

RJP4010AGE

R07DS0371EJ0400

Rev.4.00

Dec 28, 2012

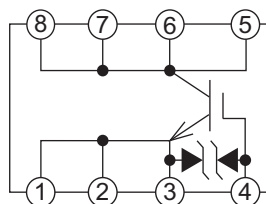
400V, 150A, IGBT for Strobe Flash

Features

- Ultra small surface mount package (TSOJ-8)
- V_{CES} : 400 V
- I_{CM} : 150 A @ $V_{GE} = 3$ V, $T_c = 70^\circ\text{C}$, $C_M = 100 \mu\text{F}$
- Drive voltage: 3.0 V to 6 V (MAX)
- 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

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

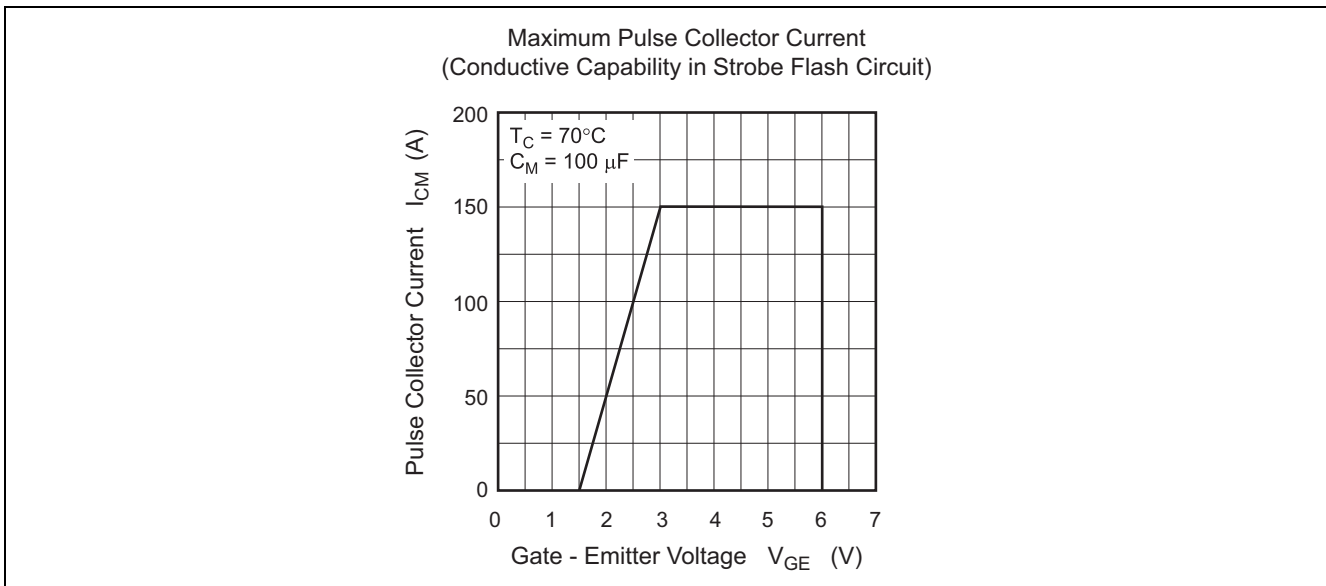
Parameter	Symbol	Ratings	Unit	Conditions
Collector-emitter voltage	V_{CES}	400	V	$V_{GE} = 0$ V
Gate-emitter voltage	V_{GES}	± 6	V	$V_{CE} = 0$ V
Collector current (Pulse)	I_{CM}	150	A	$C_M = 100 \mu\text{F}$ (see performance curve)
Channel dissipation	P_{ch}	1.6	W	
Junction temperature	T_j	-40 to +150	$^\circ\text{C}$	
Storage temperature	T_{stg}	-40 to +150	$^\circ\text{C}$	

Electrical Characteristics

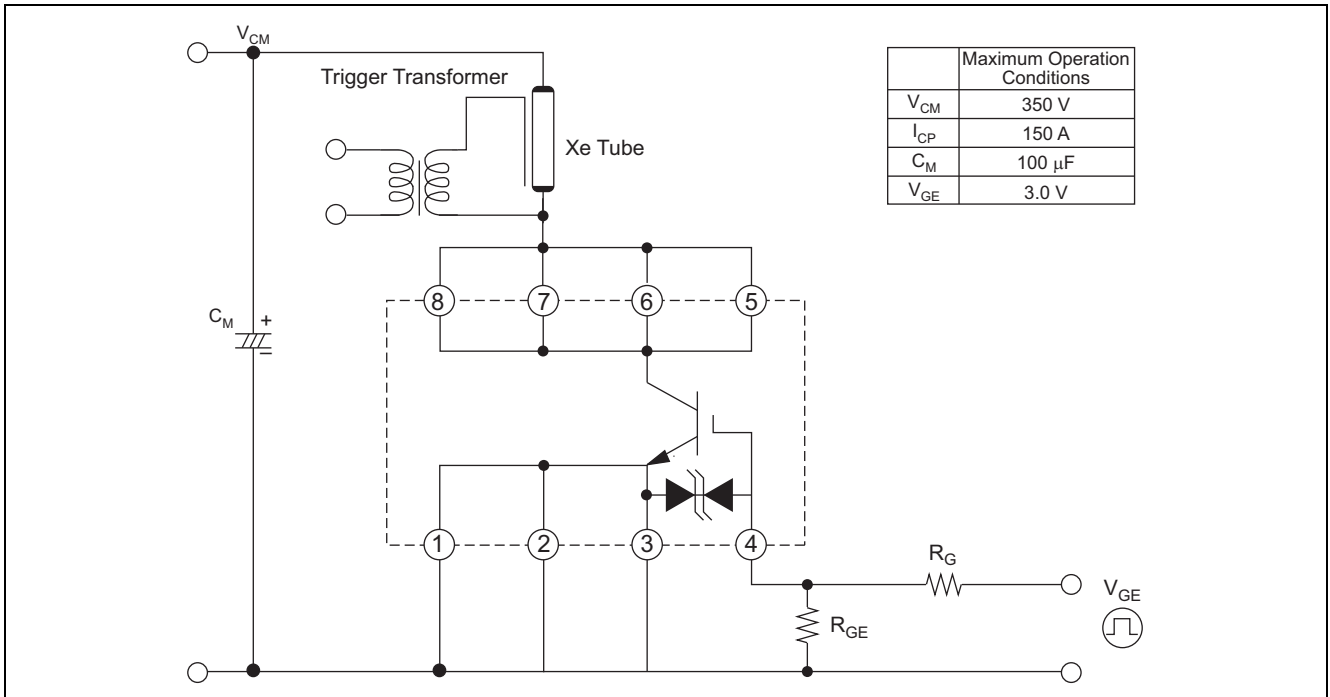
(T_j = 25°C)

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 = 150 A, V _{GE} = 3.0 V
Input capacitance	C _{ies}	—	5100	—	pF	V _{CE} = 25 V, V _{GE} = 0 V, f = 1 MHz

Performance Curves



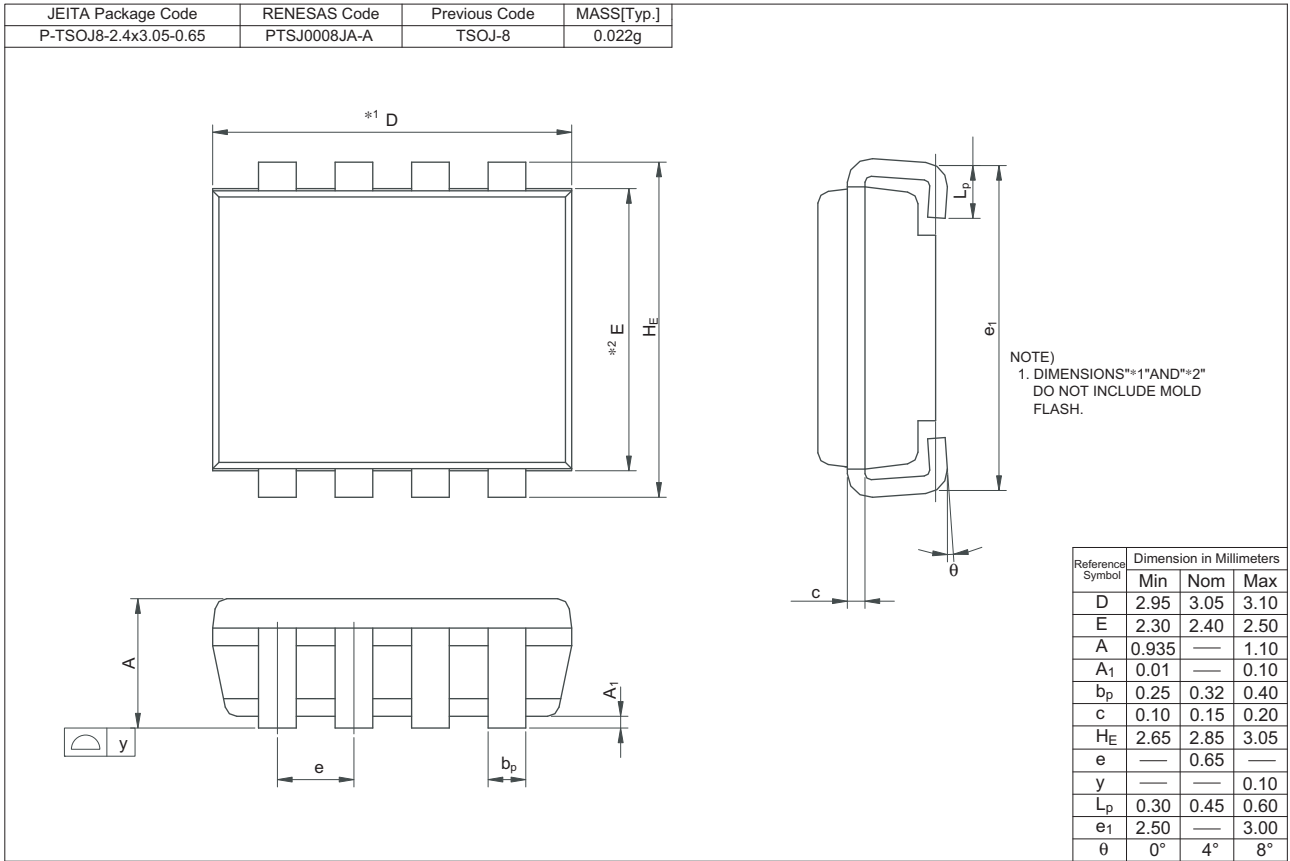
Application Example



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/ μ 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 ($I_{Xe} \leq 150$ A : full luminescence condition) of main capacitor. Repetition period under full luminescence condition is over 3 seconds.

Package Dimensions



Ordering Information

Orderable Part No.	Quantity	Shipping Container
RJP4010AGE-00-P5	3000 pcs	Taping

Note: The symbol of 2nd "-" is occasionally presented as "#".

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Renesas Electronics America Inc.
2880 Scott Boulevard Santa Clara, CA 95050-2554, U.S.A.
Tel: +1-408-588-6000, Fax: +1-408-588-6130

Renesas Electronics Canada Limited
1101 Nicholson Road, Newmarket, Ontario L3Y 9C3, Canada
Tel: +1-905-898-5441, Fax: +1-905-898-3220

Renesas Electronics Europe Limited
Dukes Meadow, Millboard Road, Bourne End, Buckinghamshire, SL8 5FH, U.K.
Tel: +44-1628-651-700, Fax: +44-1628-651-804

Renesas Electronics Europe GmbH
Arcadiastrasse 10, 40472 Düsseldorf, Germany
Tel: +49-211-65030, Fax: +49-211-6503-1327

Renesas Electronics (China) Co., Ltd.
7th Floor, Quantum Plaza, No.27 ZhiChunLu Haidian District, Beijing 100083, P.R.China
Tel: +86-10-8235-1155, Fax: +86-10-8235-7679

Renesas Electronics (Shanghai) Co., Ltd.
Unit 204, 205, AZIA Center, No.1233 Lujiazui Ring Rd., Pudong District, Shanghai 200120, China
Tel: +86-21-5877-1818, Fax: +86-21-6887-7858 / -7898

Renesas Electronics Hong Kong Limited
Unit 1601-1613, 16/F., Tower 2, Grand Century Place, 193 Prince Edward Road West, Mongkok, Kowloon, Hong Kong
Tel: +852-2886-9318, Fax: +852 2886-9022/9044

Renesas Electronics Taiwan Co., Ltd.
13F, No. 363, Fu Shing North Road, Taipei, Taiwan
Tel: +886-2-8175-9600, Fax: +886 2-8175-9670

Renesas Electronics Singapore Pte. Ltd.
80 Bendemeer Road, Unit #06-02 Hyflux Innovation Centre Singapore 339949
Tel: +65-6213-0200, Fax: +65-6213-0300

Renesas Electronics Malaysia Sdn.Bhd.
Unit 906, Block B, Menara Amcorp, Amcorp Trade Centre, No. 18, Jln Persiaran Barat, 46050 Petaling Jaya, Selangor Darul Ehsan, Malaysia
Tel: +60-3-7955-3390, Fax: +60-3-7955-9510

Renesas Electronics Korea Co., Ltd.
11F., Samik Laved. or Bldg., 720-2 Yeoksam-Dong, Kangnam-Ku, Seoul 135-080, Korea
Tel: +82-2-558-3737, Fax: +82-2-558-5141