

To our customers,

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Renesas Electronics website: <http://www.renesas.com>

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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RJP4006AGE

Nch IGBT for Strobe Flash

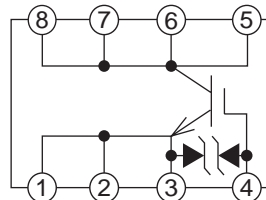
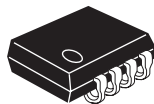
REJ03G1865-0100
Rev.1.00
Dec 09, 2009

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

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

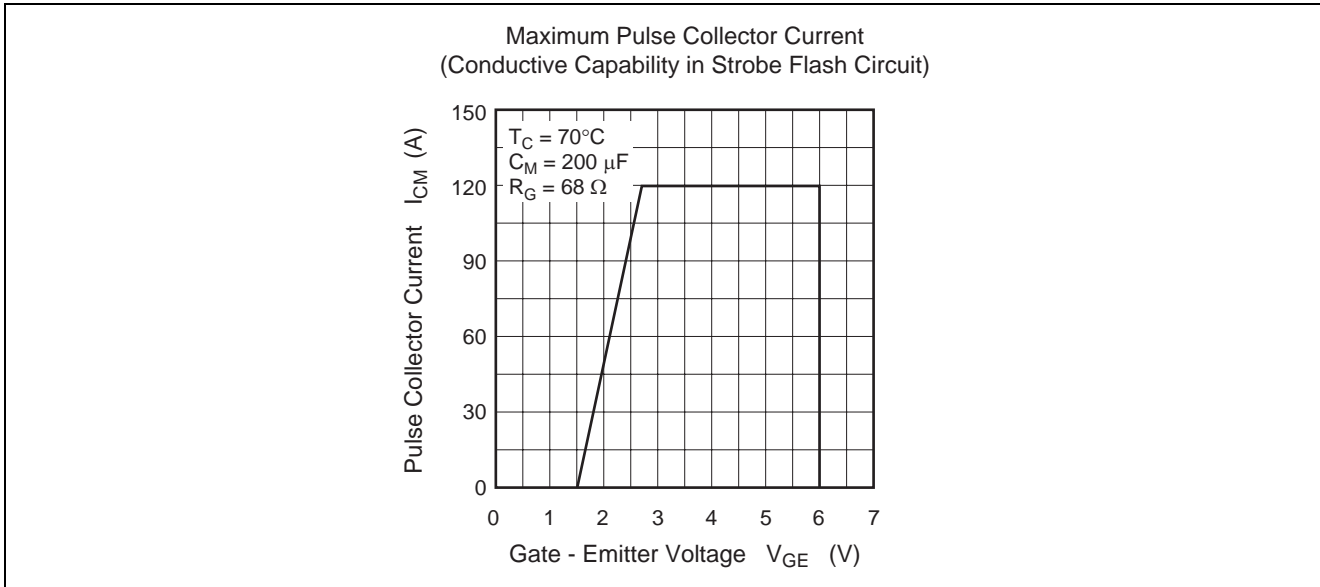
Parameter	Symbol	Ratings	Unit	Conditions
Collector-emitter voltage	V_{CES}	400	V	$V_{GE} = 0\text{ V}$
Gate-emitter voltage	V_{GES}	± 6	V	$V_{CE} = 0\text{ V}$
Collector current (Pulse)	I_{CM}	120	A	$C_M = 200\ \mu\text{F}$ (see performance curve)
Junction temperature	T_j	-40 to +150	$^\circ\text{C}$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

Electrical Characteristics

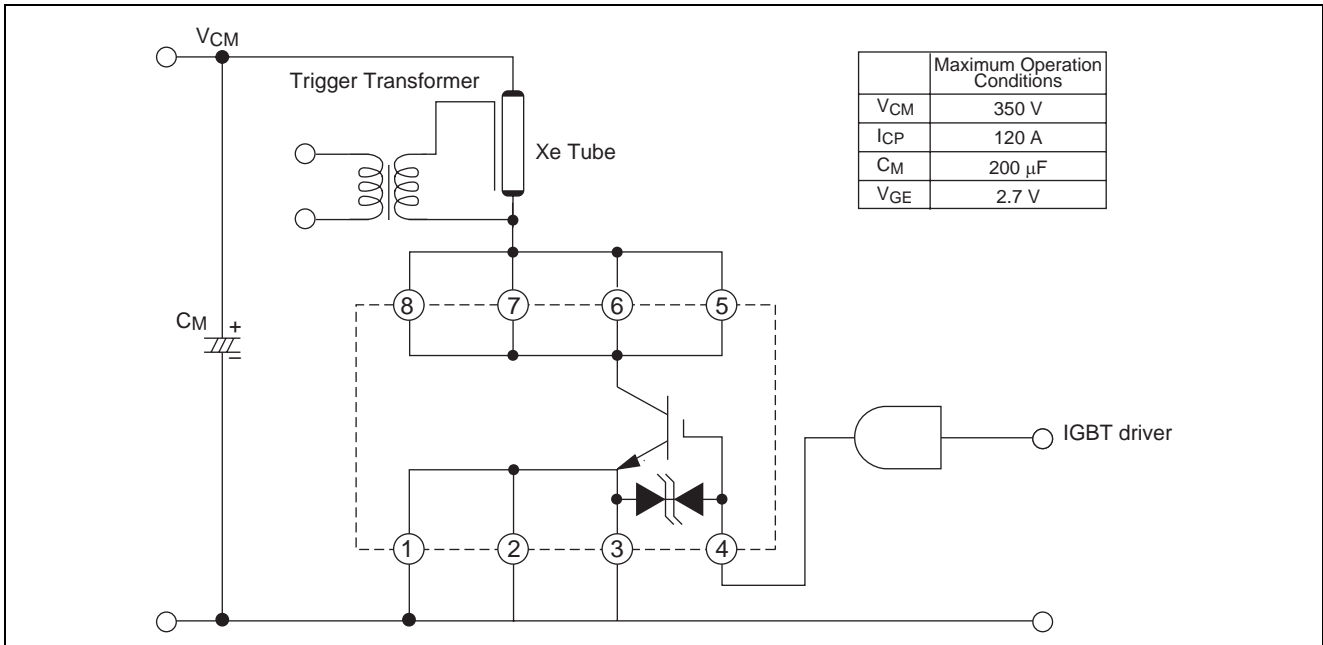
(T_j = 25°C)

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

Performance Curves



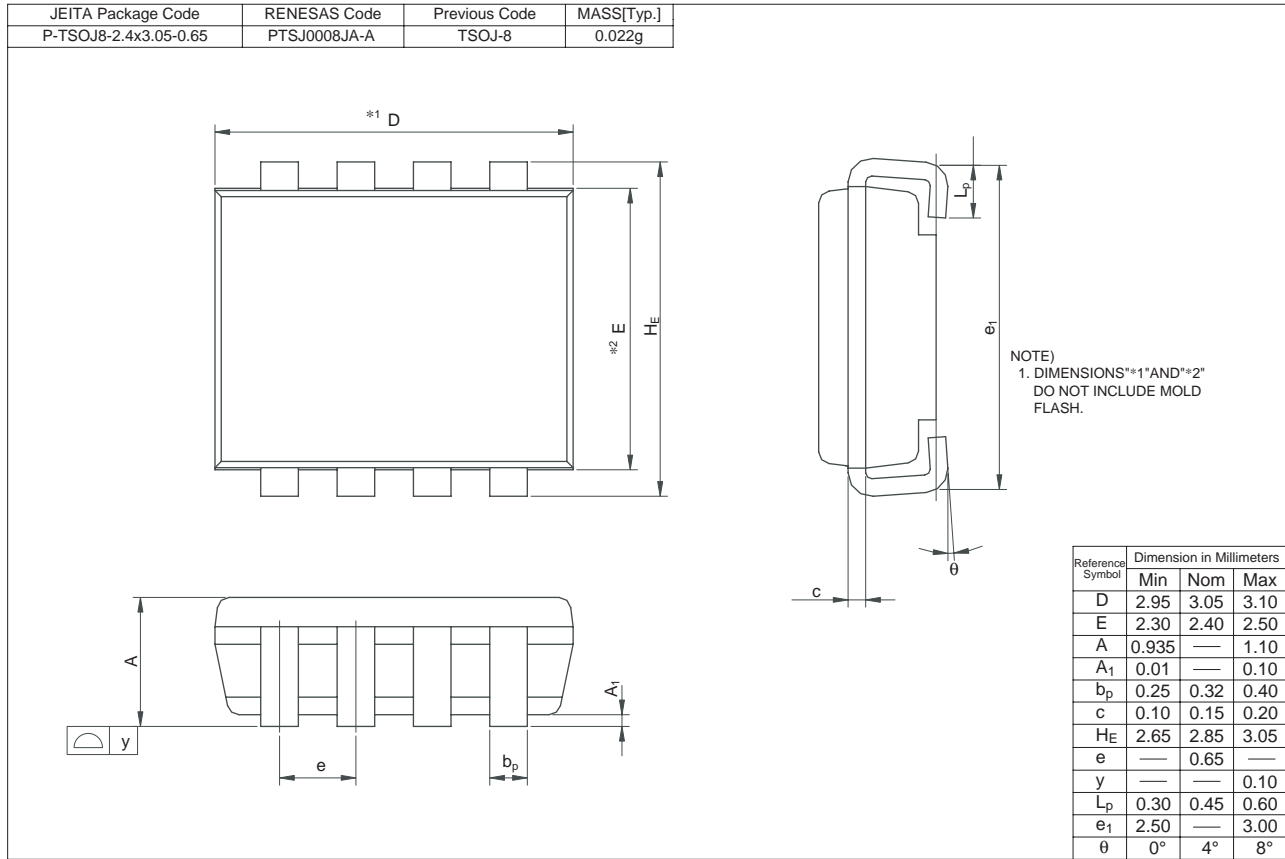
Application Example



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/μs. 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 ($I_{Xe} \leq 120 \text{ A}$: full luminescence condition) of main capacitor. Repetition period under full luminescence condition is over 3 seconds.

Package Dimensions



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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