


MITSUBISHI INSULATED GATE BIPOLAR TRANSISTOR

# CT25AS-8

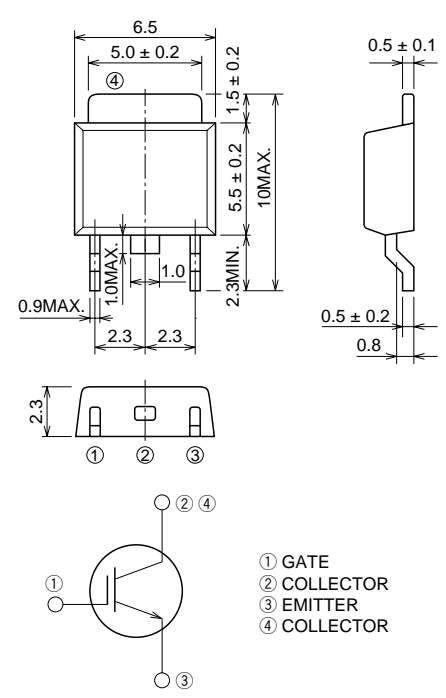
STROBE FLASHER USE

**CT25AS-8**



●  $V_{CES}$  ..... 400V  
 ●  $I_{CM}$  ..... 150A

**OUTLINE DRAWING** Dimensions in mm



① GATE  
 ② COLLECTOR  
 ③ EMITTER  
 ④ COLLECTOR

**MP-3**

**APPLICATION**  
Strobe Flasher.

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

| Symbol    | Parameter                  | Conditions                   | Ratings         | Unit             |
|-----------|----------------------------|------------------------------|-----------------|------------------|
| $V_{CES}$ | Collector-emitter voltage  | $V_{GE} = 0V$                | 400             | V                |
| $V_{GES}$ | Gate-emitter voltage       | $V_{CE} = 0V$ , See notice 4 | $\pm 30$        | V                |
| $V_{GEM}$ | Peak gate-emitter voltage  | $V_{CE} = 0V$ , $t_w = 0.5s$ | $\pm 40$        | V                |
| $I_{CM}$  | Collector current (Pulsed) | See figure 1                 | 150             | A                |
| $T_j$     | Junction temperature       |                              | $-40 \sim +150$ | $^\circ\text{C}$ |
| $T_{stg}$ | Storage temperature        |                              | $-40 \sim +150$ | $^\circ\text{C}$ |

**ELECTRICAL CHARACTERISTICS** ( $T_j = 25^\circ\text{C}$ )

| Symbol        | Parameter                           | Test conditions                    | Limits |      |           | Unit          |
|---------------|-------------------------------------|------------------------------------|--------|------|-----------|---------------|
|               |                                     |                                    | Min.   | Typ. | Max.      |               |
| $V_{(BR)CES}$ | Collector-emitter breakdown voltage | $I_C = 1mA$ , $V_{GE} = 0V$        | 450    | —    | —         | V             |
| $I_{CES}$     | Collector-emitter leakage current   | $V_{CE} = 400V$ , $V_{GE} = 0V$    | —      | —    | 10        | $\mu\text{A}$ |
| $I_{GES}$     | Gate-emitter leakage current        | $V_{GE} = \pm 40V$ , $V_{CE} = 0V$ | —      | —    | $\pm 0.1$ | $\mu\text{A}$ |
| $V_{GE(th)}$  | Gate-emitter threshold voltage      | $V_{CE} = 10V$ , $I_C = 1mA$       | —      | —    | 7.0       | V             |

PERFORMANCE CURVES

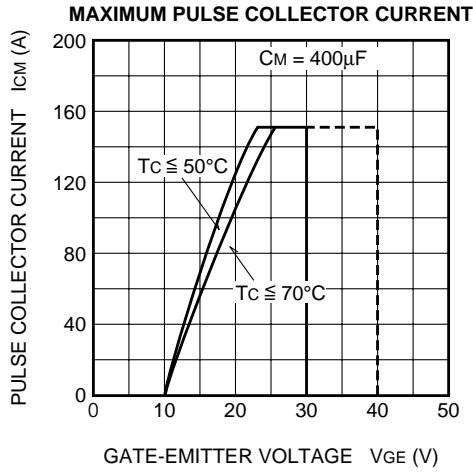
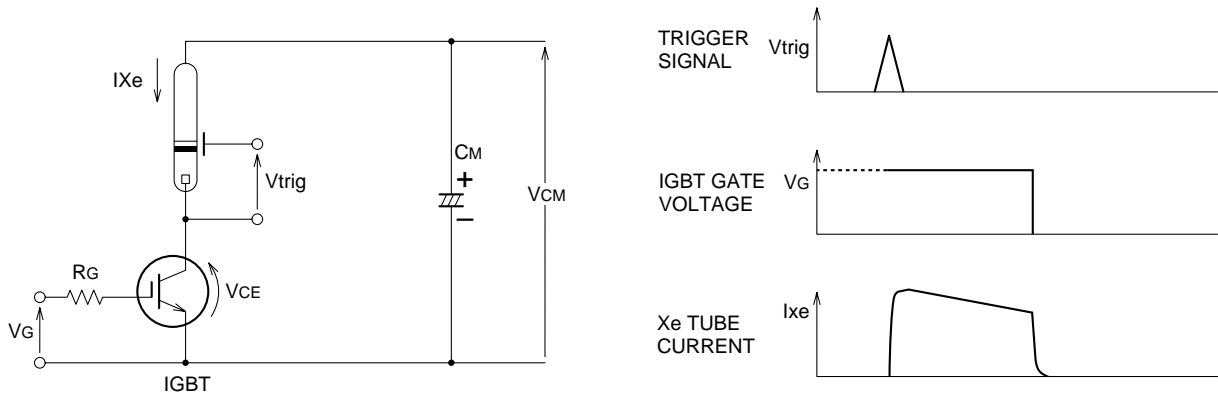


Figure 1

APPLICATION EXAMPLE



| RECOMMEND CONDITION | MAXIMUM CONDITION |
|---------------------|-------------------|
| $V_{CM} = 330V$     | 350V              |
| $I_P = 130A$        | 150A              |
| $C_M = 300\mu F$    | 400 $\mu F$       |
| $V_{GE} = 28V$      |                   |

- Notice 1. Gate drive voltage during on-period must be applied to satisfy the rating of maximum pulse collector current. And reverse gate current during turn-off must be kept less than 1A. (In general, it is satisfied if  $R_G \geq 30\Omega$ )
- Notice 2. IGBT has MOS structure and its gate is insulated by thin silicon oxide. So please handle carefully not to suffer from electrostatic charge.
- Notice 3. The operation life should be endured 5,000 shots under the charge current ( $I_{xe} \leq 150A$  : full luminescence condition) of main condenser ( $C_M=400\mu F$ ). Repetition period under full luminescence condition is over 3 seconds.
- Notice 4. Total operation hours must be applied within 5,000 hours.