

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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CY25BAJ-8F

Nch IGBT for Strobe Flash

REJ03G0285-0200

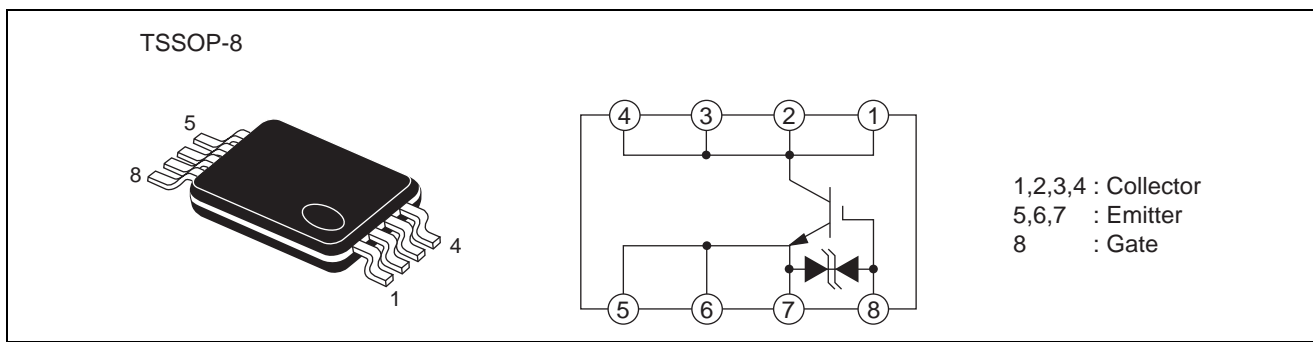
Rev.2.00

May 23, 2005

Features

- Small surface mount package (TSSOP-8)
 - Terminal Pb free: PTSP0008JA-A (8P2J-A)
 - Complete Pb free: PTSP0008JB-B (TTP-8DV)
- V_{DSS} : 400 V
- I_{CM} : 150 A
- Drive voltage : 4 V

Outline



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	$V_{CE} = 0 \text{ V}$
Peak gate-emitter voltage	V_{GEM}	± 8	V	$V_{CE} = 0 \text{ V}$, $t_w = 10 \text{ s}$
Collector current (Pulse)	I_{CM}	150	A	$C_M = 400 \mu\text{F}$ (see performance curve)
Junction temperature	T_j	-40 to $+150$	$^\circ\text{C}$	
Storage temperature	T_{stg}	-40 to $+150$	$^\circ\text{C}$	

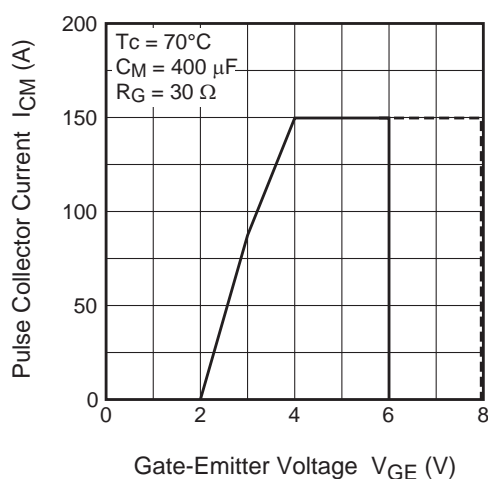
Electrical Characteristics

(T_j = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test conditions
Collector-emitter breakdown voltage	V _{(BR)CES}	450	—	—	V	I _C = 1 mA, V _{GE} = 0 V
Collector-emitter leakage current	I _{CES}	—	—	10	μA	V _{CE} = 400 V, V _{GE} = 0 V
Gate-emitter leakage current	I _{GES}	—	—	±10	μA	V _{GE} = ±6 V, V _{CE} = 0 V
Gate-emitter threshold voltage	V _{GE(th)}	0.5	0.7	1.5	V	V _{CE} = 10 V, I _C = 1 mA
Collector-emitter saturation voltage	V _{CE(sat)}	—	4.0	6.0	V	V _{CE} = 4 V, I _C = 150 A

Performance Curves

Maximum Collector Current vs. Gate-Emitter Voltage



Precautions on Usage

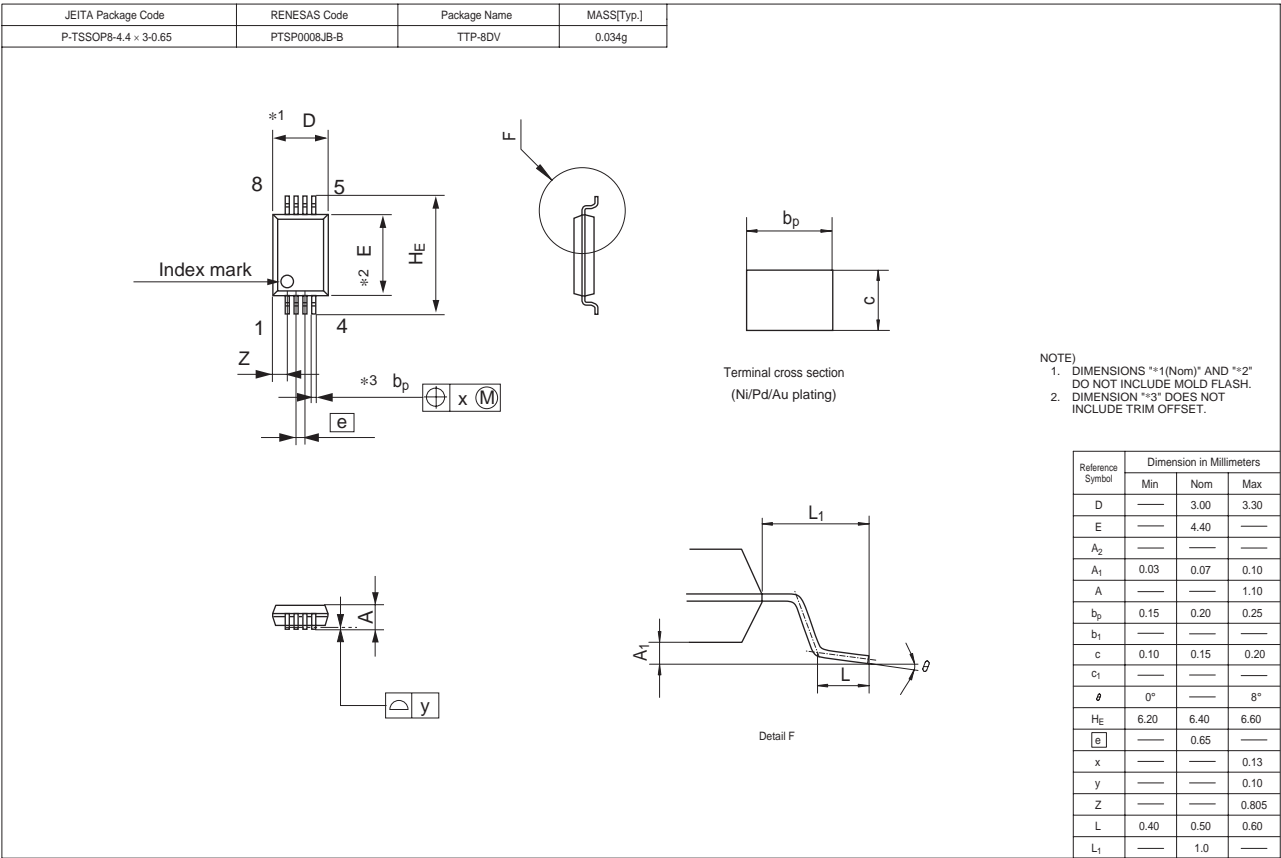
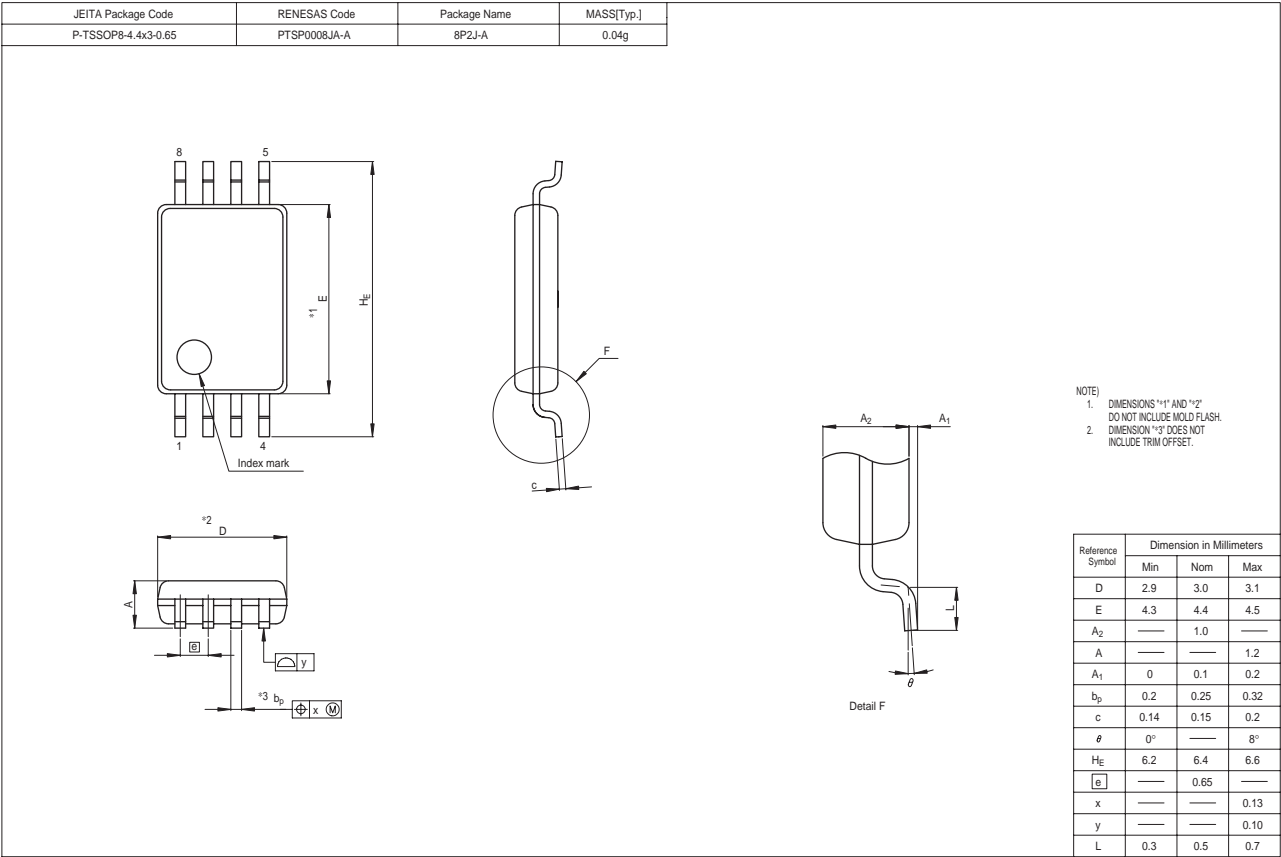
1. IGBT has MOS structure and its gate is insulated by thin silicon oxide. So please handle carefully to protect the device from electrostatic charge.
2. Gate drive voltage during on-period must be applied to satisfy the rating of maximum pulse collector current. And peak reverse gate current during turn-off must become less than 0.1 A. (In general, when $R_{G(off)} = 30 \Omega$, it is satisfied.)
3. The operation life should be endured 5,000 shots under the charge current ($I_{Xe} \leq 150$ A : full luminescence condition) of main capacitor ($C_M = 400 \mu\text{F}$) which can endure repeated discharge of 5,000 times. Repetition period under full luminescence condition is over 3 seconds.
4. Total operation hours applied to the gate-emitter voltage must be within 5,000 hours when V_{GE} is driven at 6 V.

Order Code

Lead form	Standard packing	Quantity	Standard order code	Standard order code example
Surface-mounted type	Taping	3000	Type name – T +Direction (1 or 2) +3	CY25BAJ-8F-T13

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

Package Dimensions



Renesas Technology Corp. Sales Strategic Planning Div. Nippon Bldg., 2-6-2, Ohte-machi, Chiyoda-ku, Tokyo 100-0004, Japan

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