

# RJP4009ANS

R07DS0370EJ0200

Rev.2.00

## Nch IGBT for Strobe Flash

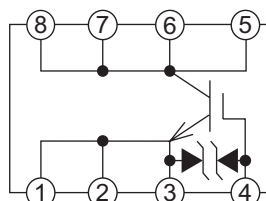
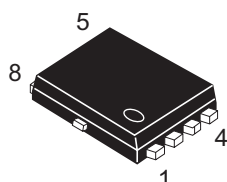
Apr 27, 2011

### Features

- Small surface mount package (VSON-8)
- $V_{CES}$ : 400 V
- $I_{CM}$ : 150 A @ $T_c = 70^\circ\text{C}$ ,  $C_M = 400 \mu\text{F}$
- Drive voltage: 2.5 V to 6 V (MAX)
- Pb-free
- Halogen-free

### Outline

RENESAS Package code: PVSN0008JA-A  
(Package name: VSON-8<TNP-8DBV>)



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

### Applications

Strobe flash for cameras

### Maximum Ratings

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

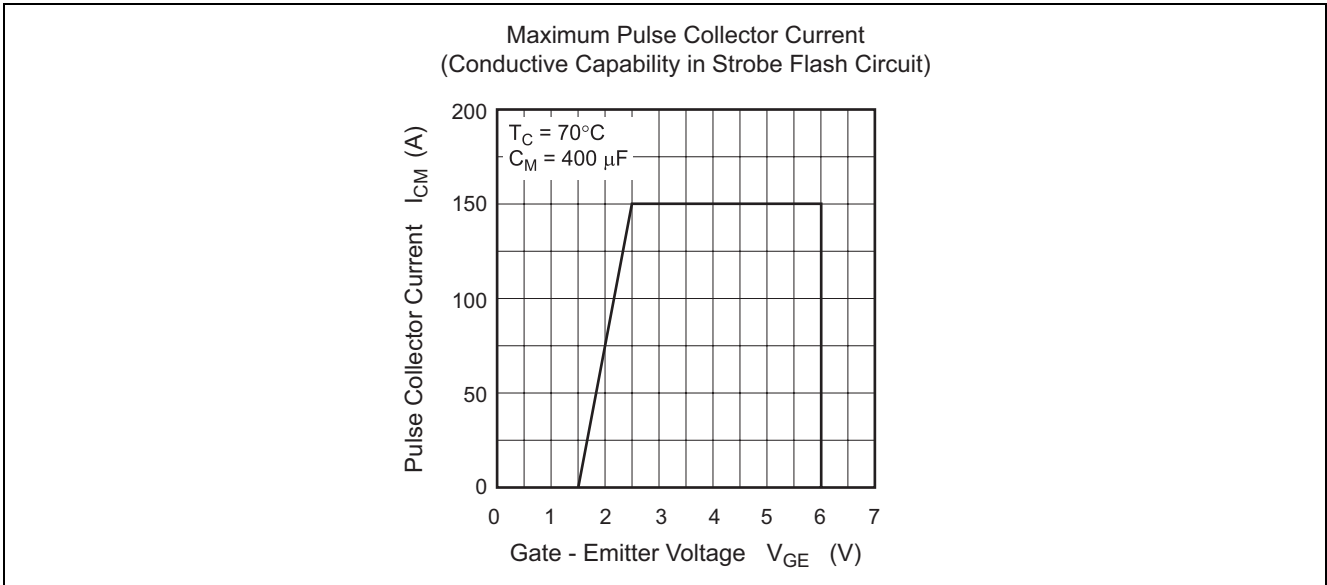
Parameter	Symbol	Ratings	Unit	Conditions
Collector-emitter voltage	$V_{CES}$	400	V	$V_{GE} = 0 \text{ V}$
Gate-emitter voltage	$V_{GES}$	$\pm 6$	V	$V_{CE} = 0 \text{ V}$
Collector current (Pulse)	$I_{CM}$	150	A	$C_M = 400 \mu\text{F}$ (see performance curve)
Power dissipation	$P_j$	1.8	W	
Junction temperature	$T_j$	-40 to +150	$^\circ\text{C}$	
Storage temperature	$T_{stg}$	-40 to +150	$^\circ\text{C}$	

## Electrical Characteristics

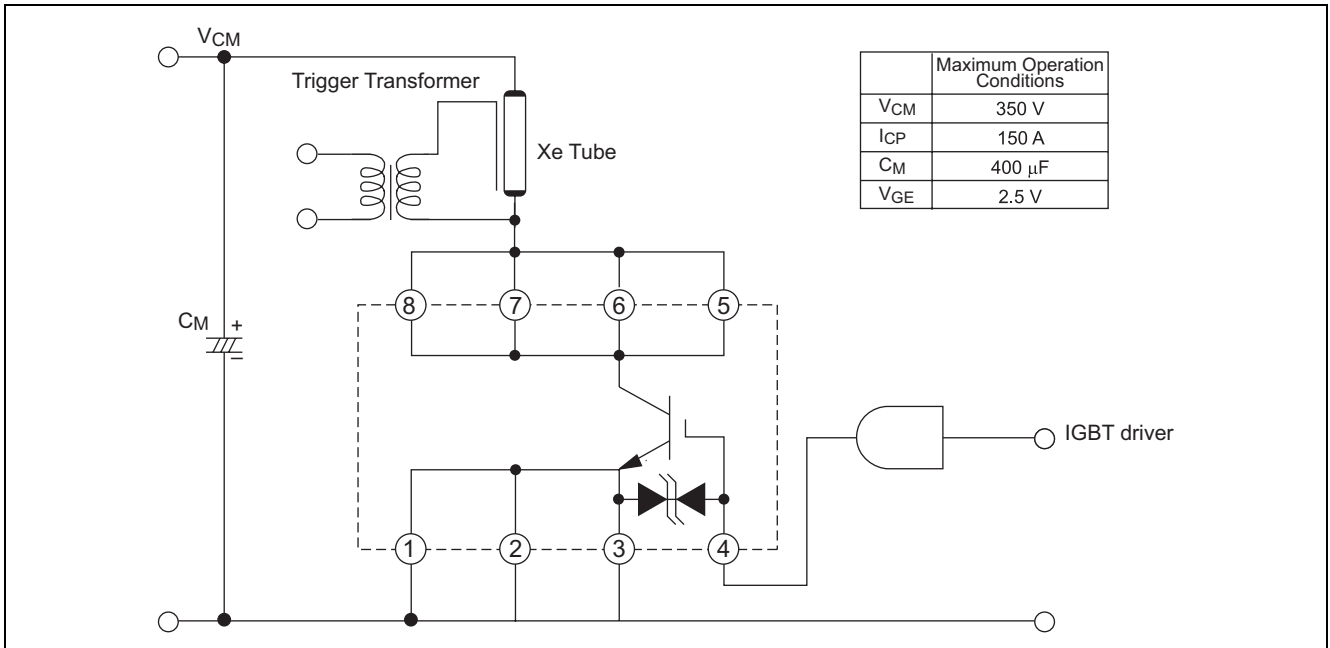
(T<sub>j</sub> = 25°C)

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>	—	4.0	9.0	V	I <sub>C</sub> = 150 A, V <sub>GE</sub> = 2.5 V
Input capacitance	C <sub>ies</sub>	—	5500	—	pF	V <sub>CE</sub> = 25 V, V <sub>GE</sub> = 0 V, f = 1 MHz

## Performance Curves



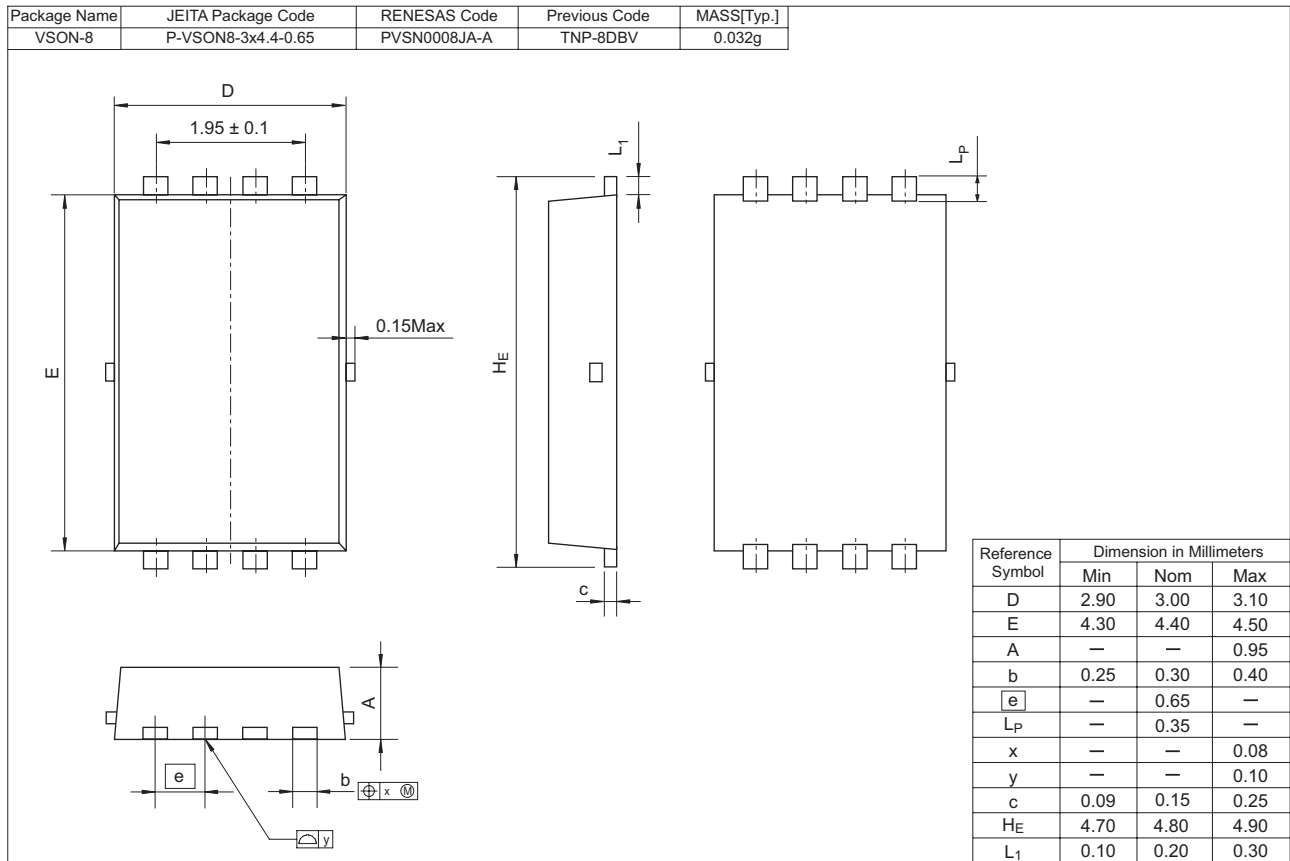
## Application Example



## 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  $400 \text{ V}/\mu\text{s}$ . In general, when  $R_{G(\text{off})} = 30 \Omega$ , it is satisfied.
3. The operation life should be endured until repeated discharge of 5,000 times under the charge current ( $I_{Xe} \leq 150 \text{ A}$ : 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
RJP4009ANS-01-Q6	3000 pcs	Taping

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