

MITSUBISHI INSULATED GATE BIPOLAR TRANSISTOR

# CT30TM-8

STROBE FLASHER USE

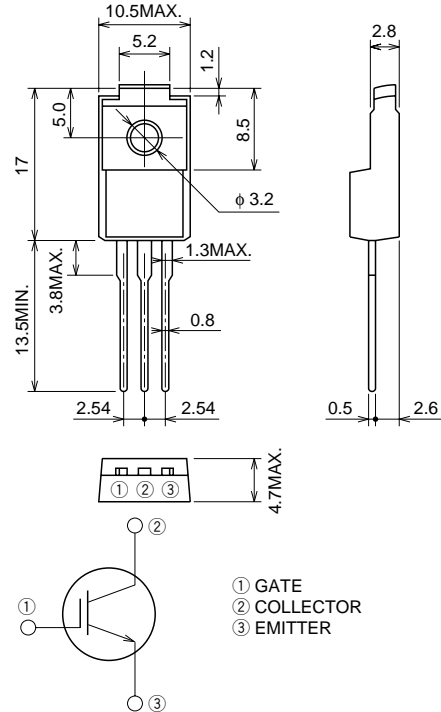
## CT30TM-8



- VCES ..... 400V
- ICM ..... 180A

## OUTLINE DRAWING

Dimensions in mm



TO-220F

## APPLICATION

Strobe Flasher.

## MAXIMUM RATINGS (Tc = 25°C)

Symbol	Parameter	Conditions	Ratings	Unit
V <sub>CE</sub> S	Collector-emitter voltage	V <sub>GE</sub> = 0V	400	V
V <sub>GE</sub> S	Gate-emitter voltage	V <sub>CE</sub> = 0V, See notice 4	±30	V
V <sub>GEM</sub>	Peak gate-emitter voltage	V <sub>CE</sub> = 0V, t <sub>w</sub> = 0.5s	±40	V
I <sub>CM</sub>	Collector current (Pulsed)	See figure 1	180	A
T <sub>j</sub>	Junction temperature		-40 ~ +150	°C
T <sub>stg</sub>	Storage temperature		-40 ~ +150	°C

## ELECTRICAL CHARACTERISTICS (T<sub>j</sub> = 25°C)

Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
V(BR)CES	Collector-emitter breakdown voltage	I <sub>C</sub> = 1mA, V <sub>GE</sub> = 0V	450	—	—	V
I <sub>CES</sub>	Collector-emitter leakage current	V <sub>CE</sub> = 400V, V <sub>GE</sub> = 0V	—	—	10	μA
I <sub>GES</sub>	Gate-emitter leakage current	V <sub>GE</sub> = ±40V, V <sub>CE</sub> = 0V	—	—	±0.1	μA
V <sub>GE(th)</sub>	Gate-emitter threshold voltage	V <sub>CE</sub> = 10V, I <sub>C</sub> = 1mA	—	—	7.0	V

Feb.1999

PERFORMANCE CURVES

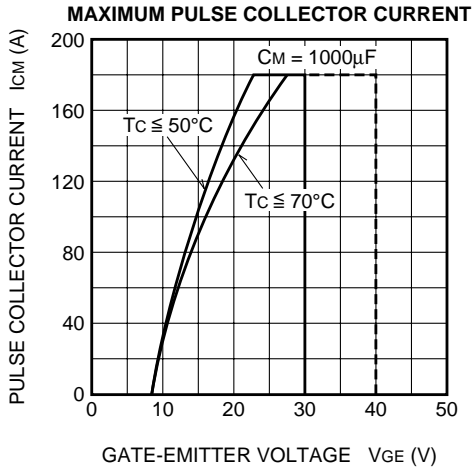


Figure 1

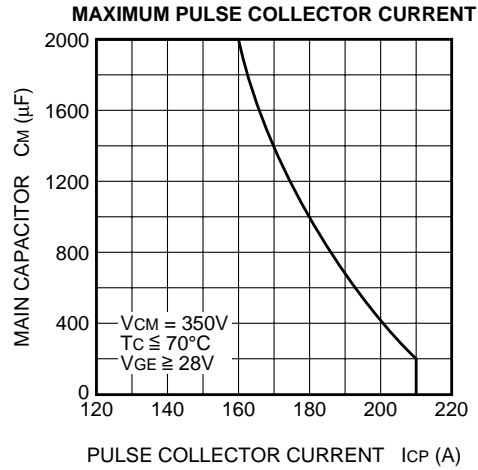
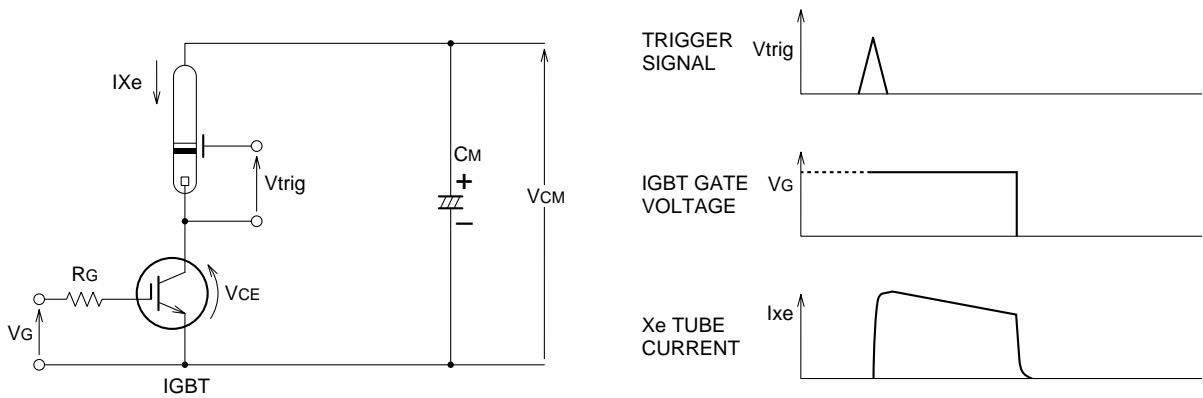


Figure 2

APPLICATION EXAMPLE



RECOMMEND CONDITION	MAXIMUM CONDITION
$V_{CM} = 330V$	360V
$I_P = 160A$	180A
$C_M = 800\mu F$	1000 $\mu F$
$V_{GE} = 28V$	

- 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 ( $I_{xe} \leq 180A$  : full luminescence condition) of main condenser ( $C_M=1000\mu F$ ). Repetition period under full luminescence condition is over 3 seconds.
- Notice 4. Total operation hours must be applied within 5,000 hours.