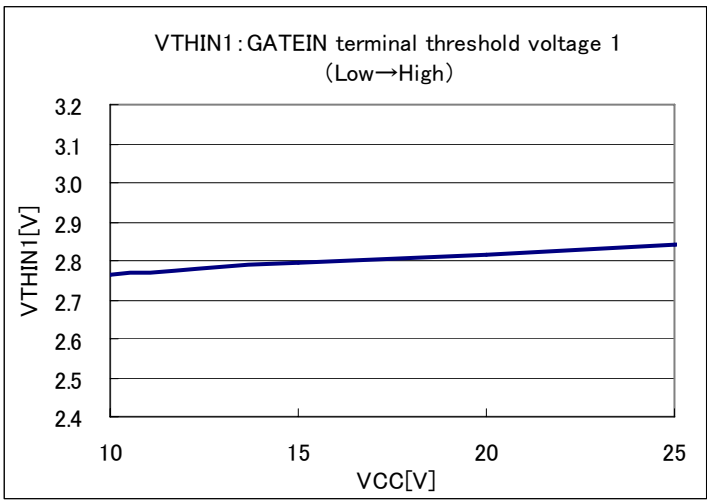
<TYPICAL CHARACTERISTICS>

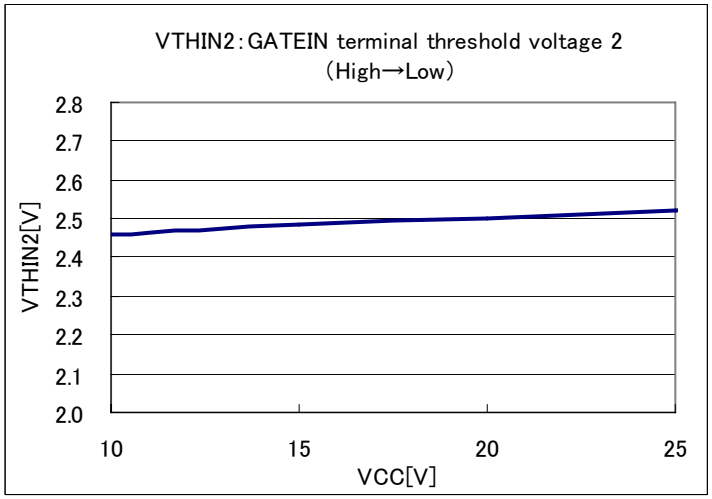


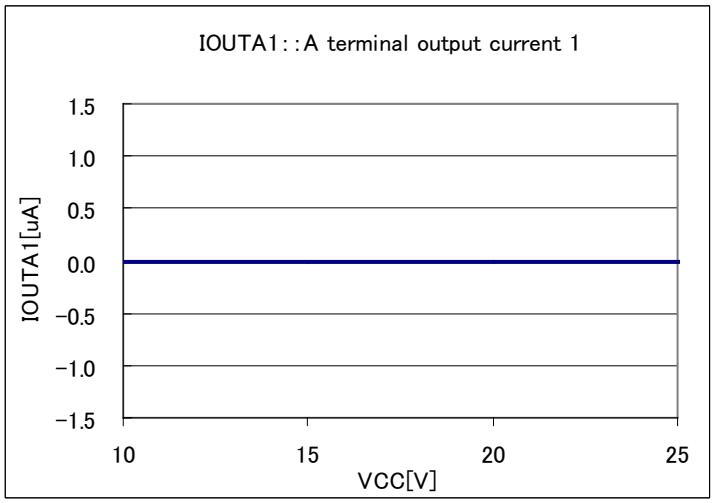


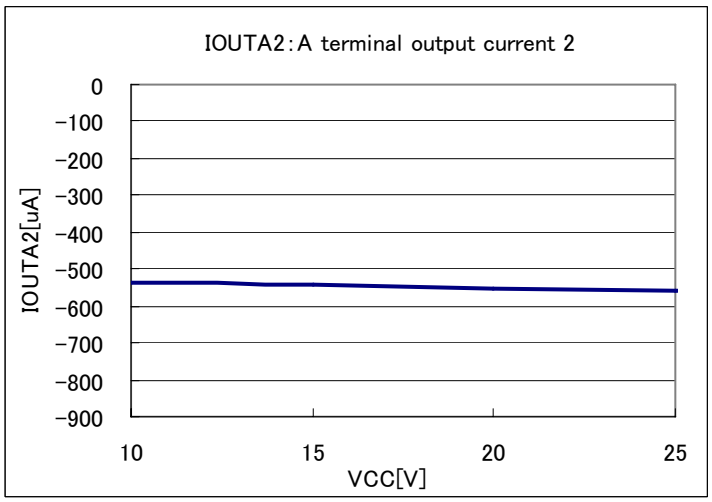


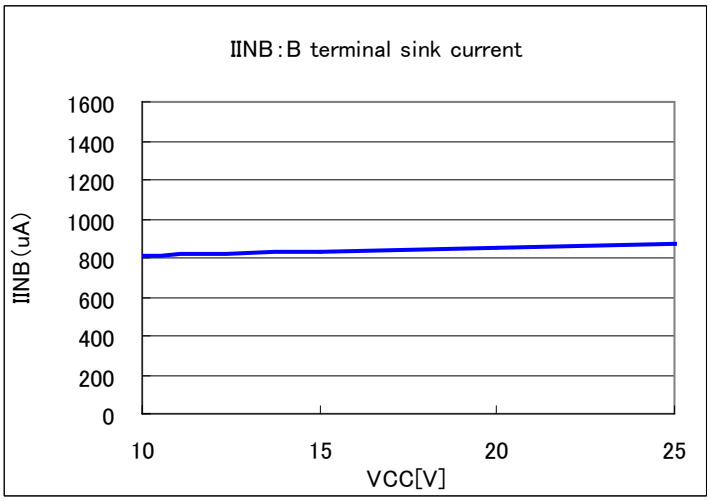


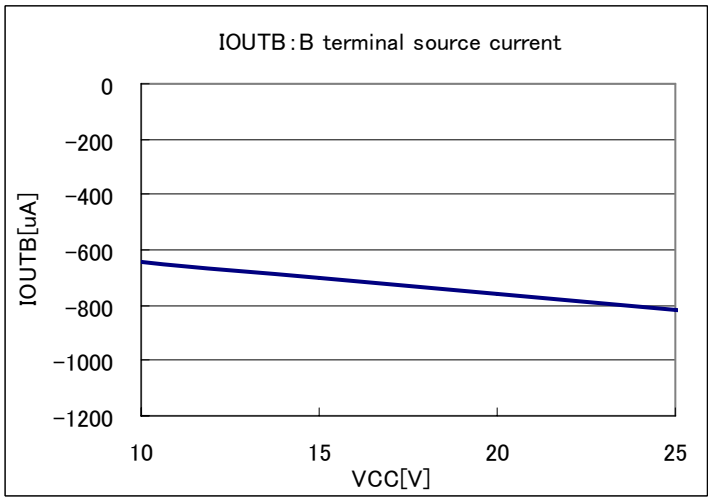

VTHIN1：GATEIN terminal threshold voltage 1
（Low→High）
VTHIN1[V]
3.2
3.1
3.0
2.9
2.8
2.7
2.6
2.5
2.4
10
15
20
25
VCC[V]


VTHIN2：GATEIN terminal threshold voltage 2
（High→Low）
VTHIN2[V]
2.8
2.7
2.6
2.5
2.4
2.3
2.2
2.1
2.0
10
15
20
25
VCC[V]


IOUTA1：：A terminal output current 1
IOUTA1[uA]
1.5
1.0
0.5
0.0
−0.5
−1.0
−1.5
10
15
20
25
VCC[V]


IOUTA2：A terminal output current 2
IOUTA2[uA]
0
−100
−200
−300
−400
−500
−600
−700
−800
−900
10
15
20
25
VCC[V]


IINB：B terminal sink current
IINB（uA）
1600
1400
1200
1000
800
600
400
200
0
10
15
20
25
VCC[V]


IOUTB：B terminal source current
IOUTB[uA]
0
−200
−400
−600
−800
−1000
−1200
10
15
20
25
VCC[V]

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