

RJP4009ANS

R07DS0370EJ0200

Rev.2.00

Nch IGBT for Strobe Flash

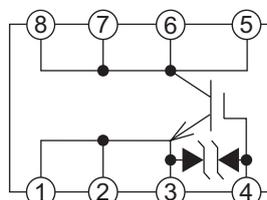
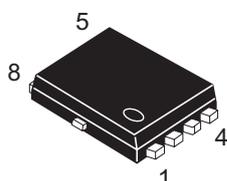
Apr 27, 2011

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

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

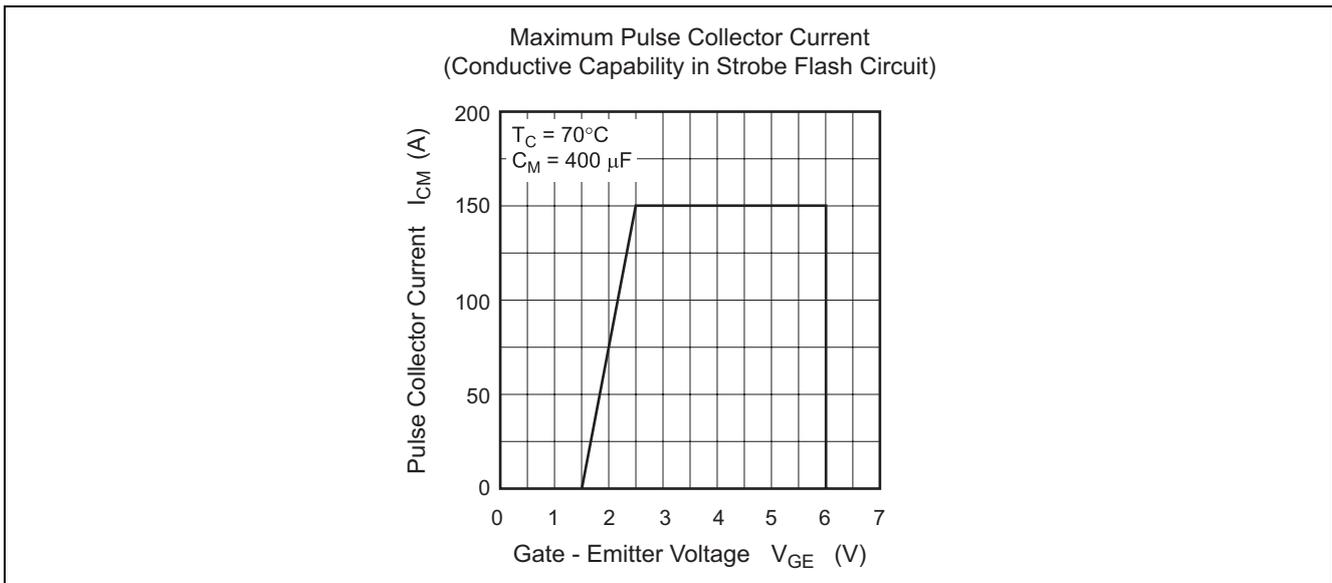
| Parameter | Symbol | Ratings | Unit | Conditions |
|---------------------------|-----------|-------------|------------------|--|
| Collector-emitter voltage | V_{CES} | 400 | V | $V_{GE} = 0 \text{ V}$ |
| Gate-emitter voltage | V_{GES} | ± 6 | V | $V_{CE} = 0 \text{ V}$ |
| Collector current (Pulse) | 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

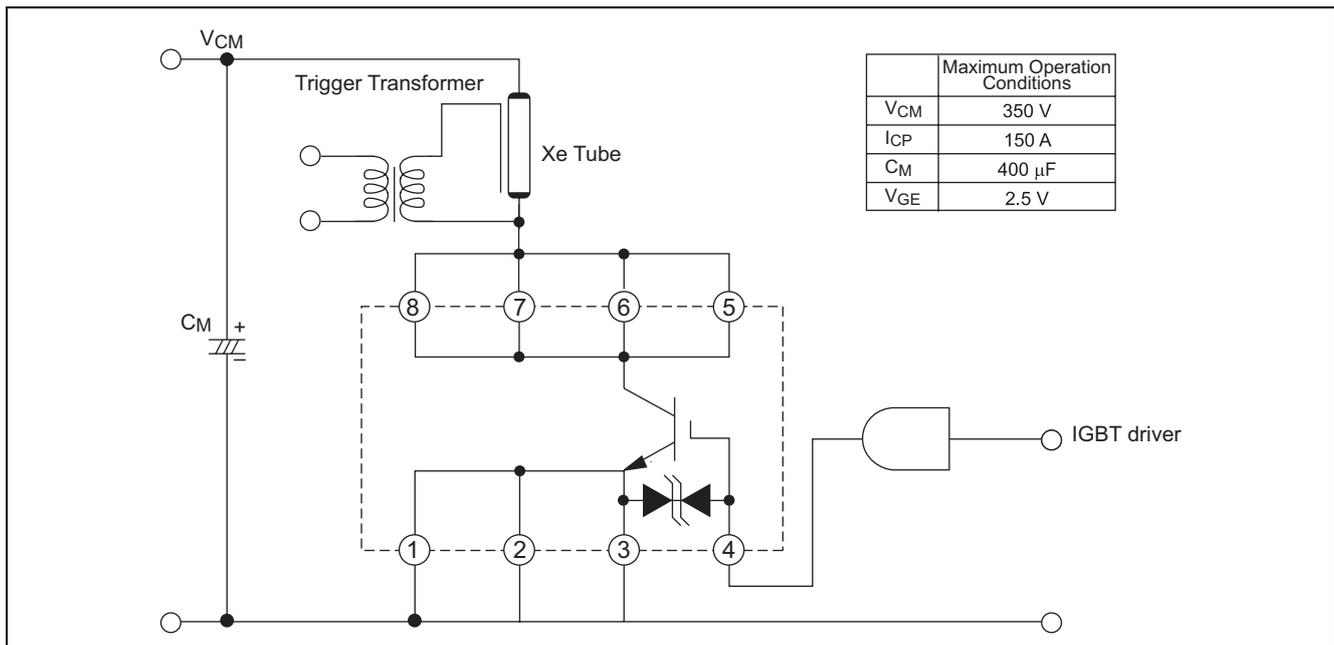
(T_j = 25°C)

| 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)} | — | 4.0 | 9.0 | V | I _C = 150 A, V _{GE} = 2.5 V |
| Input capacitance | C _{ies} | — | 5500 | — | pF | V _{CE} = 25 V, V _{GE} = 0 V, f = 1 MHz |

Performance Curves



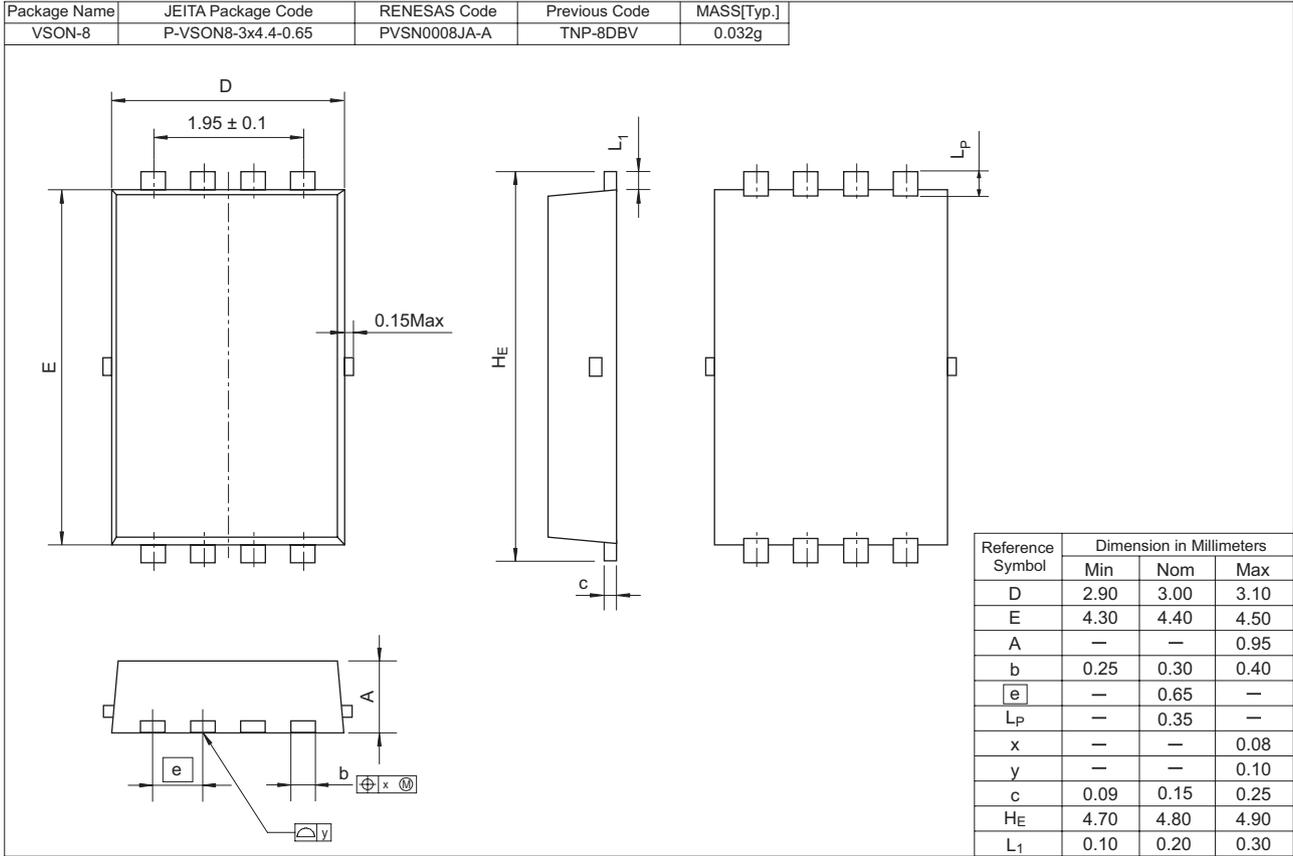
Application Example



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 $400 \text{ V}/\mu\text{s}$. 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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