ShinDengen

KC5FB60HRT

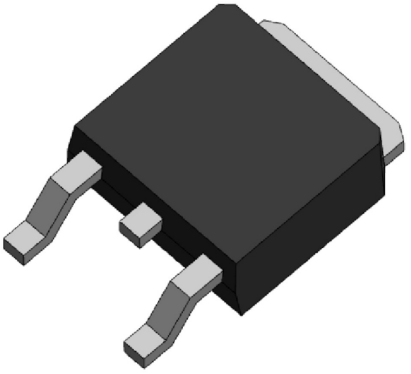
Thyristors
600V, 5A

Feature

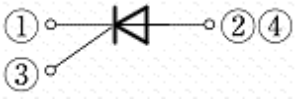
- Small SMD
- High Voltage
- High Sensitivity
- Tj=150°C
- Suitable for an Inrush Current Protection Circuit
- Pb free terminal
- RoHS:Yes

OUTLINE

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



Equivalent circuit



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

Item	Symbol	Conditions	Ratings	Unit
Storage temperrature	T_{stg}		-55 to 150	°C
Junction temperature	Tj		-40 to 150	°C
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=123°C, 60Hz sine wave, θ=180°	5	A
Peak surge on-state current	I_{TSM}	Tj=25°C, 60Hz sine wave, θ=180°, Non repetitive	90	A
Current squared time	I^2t	Tj=25°C, 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

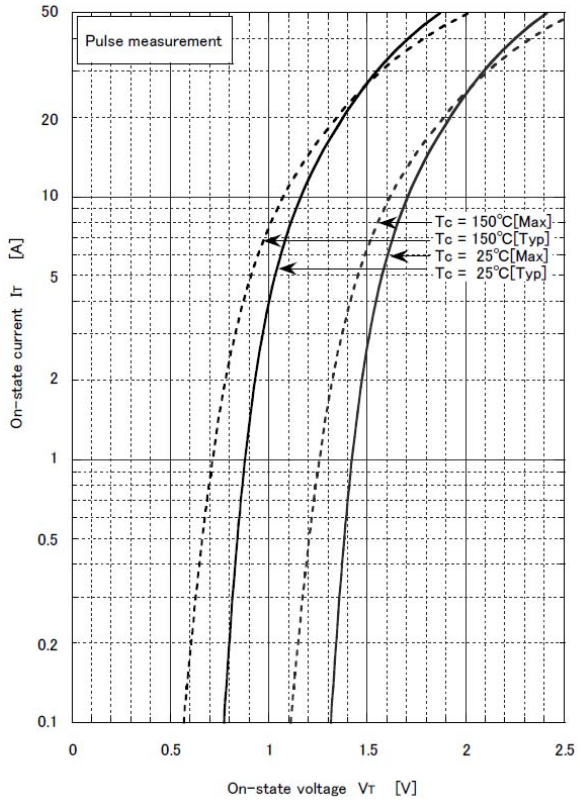
Electrical Characteristics (unless otherwise specified : Tc=25°C)

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_T	IT=15A, Pulse measurement			1.8	V
Gate trigger voltage	V_{GT}	VD=6V, RL=100Ω, Pulse measurement			0.8	V
Gate trigger current	I_{GT}	VD=6V, RL=100Ω, Pulse measurement	1		100	μA
Gate non-trigger voltage	V_{GD}	Tj=150°C, VD=1/2VDRM, RGK=220Ω	0.1			V
Holding Current	I_H	IT=0.1A, RGK=220Ω	0.2		5	mA
Thermal Resistance	Rth(j-c)	Junction to case			3	°C/W

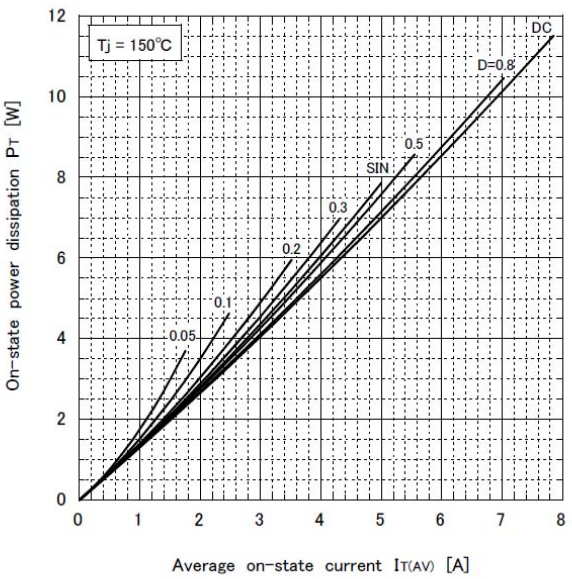
※ ：See the original Specifications

CHARACTERISTIC DIAGRAMS

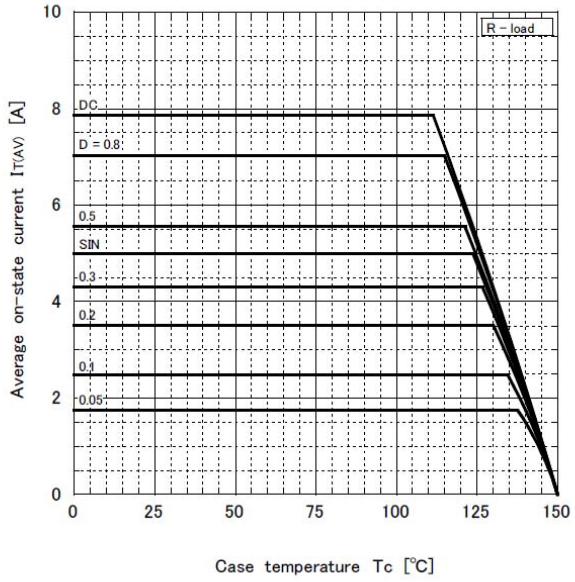
On-state voltage – On-state current



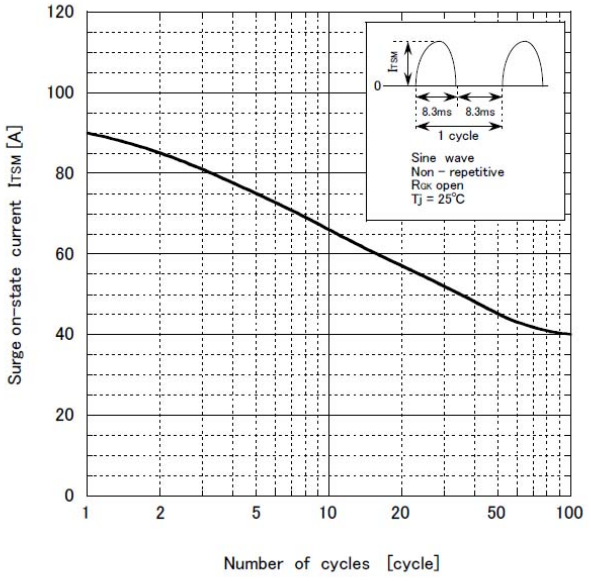
On-state power dissipation



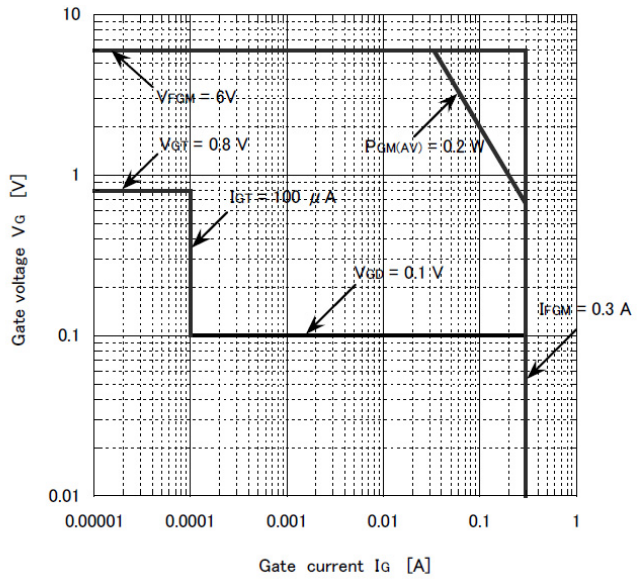
Derating curve Tc-IT(AV)



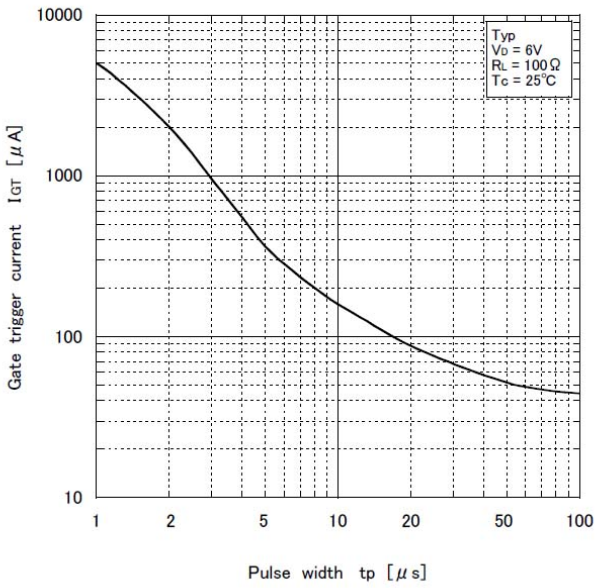
Surge on-state current capability



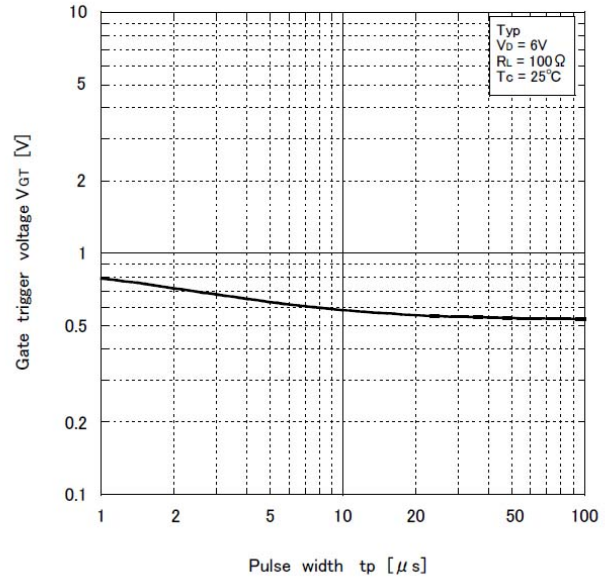
Gate characteristic



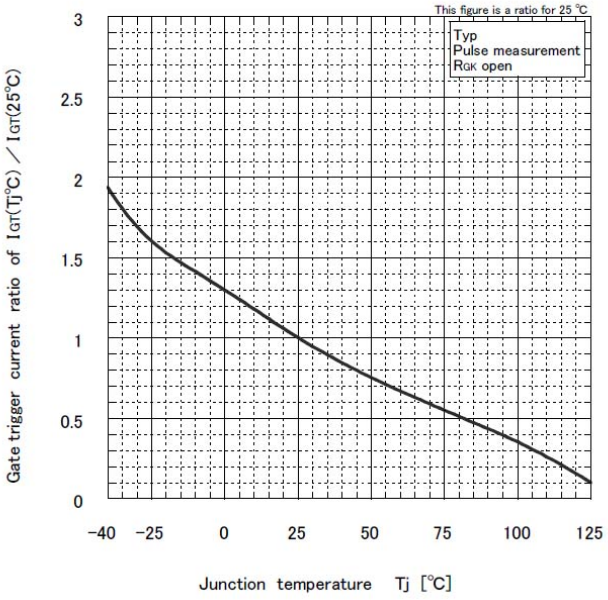
Gate trigger current – Pulse width



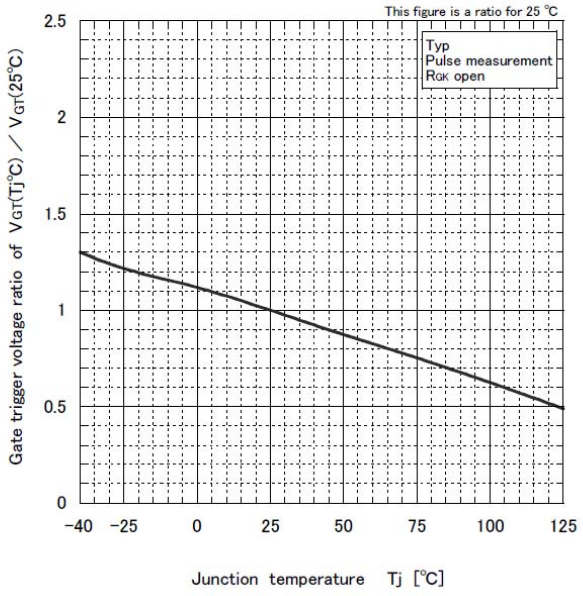
Gate trigger voltage – Pulse width



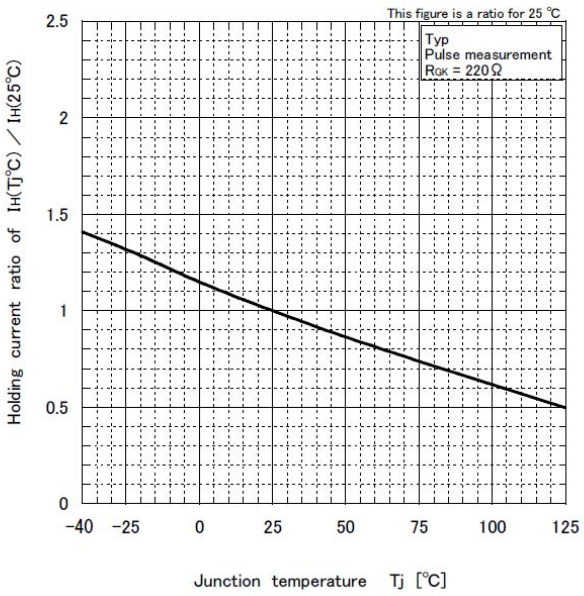
Gate trigger current – Junction temperature



Gate trigger voltage – Junction temperature



Holding current – Junction temperature

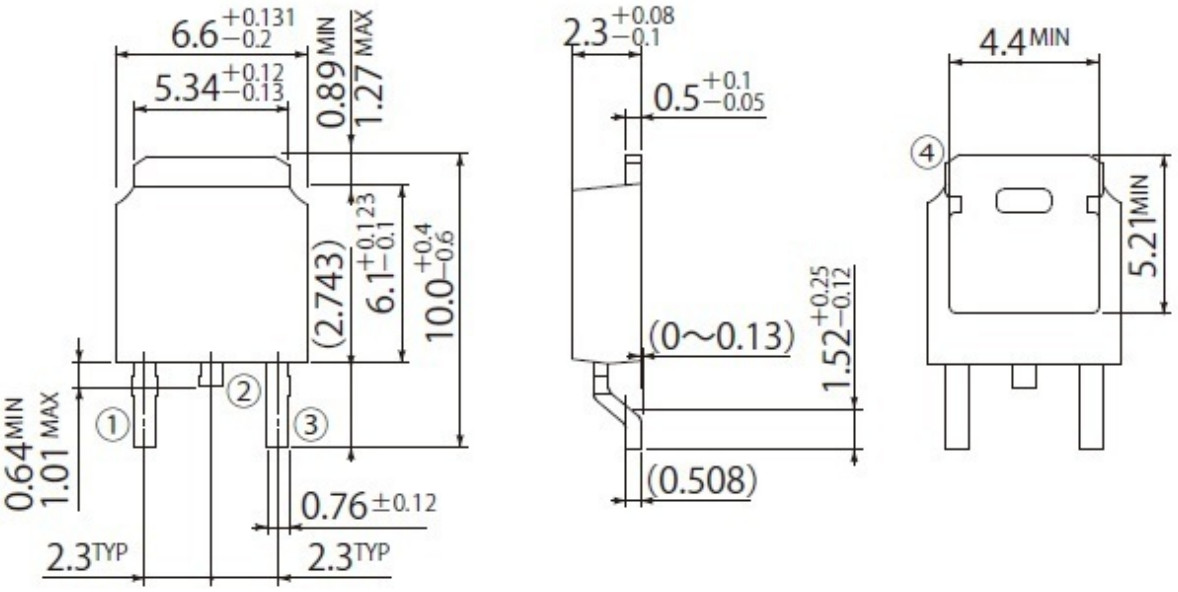


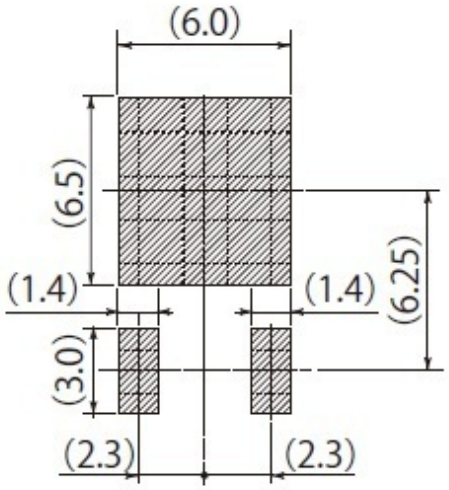
Outline Dimensions

unit:mm

G2

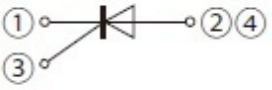
JEDEC Code	TO-252AA
JEITA Code	–
House Name	FB





Referential Soldering Pad

Fig. G2-2



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

- The content specified herein is subject to change for improvement without notice.
- If you wish to use any such products, please be sure to refer to the specifications.

U182-4(2026.08)

Notes

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   【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】
   Nuclear reactor control systems, aircraft, aerospace equipment, submarine repeaters, life support equipment and systems, etc.
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