MITSUBISHI INSULATED GATE BIPOLAR TRANSISTOR

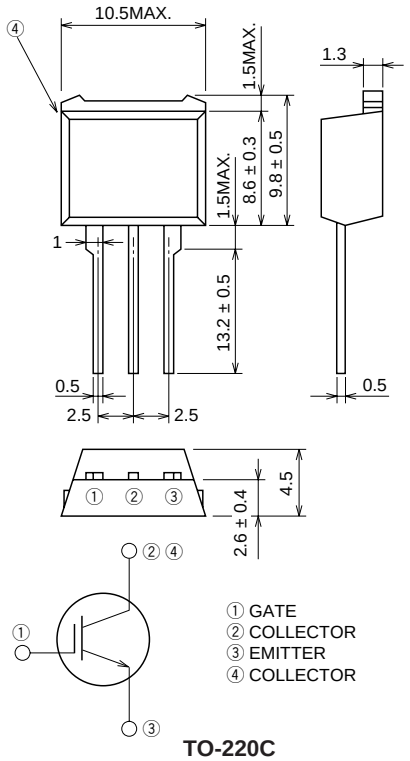
CT20VML-8

STROBE FLASHER USE

CT20VML-8

- V_{CES} 400V
- I_{CM} 130A

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	±15	V
V_{GEM}	Peak gate-emitter voltage	V_{CE} = 0V, tw = 10s	±16	V
I_{CM}	Collector current (Pulsed)	See figure 1	130	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} = ±16V, V_{CE} = 0V	—	—	±0.1	µA
$V_{GE(th)}$	Gate-emitter threshold voltage	V_{CE} = 10V, I_C = 1mA	0.5	—	2.0	V

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PERFORMANCE CURVES

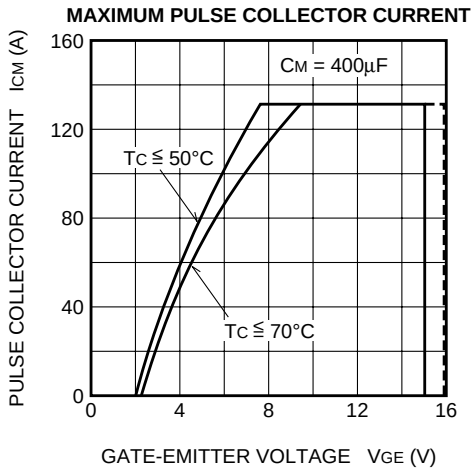
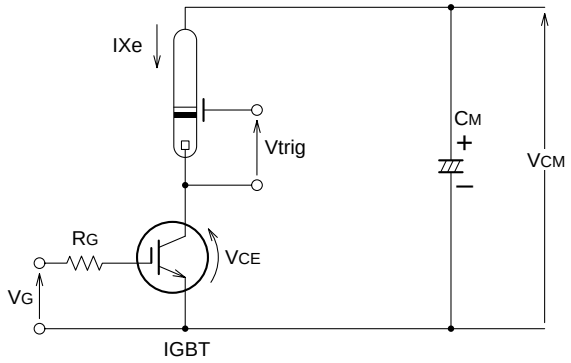
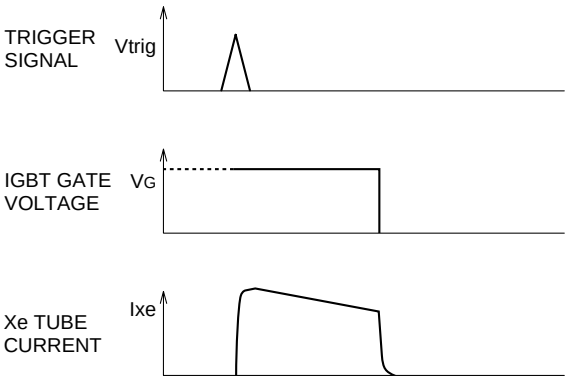


Figure 1

APPLICATION EXAMPLE





RECOMMEND CONDITION	MAXIMUM CONDITION
VCM = 330V	350V
IP = 120A	130A
CM = 300μF	400μF
VGE = 12V	

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 0.5A. (In general, it is satisfied if $R_G \geq 47\Omega$)

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 ($I_{xe} \leq 130A$: full luminescence condition) of main condenser (C_M=400μF). Repetition period under full luminescence condition is over 3 seconds.

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