

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

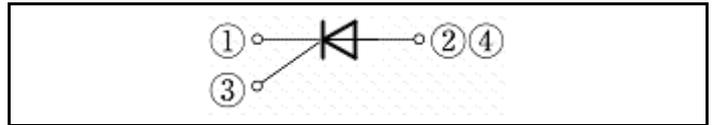
OUTLINE

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 temperature	T _{stg}		-55 to 150	°C
Junction temperature	T _j		-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 ² t	Tj=25°C, tp=8.3ms, Non repetitive	33.6	A ² s
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

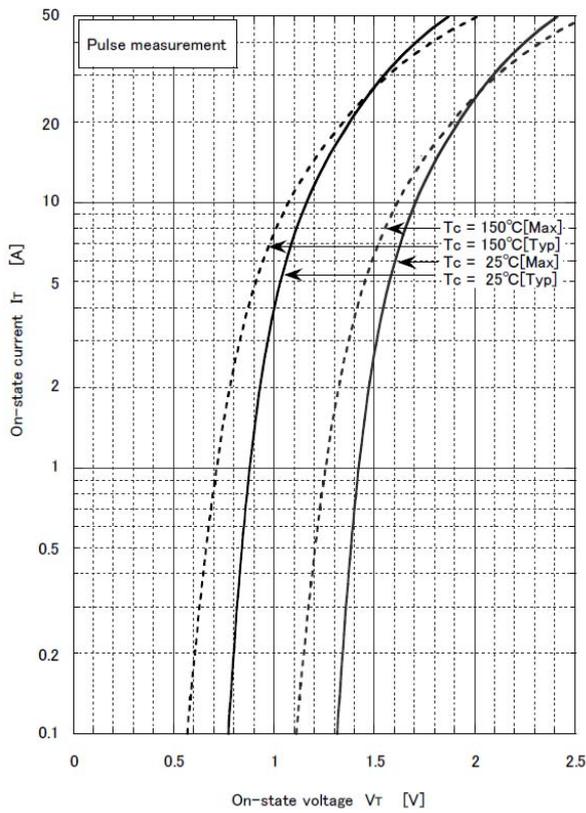
Electrical Characteristics (unless otherwise specified : Tc=25°C)

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_{TM}	ITM=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	ITM=0.1A, RGK=220Ω	0.2		5	mA
Thermal Resistance	Rth(j-c)	Junction to case			3	°C/W

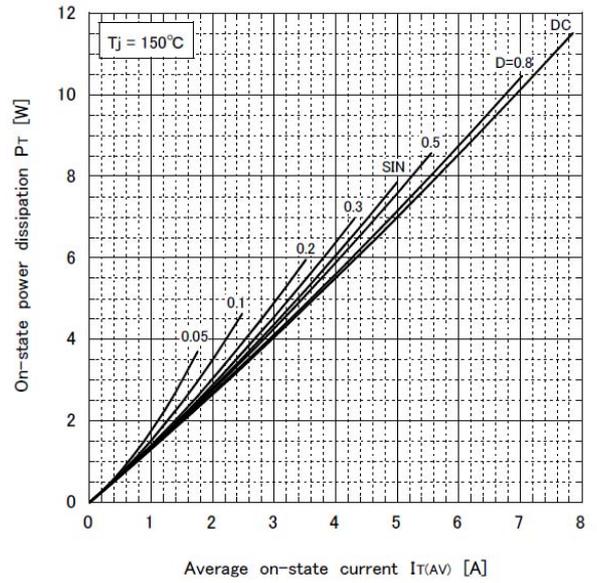
※ :See the original Specifications

CHARACTERISTIC DIAGRAMS

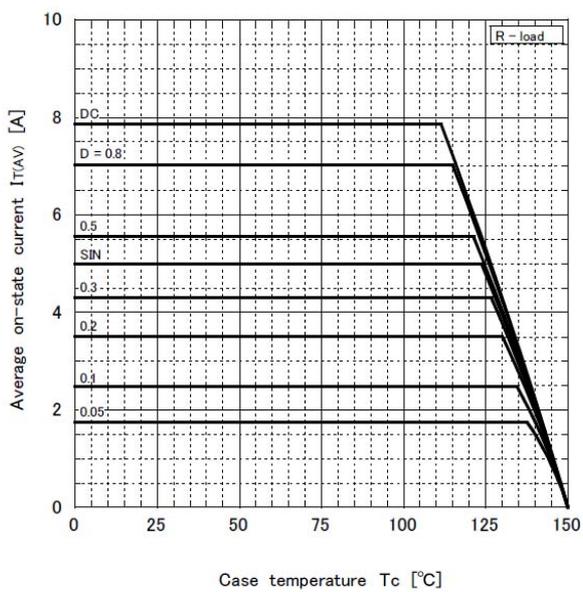
On-state voltage - On-state current



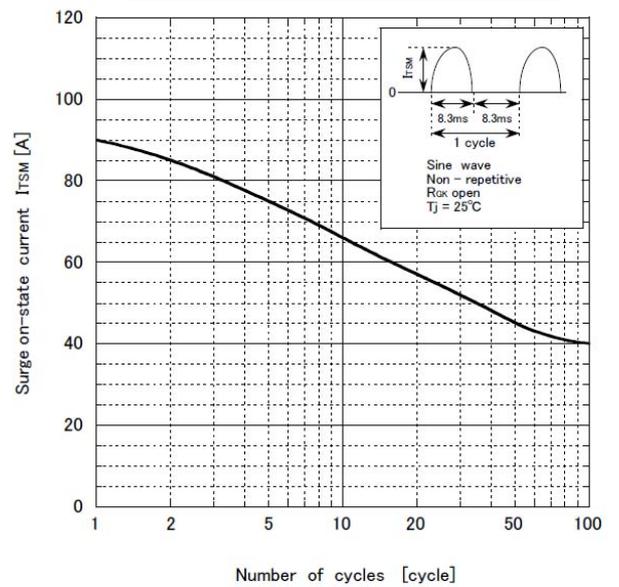
On-state power dissipation

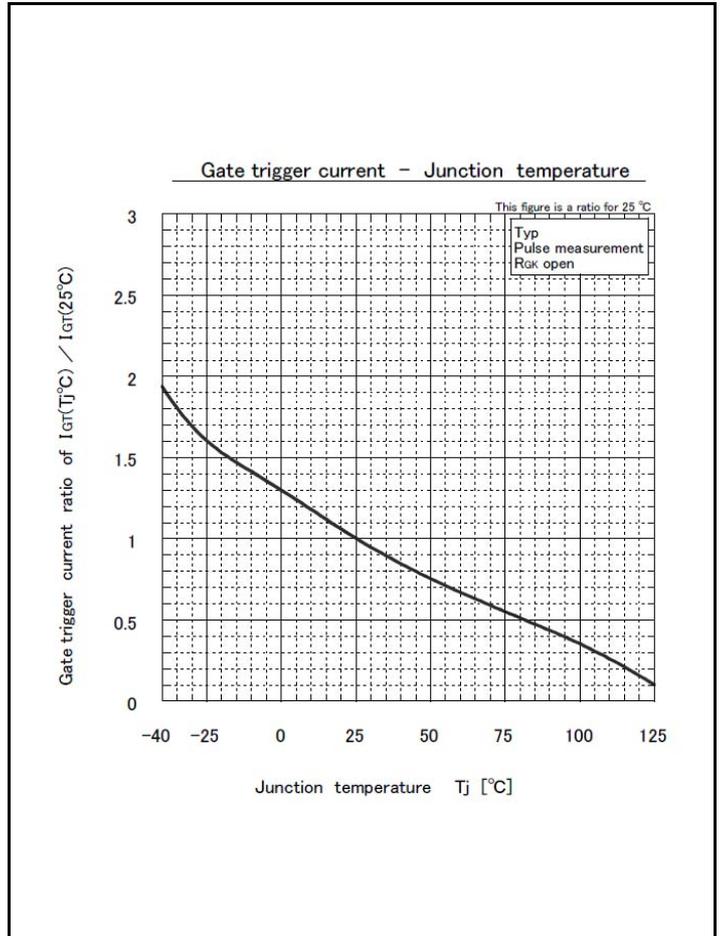
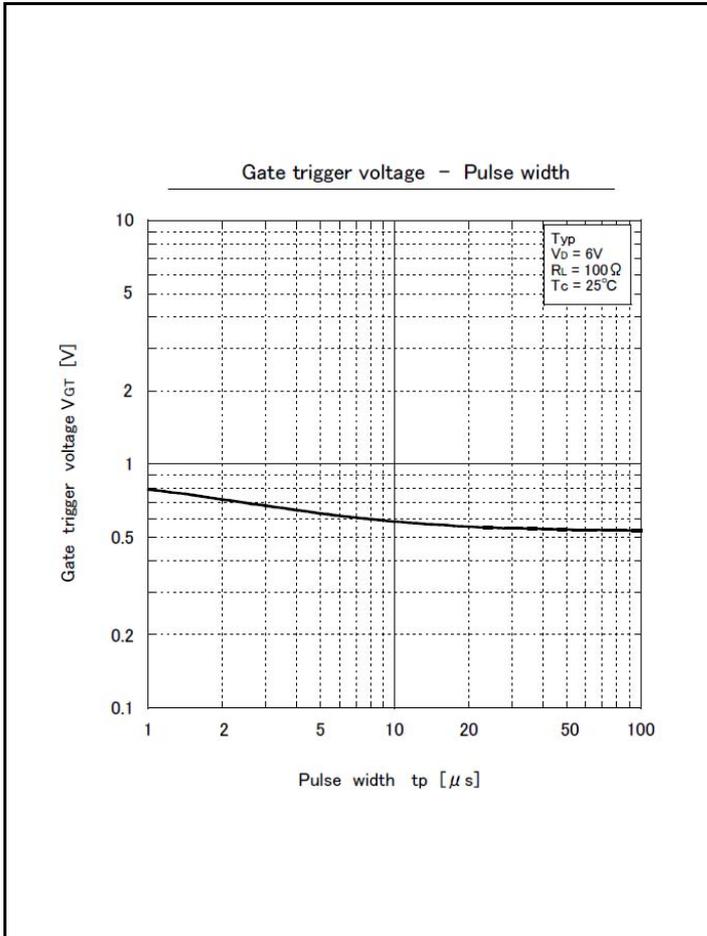
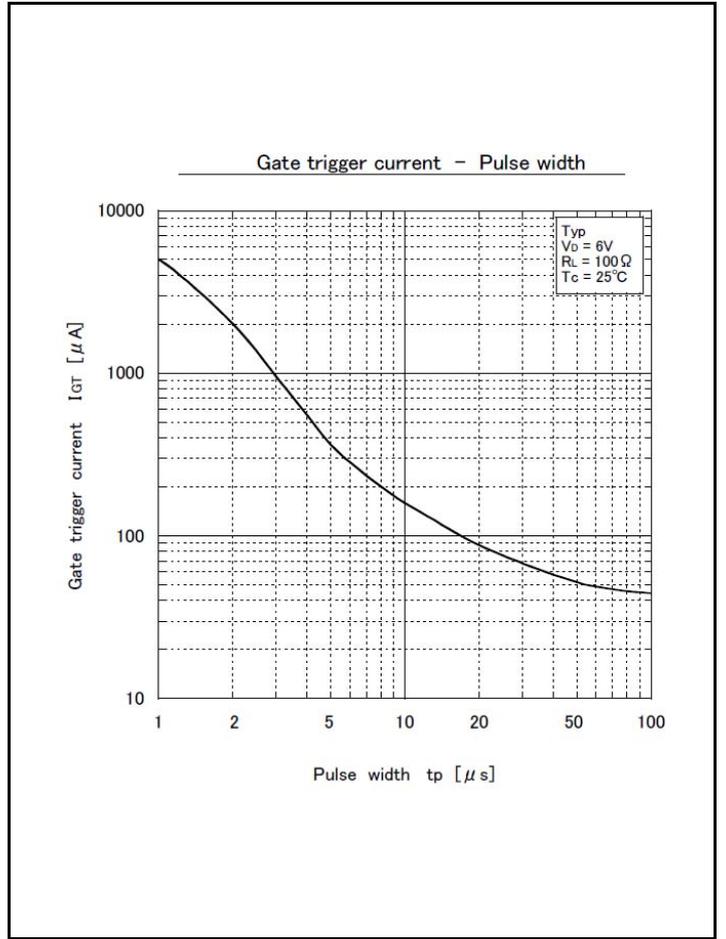
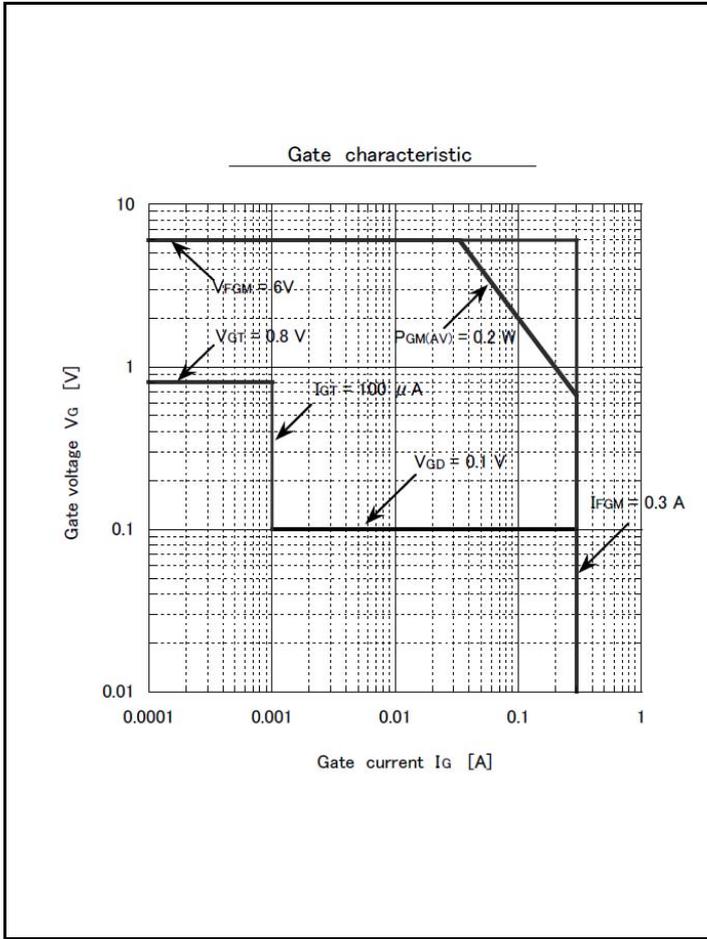


Derating curve $T_c - I_{T(AV)}$

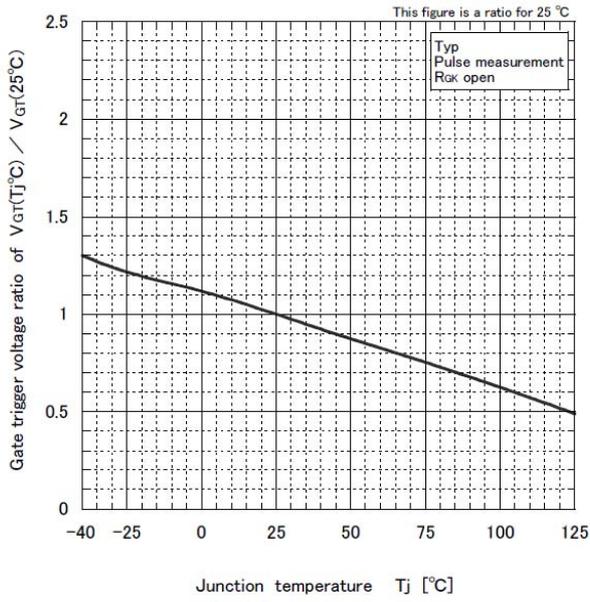


Surge on-state current capability

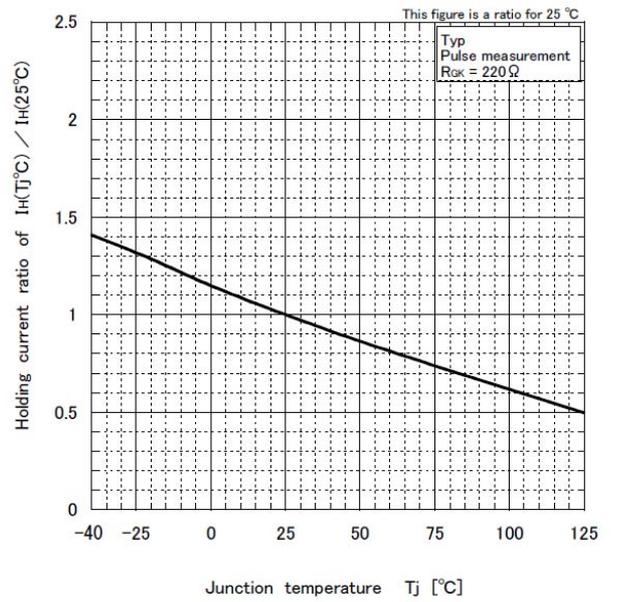




Gate trigger voltage - Junction temperature

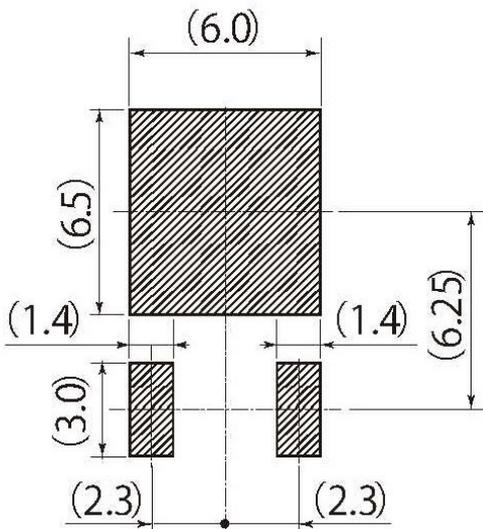
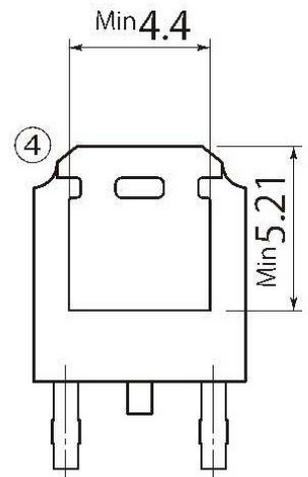
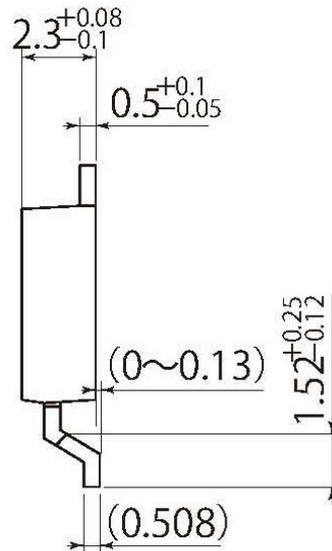
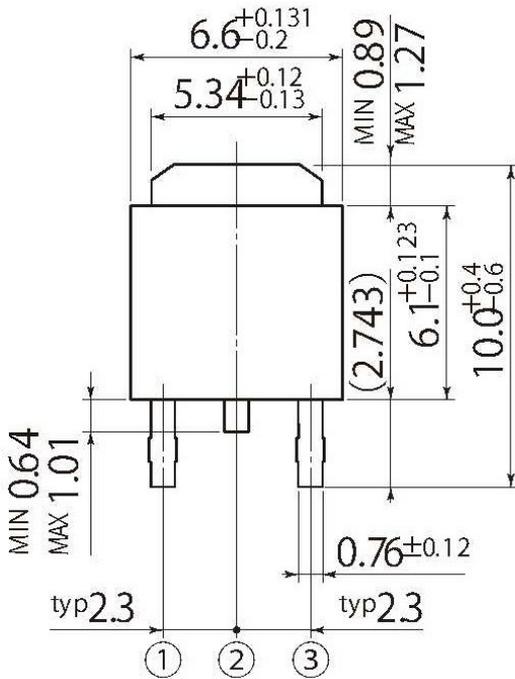


Holding current - Junction temperature



G2

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



Referential Soldering Pad

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

Notes

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