CT40KM-8H

Nch IGBT for Strobe Flasher

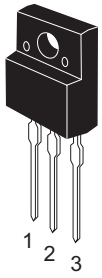
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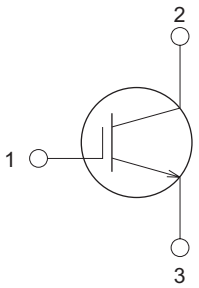
Features

- V_{CES} : 400 V
- TO-220FN package
- High Speed Switching

Outline

RENESAS Package code: PRSS0003AB-A
(Package name: TO-220FN)





1 : Gate
2 : Collector
3 : Emitter

Applications

Strobe flashers

Maximum Ratings

(Tc = 25°C)

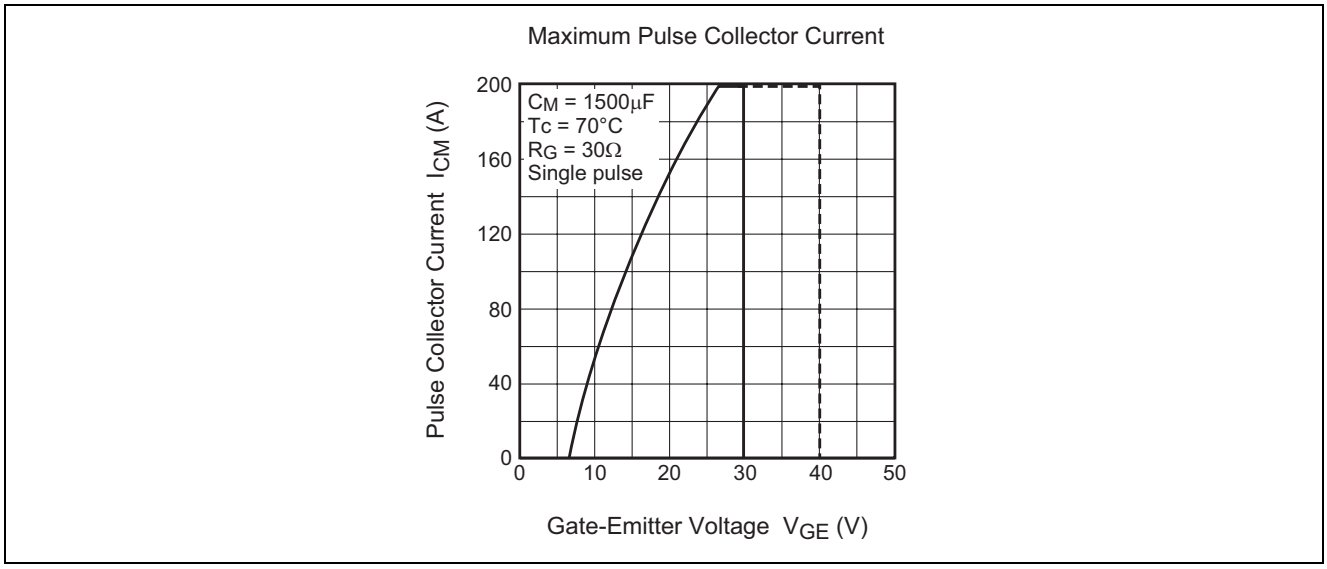
Parameter	Symbol	Ratings	Unit	Conditions
Collector-emitter voltage	V_{CES}	400	V	V_{GE} = 0 V
Gate-emitter voltage	V_{GES}	30	V	V_{CE} = 0 V, Refer to item 4 under Notes on the Actual Specifications
Peak gate-emitter voltage	V_{GEM}	40	V	V_{CE} = 0 V, tw = 0.5 s
Collector current (Pulse)	I_{CM}	200	A	C_M = 1500 µF (see performance curve)
Maximum power dissipation	P_C	45	W	
Junction temperature	Tj	– 40 to +150	°C	
Storage temperature	Tstg	– 40 to +150	°C	
Mass	—	2.0	g	Typical value

Electrical Characteristics

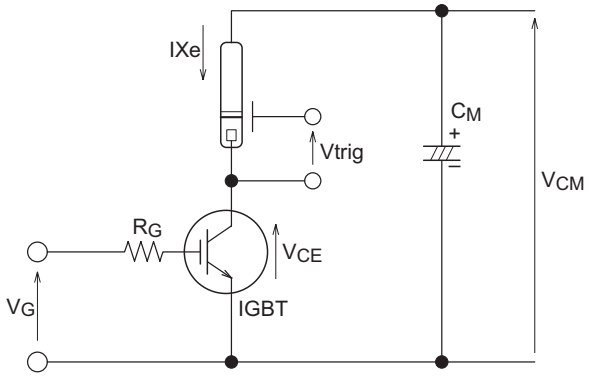
(Tj = 25°C)

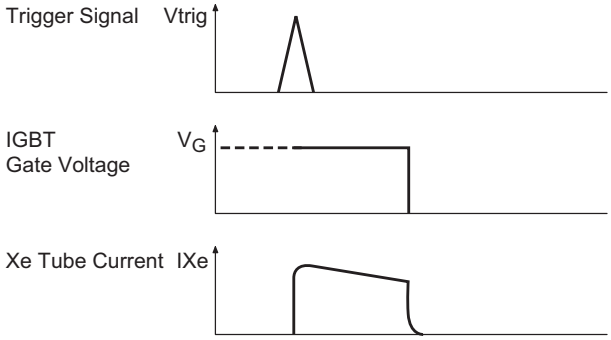
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test conditions
Collector-emitter breakdown voltage	$V_{(BR)CES}$	450	—	—	V	I_C = 1 mA, V_{GE} = 0 V
Collector-emitter leakage current	I_{CES}	—	—	10	µA	V_{CE} = 400 V, V_{GE} = 0 V
Gate-emitter leakage current	I_{GES}	—	—	±0.1	µA	V_{GE} = ±40 V, V_{CE} = 0 V
Gate-emitter threshold voltage	$V_{GE(th)}$	—	—	7.0	V	V_{CE} = 10 V, I_C = 1 mA

Performance Curves



Application Example





	Recommended Operation Conditions	Maximum Operation Conditions
V_{CM}	330 V	350 V
I_{CP}	180 A	200 A
C_M	1200 μF	1500 μF
V_{GE}	28 V	—

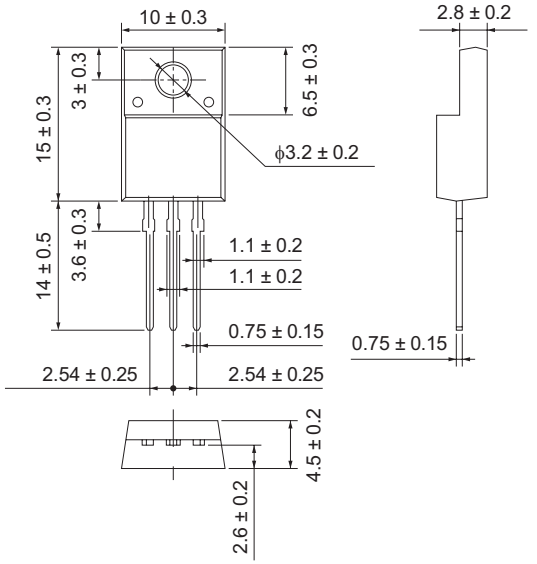
Precautions on Usage

1. 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 1 A. (In general, when $R_{G(off)}$ = 30 Ω, it is satisfied.)
2. IGBT has MOS structure and its gate is insulated by thin silicon oxide. So please handle carefully to protect the device from electrostatic charge.
3. The operation life should be endured 5,000 shots under the charge current ($I_{Xe} \leq 200$ A : full luminescence condition) of main capacitor (C_M = 1500 μF) 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

JEITA Package Code	RENESAS Code	Package Name	MASS[Typ.]
–	PRSS0003AB-A	TO-220FN	2.0g

Unit: mm



Order Code

Lead form	Standard packing	Quantity	Standard order code	Standard order code example
Straight type	Plastic Magazine (Tube)	50	Type name	CT40KM-8H

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

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