MITSUBISHI INSULATED GATE BIPOLAR TRANSISTOR

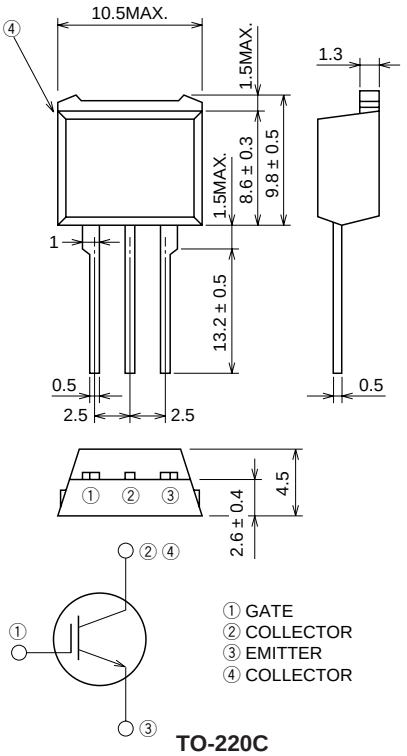
CT30VM-8

STROBE FLASHER USE

CT30VM-8

- V_{CES} 400V
- I_{CM} 180A

OUTLINE DRAWING Dimensions in mm



TO-220C

APPLICATION

Strobe Flasher.

MAXIMUM RATINGS (T_c = 25°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	±30	V
V_{GEM}	Peak gate-emitter voltage	V_{CE} = 0V, tw = 0.5s	±40	V
I_{CM}	Collector current (Pulsed)	See figure 1	180	A
T_j	Junction temperature		–40 ~ +150	°C
T_{stg}	Storage temperature		–40 ~ +150	°C

ELECTRICAL CHARACTERISTICS (T_j = 25°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	μA
I_{GES}	Gate-emitter leakage current	V_{GE} = ±40V, V_{CE} = 0V	—	—	±0.1	μA
$V_{GE(th)}$	Gate-emitter threshold voltage	V_{CE} = 10V, I_C = 1mA	—	—	7.0	V

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PERFORMANCE CURVES

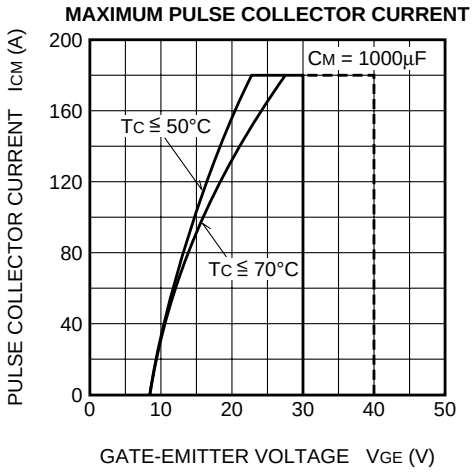


Figure 1

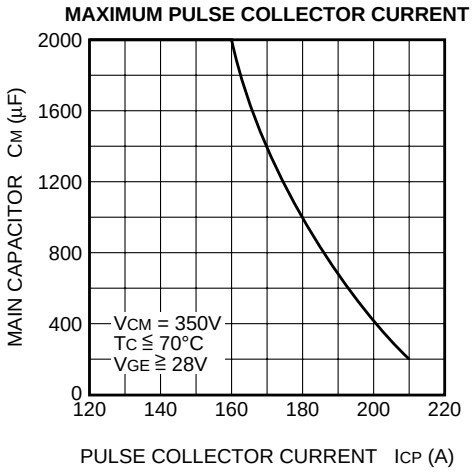
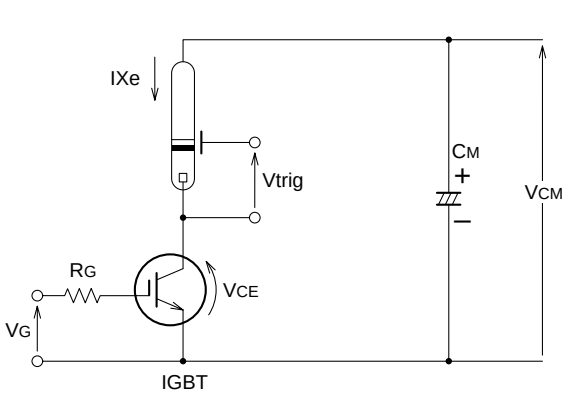
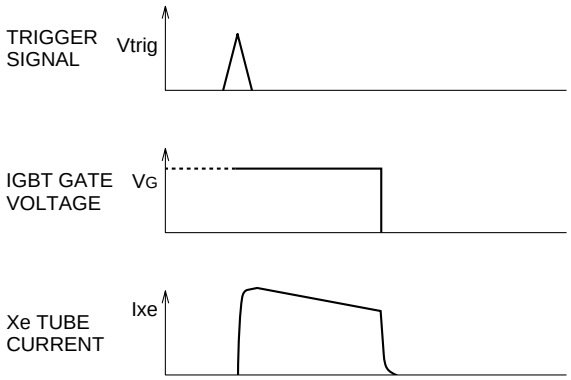


Figure 2

APPLICATION EXAMPLE





RECOMMEND CONDITION	MAXIMUM CONDITION
V_{CM} = 330V	360V
I_P = 160A	180A
C_M = 800μF	1000μF
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=1000μF).
Repetition period under full luminescence condition is over 3 seconds.

Notice 4. Total operation hours must be applied within 5,000 hours.