ShinDengen

KC5FB60HR

Thyristors
600V, 5A

Feature

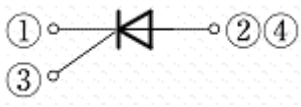
- Small SMD
- High Voltage
- High Sensitivity
- Suitable for an Inrush Current Protection Circuit
- Pb free terminal
- RoHS:Yes

OUTLINE

Package (House Name): FB
Package (JEDEC Code): TO-252AA



Equivalent circuit



Absolute Maximum Ratings (unless otherwise specified : Tc=25℃)

Item	Symbol	Conditions	Ratings	Unit
Storage temperrature	T_{stg}		-40 to 125	℃
Junction temperature	Tj		125	℃
Repetitive peak off-state voltage	V_{DRM}	RGK=220Ω	600	V
Repetitive peak reverse voltage	V_{RRM}	(not guaranteed)	-	V
Average on-state Current	I_T(AV)	Tc=98℃, 60Hz sine wave, θ=180°	5	A
Peak surge on-state current	I_{TSM}	Tj=25℃, 60Hz sine wave, θ=180°, Non repetitive	90	A
Current squared time	I^2t	Tj=25℃, tp=8.3ms, Non repetitive	33.6	A^2s
Peak gate dissipation	P_{FGM}	f≧60Hz, Duty≦10%	2	W
Average gate dissipation	P_{FG}(AV)		0.2	W
Peak gate forward current	I_{FGM}	f=60Hz, Duty≦10%	0.3	A
Peak gate reverse voltage	V_{RGM}		6	V
Critical rate of rise of on-state current	di/dt		50	A/μs

※ ：See the original Specifications

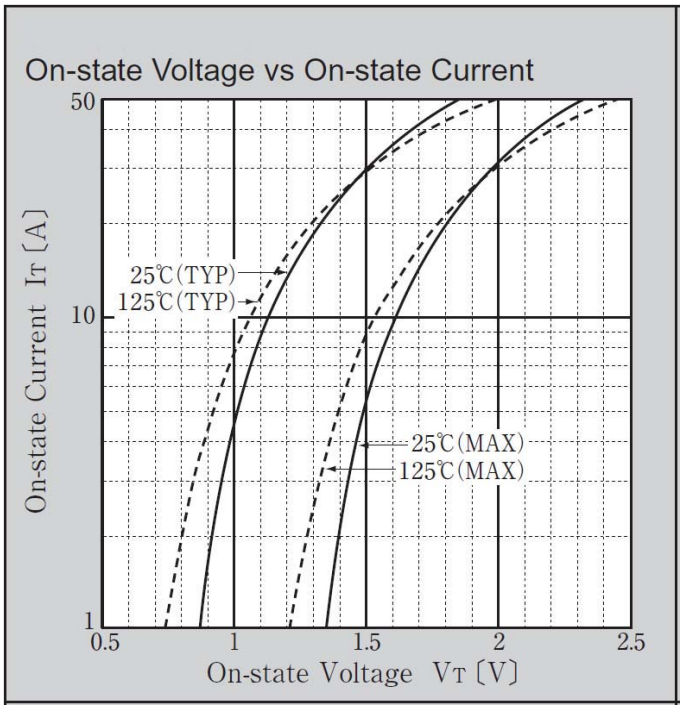
Electrical Characteristics (unless otherwise specified : Tc=25℃)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Repetitive off-state current	I_{DRM}	VD=600V, RGK=220Ω, Pulse measurement			10	μA
On-state voltage	V_{TM}	ITM=15A			1.8	V
Gate trigger voltage	V_{GT}	VD=6V, RL=100Ω			0.8	V
Gate trigger current	I_{GT}	VD=6V, RL=100Ω	1		100	μA
Gate non-trigger voltage	V_{GD}	Tj=125℃, VD=1/2VDRM, RGK=220Ω	0.1			V
Holding Current	I_H	ITM=100mA, RGK=220Ω	0.2		5	mA
Thermal Resistance	Rth(j-c)	Junction to case			3	℃/W

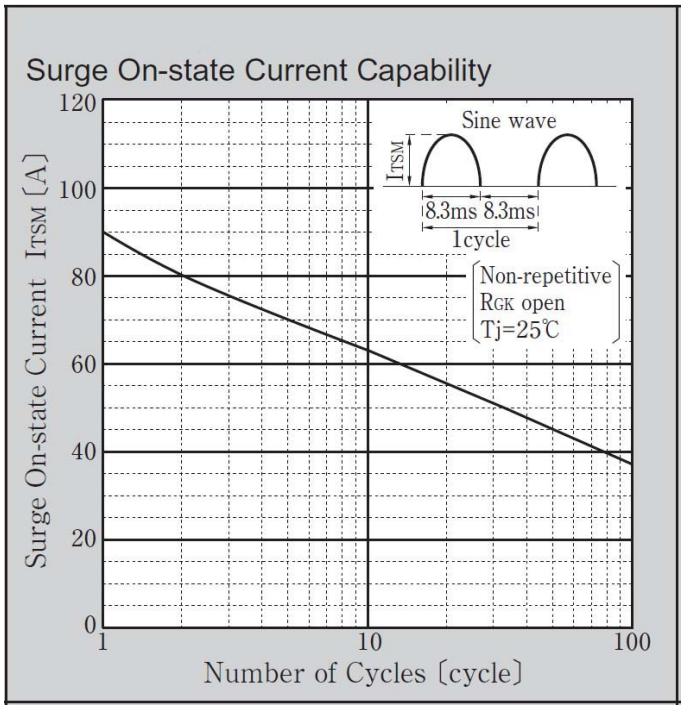
※ :See the original Specifications

CHARACTERISTIC DIAGRAMS

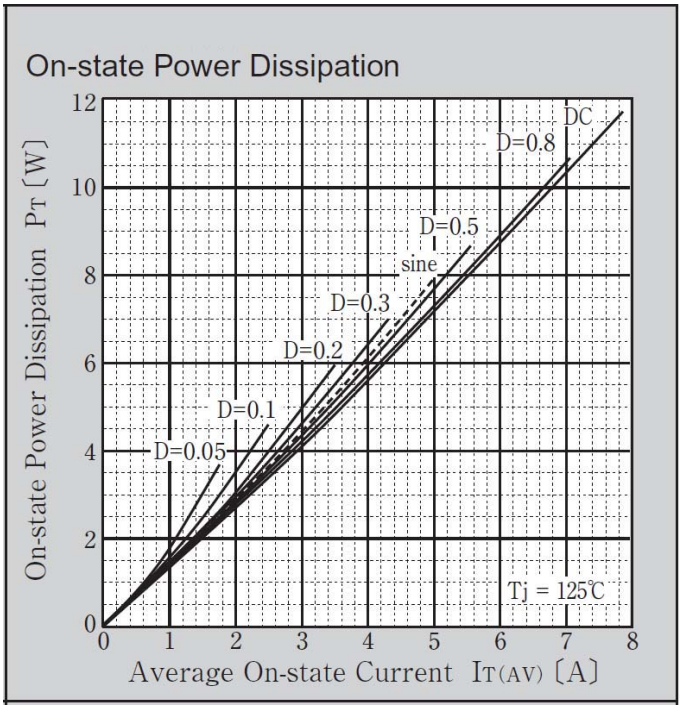
On-state Voltage vs On-state Current



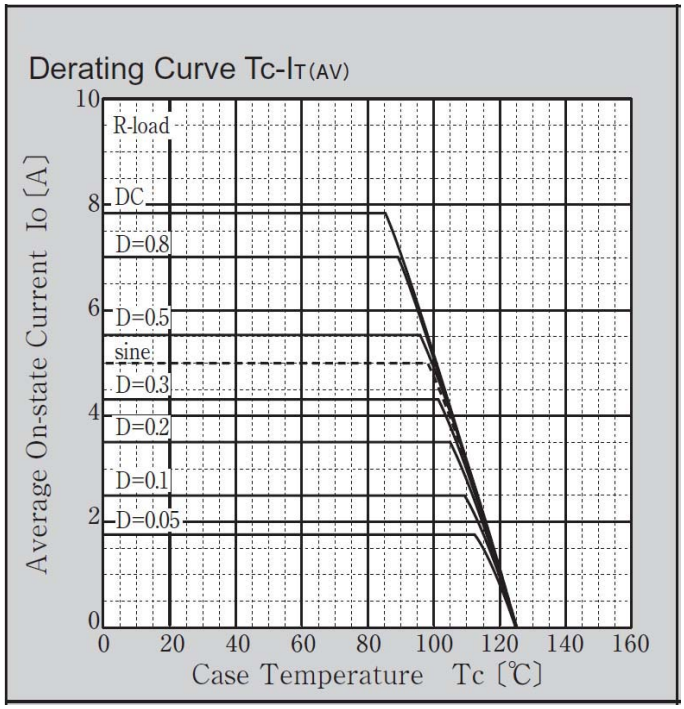
Surge On-state Current Capability



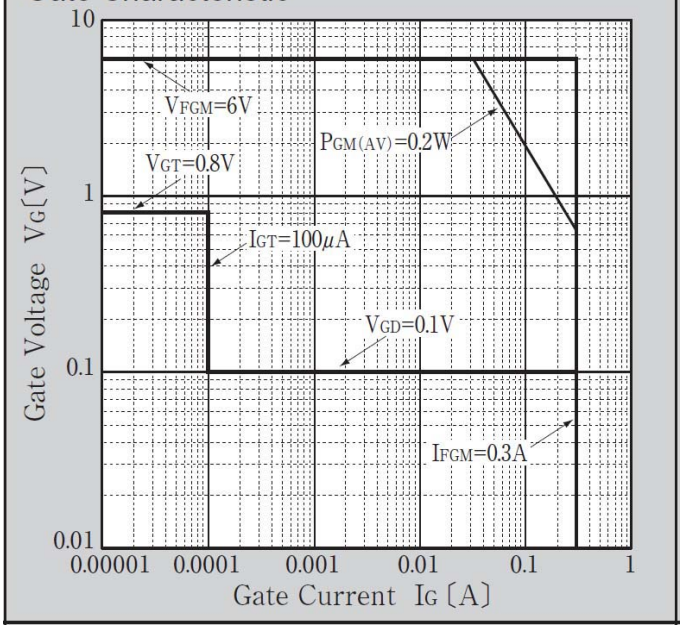
On-state Power Dissipation



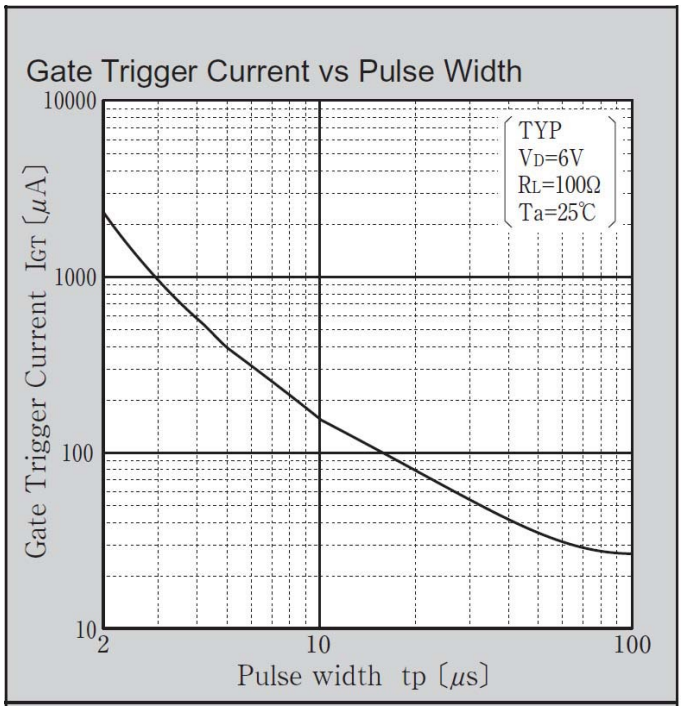
Derating Curve Tc-IT(AV)



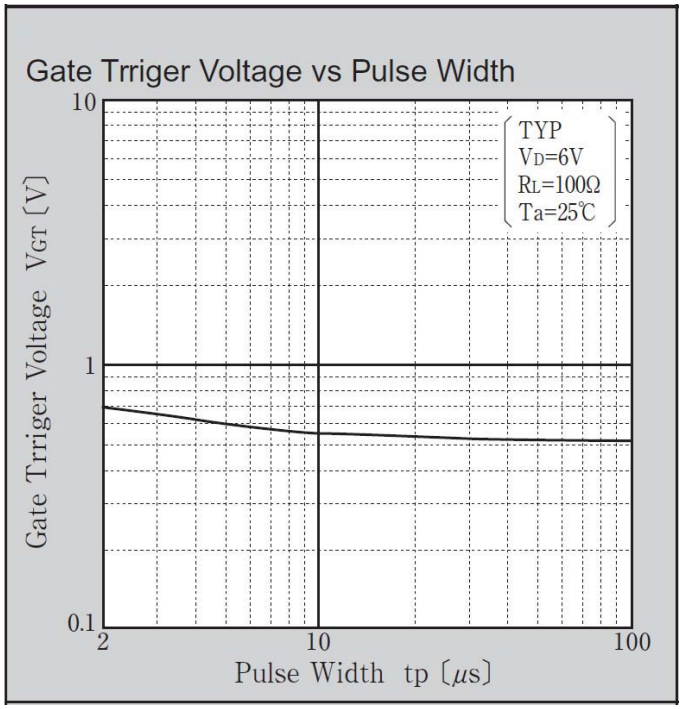
Gate Characteristic



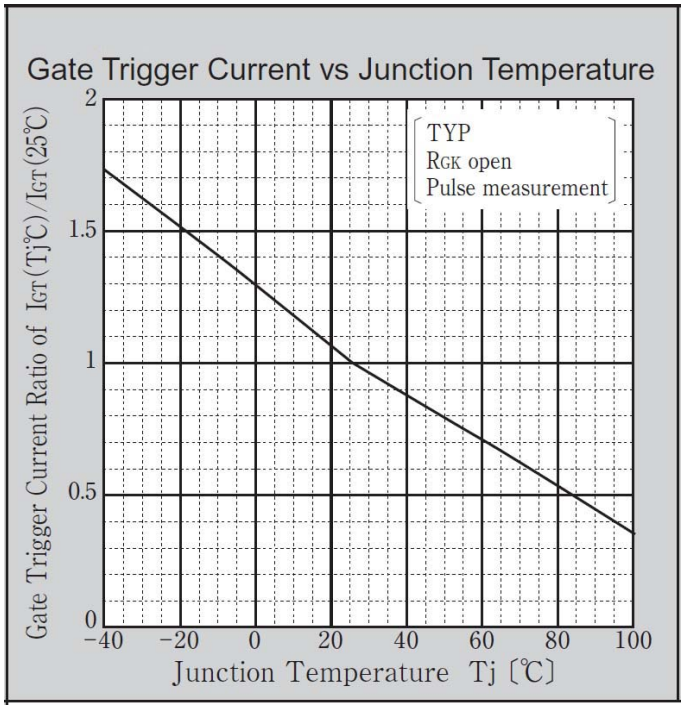
Gate Trigger Current vs Pulse Width



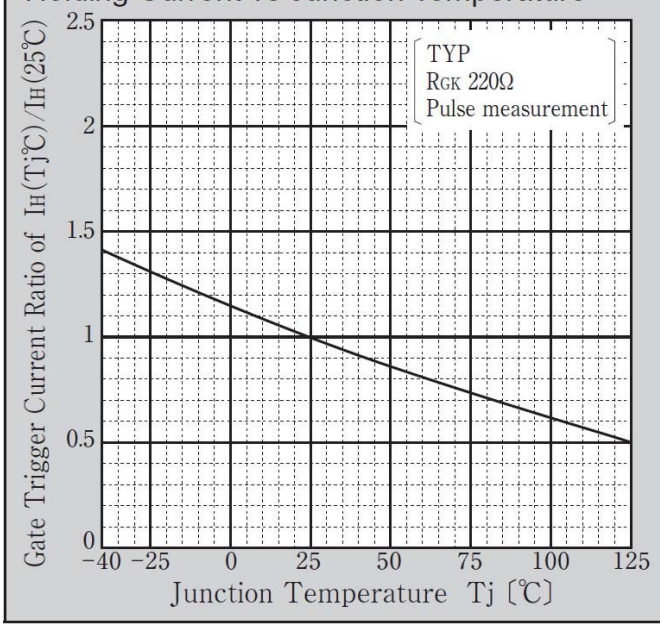
Gate Trriger Voltage vs Pulse Width



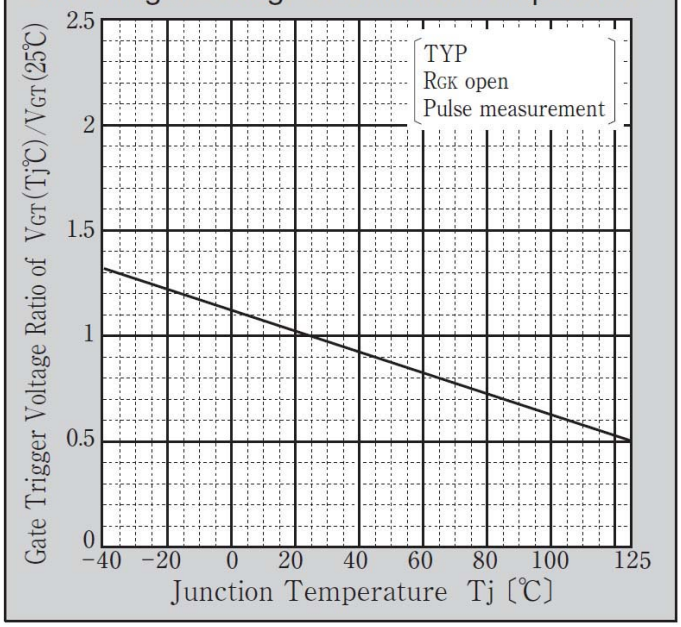
Gate Trigger Current vs Junction Temperature



Holding Current vs Junction Temperature



Gate Trriger Voltage vs Junction Temperature

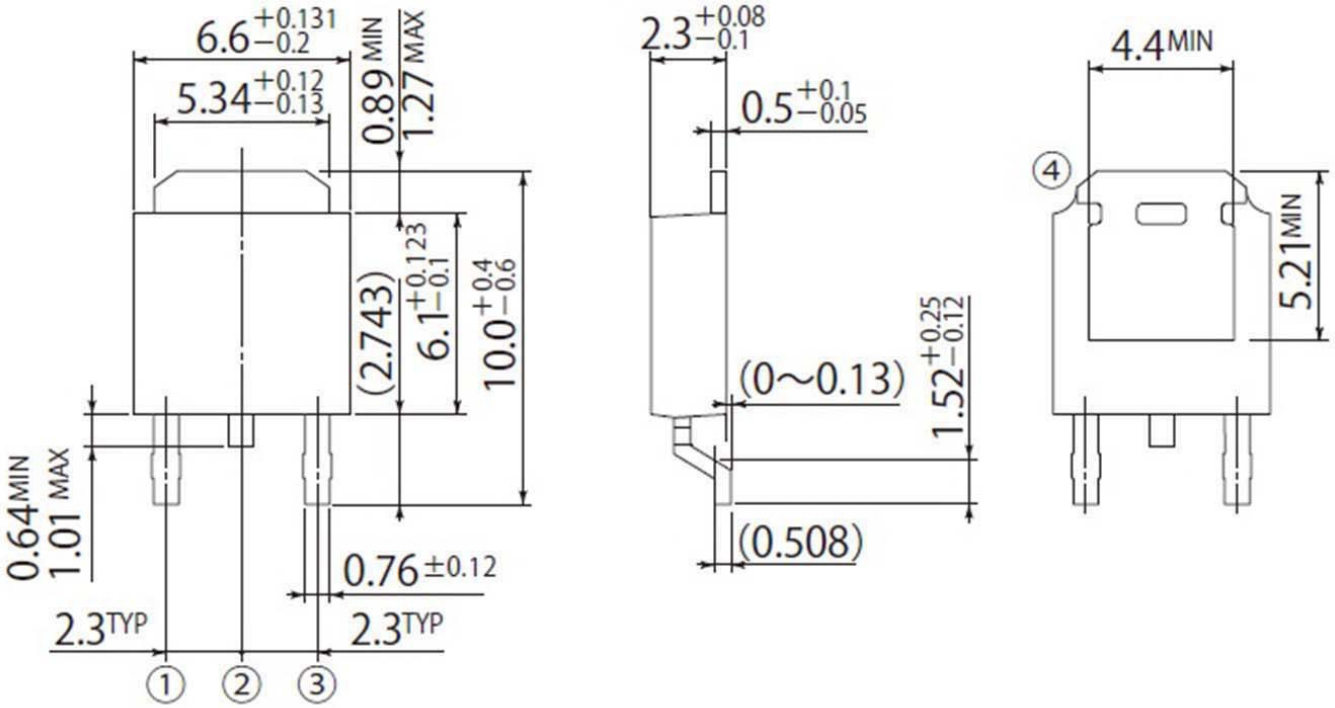


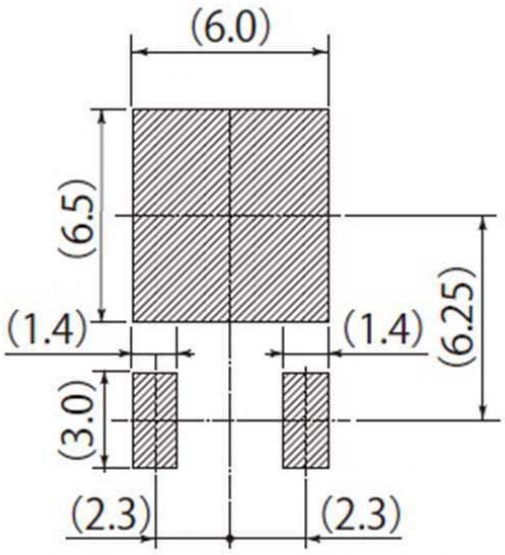
Outline Dimensions

unit:mm

G2

JEDEC Code	TO-252AA
JEITA Code	–
House Name	FB





Referential Soldering Pad

・Optimize soldering pad to the board design and soldering condition.

Notes

1. If you wish to use any such product, please be sure to refer to the specifications issued by Shindengen.
2. All products described or contained herein are designed with a quality level intended for use in standard applications requiring an ordinary level of reliability. If these products are to be used in equipment or devices for special or specific applications requiring an extremely high grade of quality or reliability in which failures or malfunctions of products may directly affect human life or health, a local Shindengen office must be contacted in advance to confirm that the intended use of the product is appropriate. Shindengen products are grouped into the following three applications according the quality grade.

   【Standard applications】
   Computers, office automation and other office equipment, communication terminals, test and measurement equipment, audio/visual equipment, amusement equipment, consumer electronics, machine tools, personal electronic equipment, industrial equipment, etc.
   【Special applications】
   Transportation equipment (vehicles, ships, etc.), trunk-line communication equipment, traffic signal control systems, anti-disaster/crime systems, safety equipment, medical equipment, etc.
   【Specific applications】
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