

# RJP4006AGE

Nch IGBT for Strobe Flash

REJ03G1865-0100

Rev.1.00

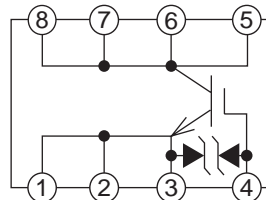
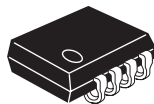
Dec 09, 2009

## Features

- Ultra small surface mount package
- $V_{CES}$ : 400 V
- $I_{CM}$ : 120 A
- Drive voltage: 2.7 V
- Pb-free
- Halogen-free

## Outline

RENESAS Package code: PTSJ0008JA-A  
(Package name: TSOJ-8)



1, 2, 3 : Emitter  
4 : Gate  
5, 6, 7, 8 : Collector

## Applications

Strobe flash for cameras

## Maximum Ratings

( $T_c = 25^\circ\text{C}$ )

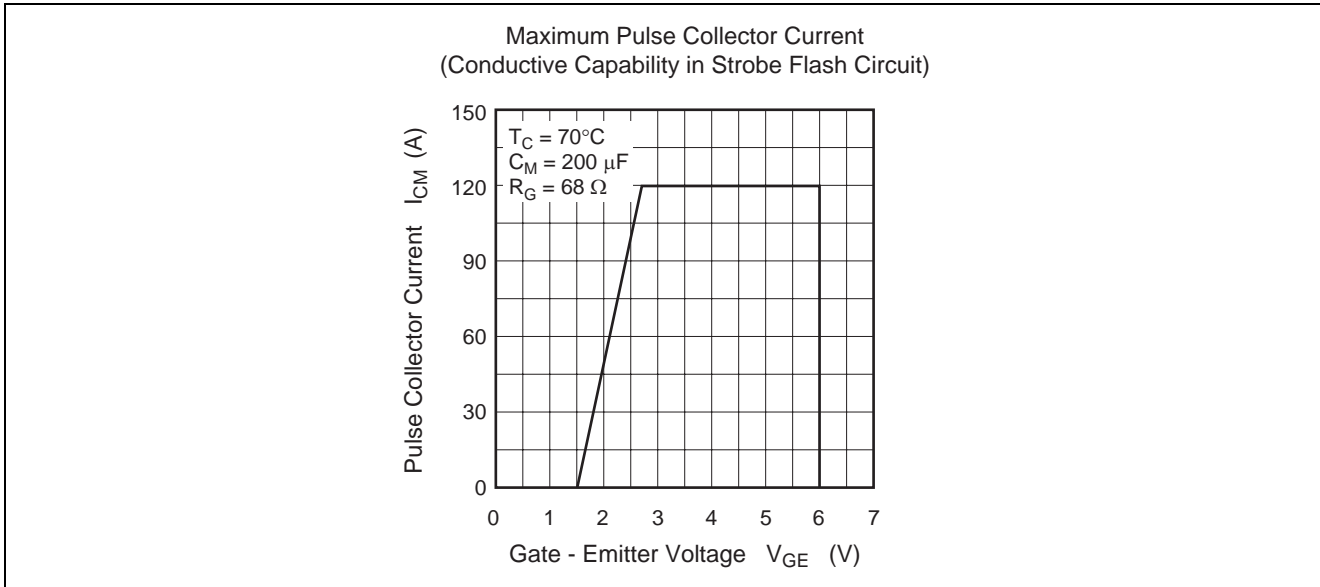
Parameter	Symbol	Ratings	Unit	Conditions
Collector-emitter voltage	$V_{CES}$	400	V	$V_{GE} = 0\text{ V}$
Gate-emitter voltage	$V_{GES}$	$\pm 6$	V	$V_{CE} = 0\text{ V}$
Collector current (Pulse)	$I_{CM}$	120	A	$C_M = 200\ \mu\text{F}$ (see performance curve)
Junction temperature	$T_j$	-40 to +150	$^\circ\text{C}$	
Storage temperature	$T_{stg}$	-40 to +150	$^\circ\text{C}$	

## Electrical Characteristics

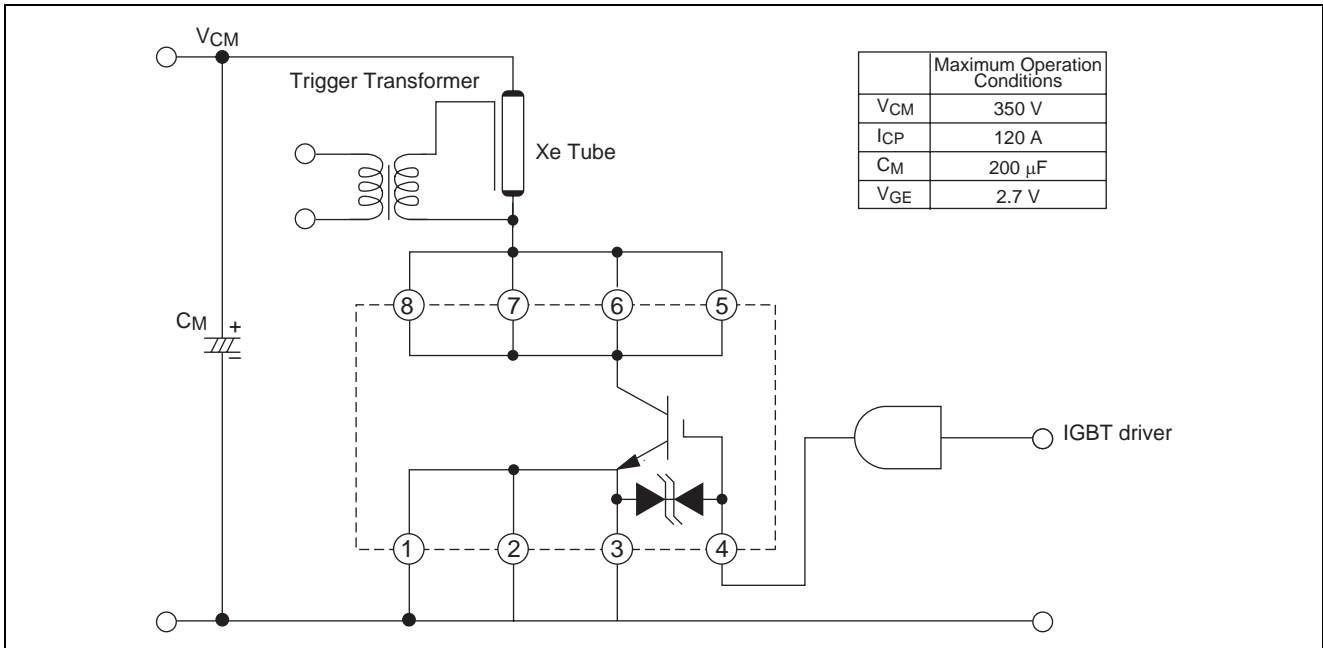
(T<sub>j</sub> = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test conditions
Collector-emitter leakage current	I <sub>CES</sub>	—	—	1	μA	V <sub>CE</sub> = 400 V, V <sub>GE</sub> = 0 V
Gate-emitter leakage current	I <sub>GES</sub>	—	—	±10	μA	V <sub>GE</sub> = ±6 V, V <sub>CS</sub> = 0 V
Gate-emitter threshold voltage	V <sub>GE(th)</sub>	0.4	0.6	1.2	V	V <sub>CE</sub> = 10 V, I <sub>C</sub> = 1 mA
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	—	4.5	9.0	V	I <sub>C</sub> = 120 A, V <sub>GE</sub> = 2.7 V
Input capacitance	C <sub>ies</sub>	—	4200	—	pF	V <sub>CE</sub> = 25 V, V <sub>GE</sub> = 10 V, f = 1 MHz

## Performance Curves



## Application Example

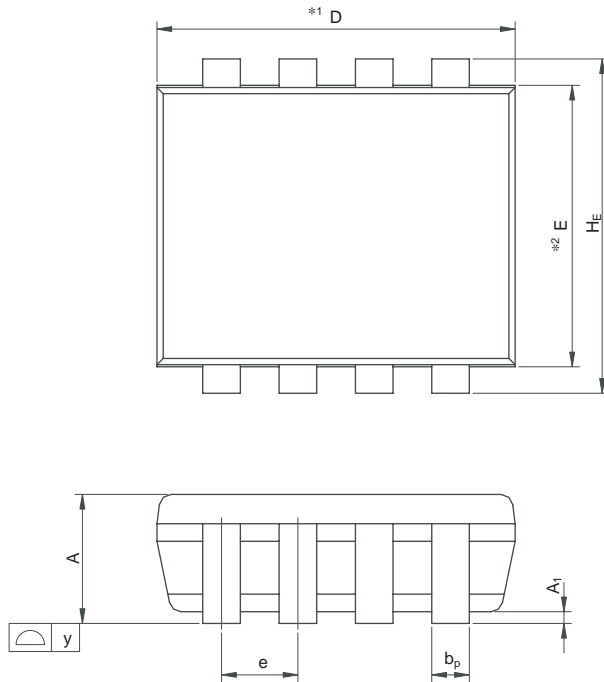


## Precautions on Usage

1. IGBT has MOS structure and its gate is insulated by thin silicon oxide. So please handle carefully to protect the device from electrostatic charge.
2. Gate drive voltage during on-period must be applied to satisfy the rating of maximum pulse collector current. And turn-off  $dv/dt$  must become less than 400 V/ $\mu$ s. In general, when  $R_{G(off)} = 68 \Omega$ , it is satisfied.
3. The operation life should be endured until repeated discharge of 5,000 times under the charge current ( $I_{Xe} \leq 120$  A : full luminescence condition) of main capacitor. Repetition period under full luminescence condition is over 3 seconds.

### Package Dimensions

JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
P-TSOJ8-2.4x3.05-0.65	PTSJ0008JA-A	TSOJ-8	0.022g



NOTE)  
1. DIMENSIONS<sup>\*1</sup>AND<sup>\*2</sup>  
DO NOT INCLUDE MOLD  
FLASH.

Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
D	2.95	3.05	3.10
E	2.30	2.40	2.50
A	0.935	—	1.10
A <sub>1</sub>	0.01	—	0.10
b <sub>p</sub>	0.25	0.32	0.40
c	0.10	0.15	0.20
H <sub>E</sub>	2.65	2.85	3.05
e	—	0.65	—
y	—	—	0.10
L <sub>p</sub>	0.30	0.45	0.60
e <sub>1</sub>	2.50	—	3.00
$\theta$	0°	4°	8°

### Order Code

Lead form	Standard packing	Quantity	Standard order code	Standard order code example
Surface-mounted type	Taping	3000	Type name – 00 – P5	RJP4006AGE-00-P5

Note : Please confirm the specification about the shipping in detail.

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