ShinDengen

KC5FB60HV

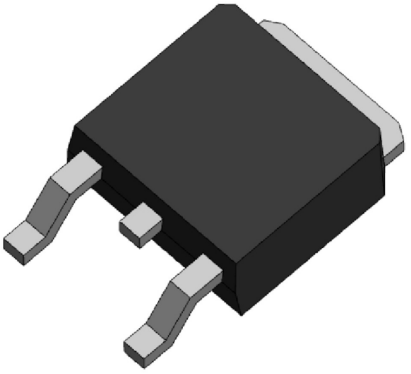
Thyristors
600V, 5A

Feature

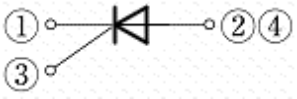
- Small SMD
- High Voltage
- High Sensitivity
- High dv/dt
- Pb free terminal
- RoHS:Yes

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 125	°C
Repetitive peak off-state voltage	V_{DRM}	AC,RGK=220Ω	600	V
Repetitive peak reverse voltage	V_{RRM}	AC,RGK=220Ω	600	V
Average on-state Current	I_T(AV)	Tc=100°C, 60Hz, Sine wave, Conduction angle θ=180°, With heatsink	5	A
Peak surge on-state current	I_{TSM}	Tj=25°C, 60Hz, Sine wave, Non-repetitive, Conduction angle θ=180°	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

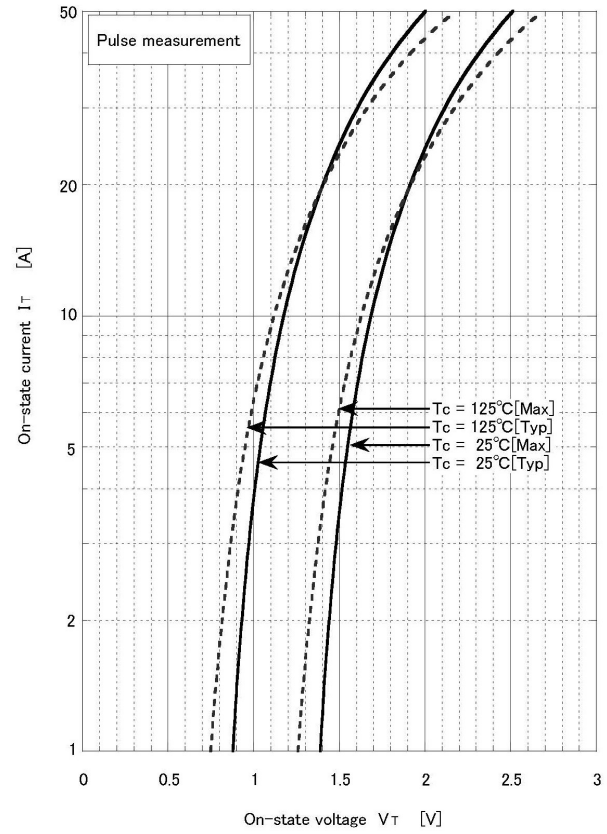
Electrical Characteristics (unless otherwise specified : Tc=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Repetitive off-state current	I_{DRM}	VD=600V, Pulse measurement, RGK=220Ω			10	μA
Repetitive reverse current	I_{RRM}				10	μA
On-state voltage	V_T	IT=15A, Pulse measurement			1.8	V
Gate trigger voltage	V_{GT}	VD=6V, RL=100Ω			0.8	V
Gate trigger current	I_{GT}	VD=6V, RL=100Ω	0.1		50	μA
Gate non-trigger voltage	V_{GD}	Tj=125°C, VD=1/2VDRM, RGK=220Ω	0.1			V
Holding Current	I_H	IT=100mA, RGK=220Ω	0.2		5	mA
Thermal Resistance	Rth(j-c)	Junction to case, With heatsink			3	°C/W

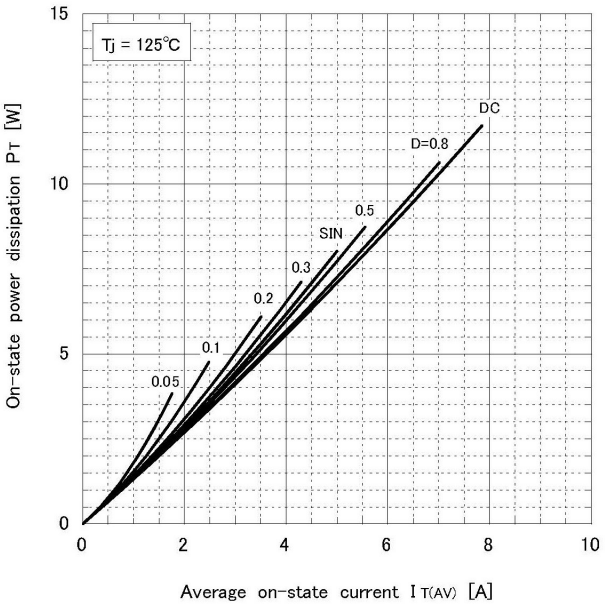
※ ：See the original Specifications

CHARACTERISTIC DIAGRAMS

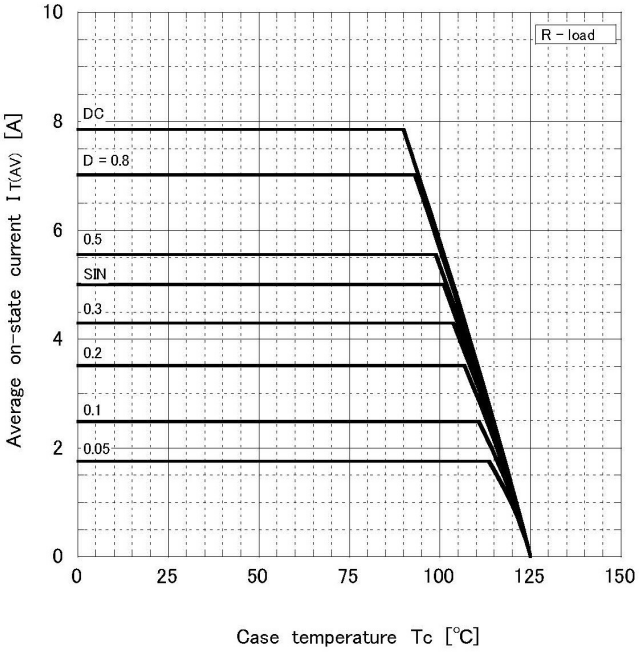
On-state current vs On-state voltage



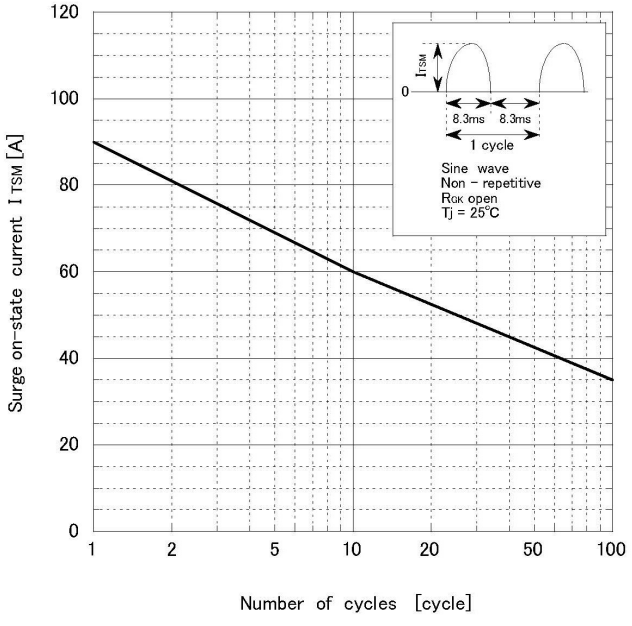
On-state power dissipation vs Average on-state current



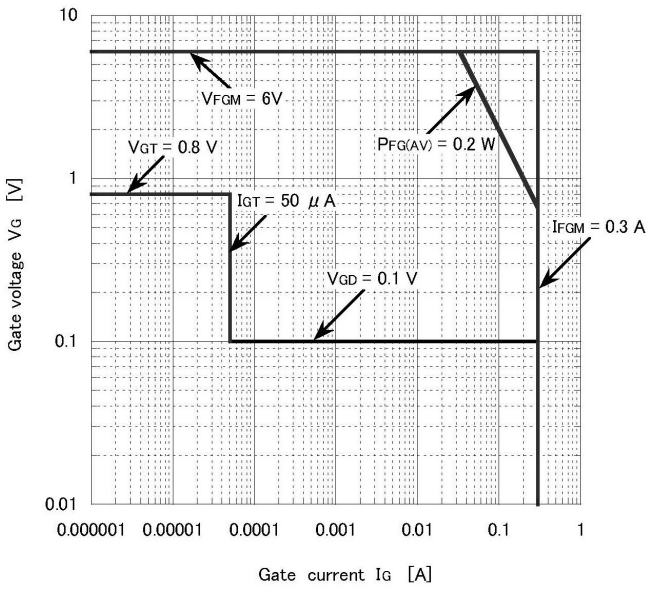
Average on-state current vs Case temperature



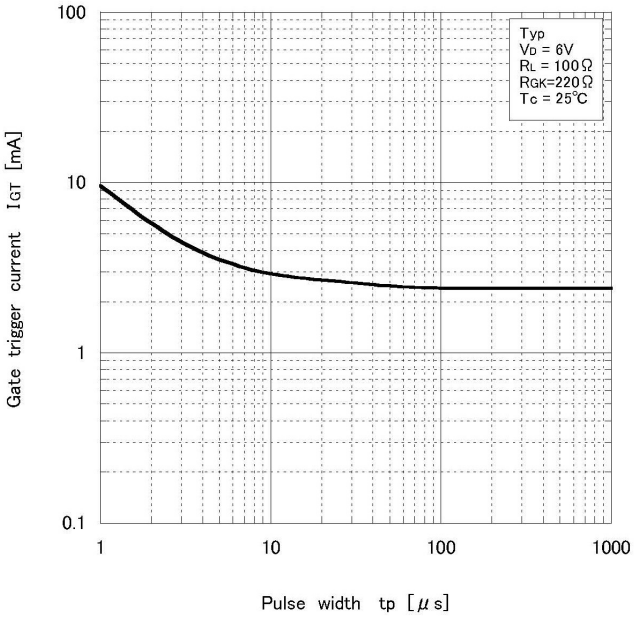
Surge on-state current vs Number of cycles



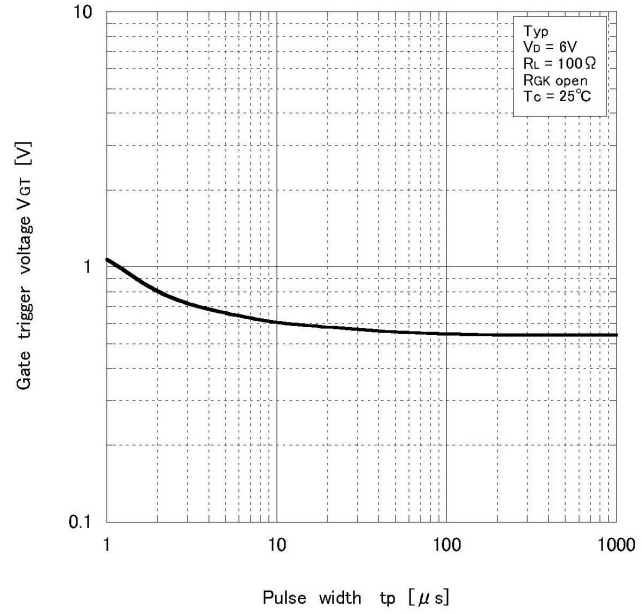
Gate voltage vs Gate current



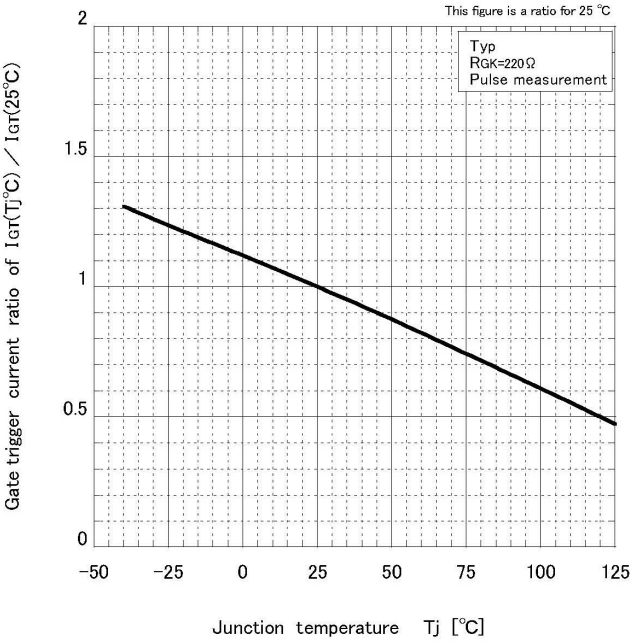
Gate trigger current vs Pulse width



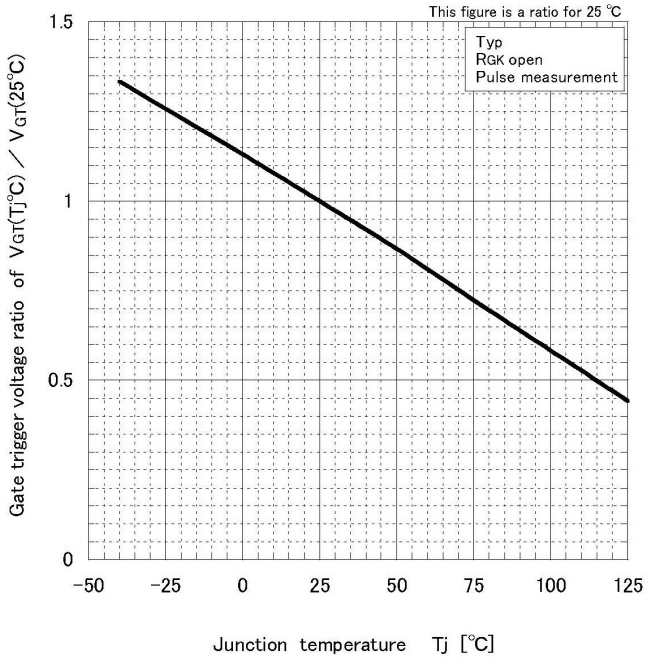
Gate trigger voltage vs Pulse width



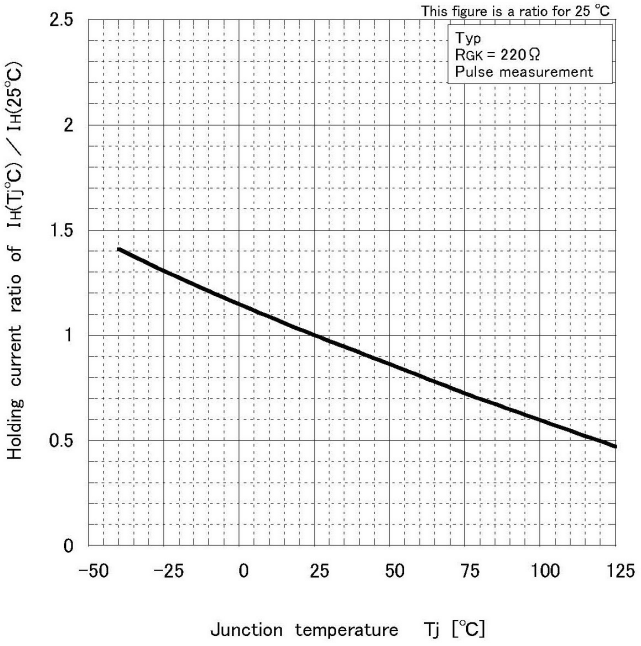
Gate trigger current ratio vs Junction temperature



Gate trigger voltage ratio vs Junction temperature



Holding current ratio vs Junction temperature

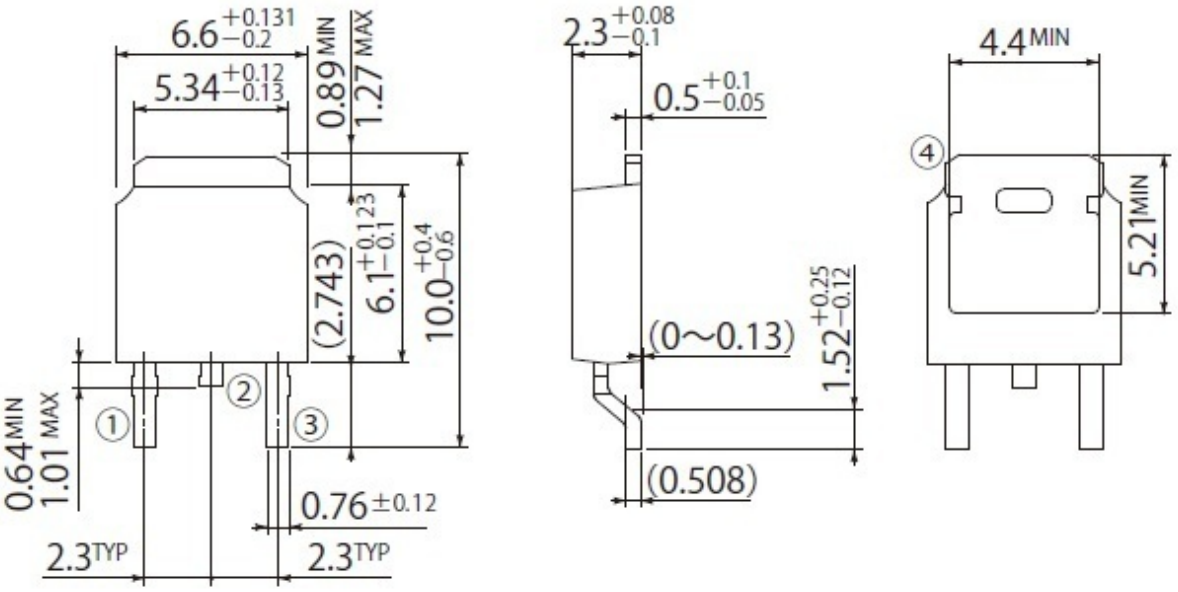


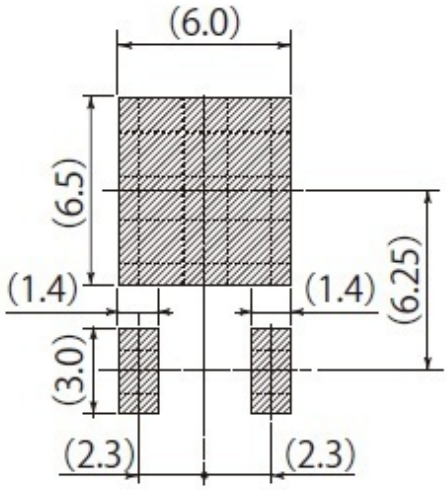
Outline Dimensions

unit:mm

G2

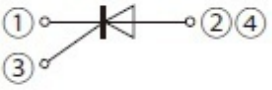
JEDEC Code	TO-252AA
JEITA Code	–
House Name	FB





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)

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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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