

## CY20AAJ-8F

Nch IGBT for Strobe Flasher

REJ03G0281-0100

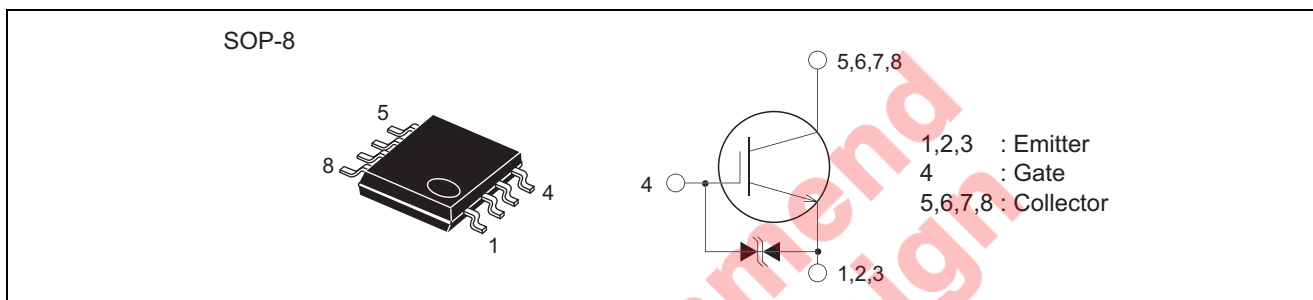
Rev.1.00

Aug.20.2004

### Features

- $V_{CES}$  : 400 V
- $I_{CM}$  : 130 A
- Drive voltage : 4 V

### Outline



### Applications

Strobe flasher for cameras

### Maximum Ratings

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

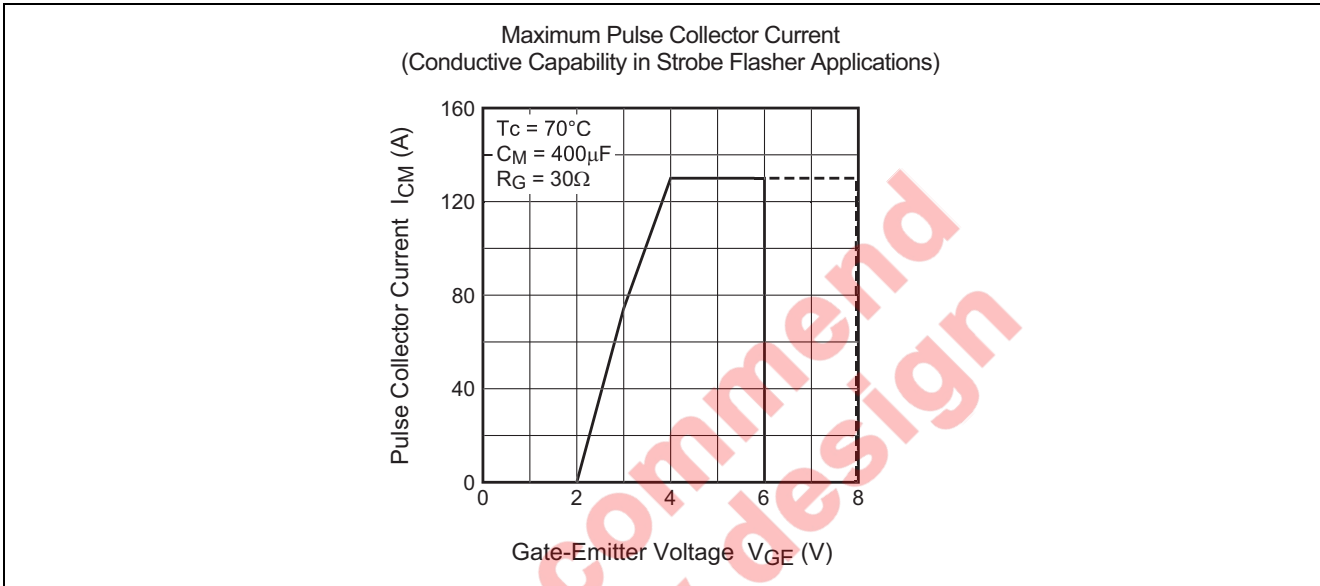
Parameter	Symbol	Ratings	Unit	Conditions
Collector-emitter voltage	$V_{CES}$	400	V	$V_{GE} = 0\text{ V}$
Gate-emitter voltage	$V_{GES}$	$\pm 6$	V	$V_{CE} = 0\text{ V}$
Peak gate-emitter voltage	$V_{GEM}$	$\pm 8$	V	$V_{CE} = 0\text{ V}$ , $t_w = 10\text{ s}$
Collector current (Pulse)	$I_{CM}$	130	A	$C_M = 400\text{ }\mu\text{F}$ (see performance curve)
Junction temperature	$T_j$	- 40 to +150	$^\circ\text{C}$	
Storage temperature	$T_{stg}$	- 40 to +150	$^\circ\text{C}$	

## Electrical Characteristics

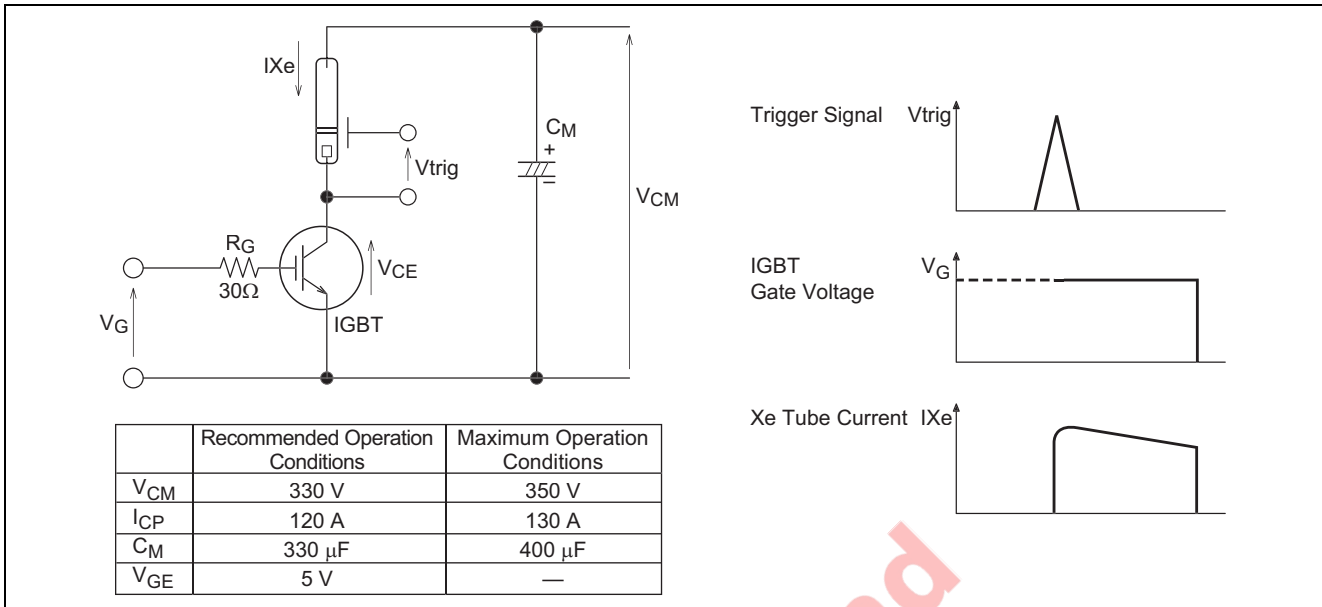
(T<sub>ch</sub> = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test conditions
Collector-emitter breakdown voltage	$V_{(BR)CES}$	450	—	—	V	$I_C = 1 \text{ mA}$ , $V_{GE} = 0 \text{ V}$
Gate-emitter breakdown voltage	$V_{(BR)GES}$	±8	—	—	V	$I_G = \pm 100 \text{ } \mu\text{A}$ , $V_{CE} = 0 \text{ V}$
Collector-emitter leakage current	$I_{CES}$	—	—	10	μA	$V_{CE} = 400 \text{ V}$ , $V_{GE} = 0 \text{ V}$
Gate-emitter leakage current	$I_{GES}$	—	—	±10	μA	$V_{GE} = \pm 6 \text{ V}$ , $V_{CE} = 0 \text{ V}$
Gate-emitter threshold voltage	$V_{GE(th)}$	—	—	1.5	V	$V_{CE} = 10 \text{ V}$ , $I_C = 1 \text{ mA}$

## Performance Curves



## Application Example



## Precautions on Usage

1. IGBT has MOS structure and its gate is insulated by thin silicon oxide. So please handle carefully to protect the device from electrostatic charge.
2. Gate drive voltage during on-period must be applied to satisfy the rating of maximum pulse collector current. And peak reverse gate current during turn-off must become less than 0.1 A. (In general, when  $R_{G(off)} = 30 \Omega$ , it is satisfied.)
3. The operation life should be endured 5,000 shots under the charge current ( $I_{Xe} \leq 130 \text{ A}$  : full luminescence condition) of main capacitor ( $C_M = 400 \mu\text{F}$ ) which can endure repeated discharge of 5,000 times. Repetition period under full luminescence condition is over 3 seconds.
4. Total operation hours applied to the gate-emitter voltage must be within 5,000 hours.

## Package Dimensions

**8P2S-B(SOP-8)**

EIAJ Package Code	JEDEC Code	Mass (g) (reference value)	Lead Material
—	Conforms	0.07	Cu alloy

Note 1) The dimensional figures indicate representative values unless otherwise the tolerance is specified.

Symbol	Dimension in Millimeters		
	Min	Typ	Max
A	—	—	—
A <sub>1</sub>	—	—	—
A <sub>2</sub>	—	—	—
b	—	—	—
D	—	—	—
E	—	—	—
e	—	—	—
x	—	—	—
y	—	—	—
y <sub>1</sub>	—	—	—
ZD	—	—	—
ZE	—	—	—

## Order Code

Lead form	Standard packing	Quantity	Standard order code	Standard order code example
Surface-mounted type	Taping	3000	Type name – T +Direction (1 or 2)+3	CY20AAJ-8F-T13
Surface-mounted type	Plastic Magazine (Tube)	100	Type name	CY20AAJ-8F

Note : Please confirm the specification about the shipping in detail.

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