

MITSUBISHI INSULATED GATE BIPOLAR TRANSISTOR

CT40TMH-8

STROBE FLASHER USE

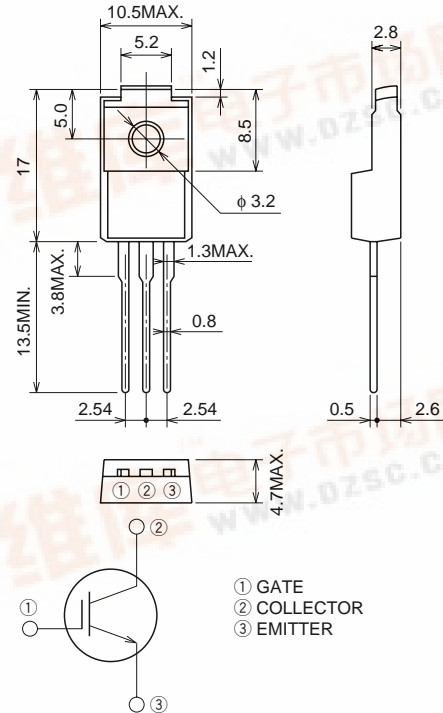
CT40TMH-8



- V_{CES} 400V
- I_{CM} 200A

OUTLINE DRAWING

Dimensions in mm



TO-220F

APPLICATION

Strobe Flasher.

MAXIMUM RATINGS (Tc = 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	$V_{CE} = 0V$, $t_w = 0.5s$	± 40	V
I_{CM}	Collector current (Pulsed)	See figure 1	200	A
T_j	Junction temperature		$-40 \sim +150$	°C
T_{stg}	Storage temperature		$-40 \sim +150$	°C

ELECTRICAL CHARACTERISTICS (Tj = 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	$V_{GE} = \pm 40V$, $V_{CE} = 0V$	—	—	± 0.1	μA
$V_{GE(th)}$	Gate-emitter threshold voltage	$V_{CE} = 10V$, $I_C = 1mA$	—	—	7.0	V

PERFORMANCE CURVES

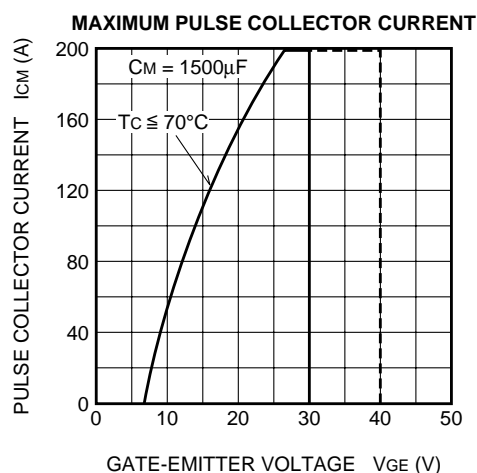
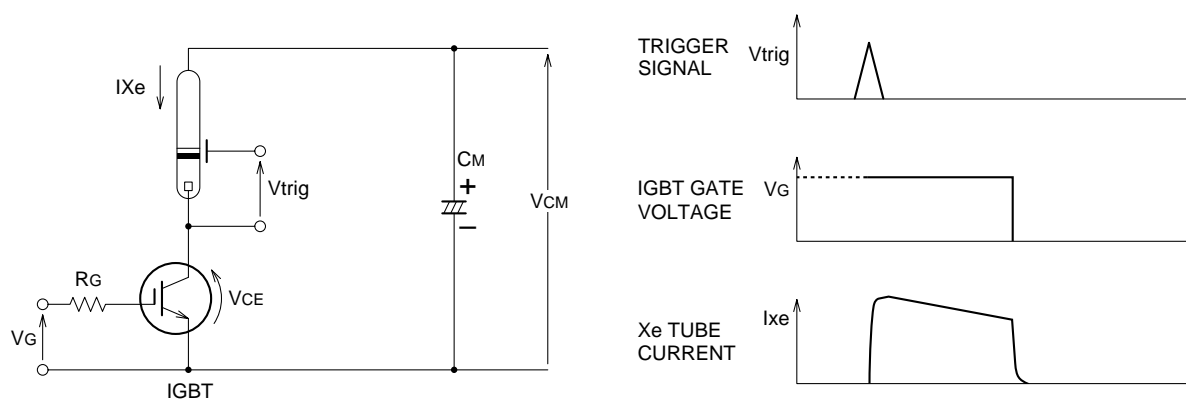


Figure 1

APPLICATION EXAMPLE



RECOMMEND CONDITION	MAXIMUM CONDITION
$V_{CM} = 330V$	350V
$I_P = 180A$	200A
$C_M = 1200\mu F$	1500μF
$V_{GE} = 28V$	

- 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 ($I_{Xe} \leq 200A$: full luminescence condition) of main condenser ($C_M=1500\mu F$).
Repetition period under full luminescence condition is over 3 seconds.
- Notice 4. Total operation hours must be applied within 5,000 hours.