

# KC5FB60H

Thyristors  
600V, 5A

### Feature

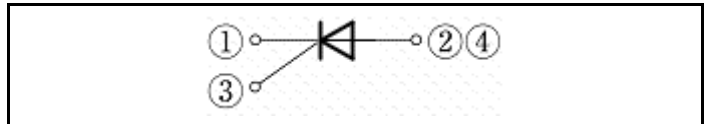
- Small SMD
- High Voltage
- High Sensitivity
- Pb free terminal
- RoHS:Yes

### 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 <sub>stg</sub>		-55 to 150	°C
Junction temperature	T <sub>j</sub>		-40 to 125	°C
Repetitive peak off-state voltage	V <sub>DRM</sub>	RGK=220Ω	600	V
Repetitive peak reverse voltage	V <sub>RRM</sub>	RGK=220Ω	600	V
Average on-state Current	I <sub>T(AV)</sub>	T <sub>c</sub> =98°C, 60Hz sine wave, θ=180°	5	A
Peak surge on-state current	I <sub>TSM</sub>	T <sub>j</sub> =25°C, 60Hz sine wave, θ=180°, Non repetitive	90	A
Current squared time	I <sup>2</sup> t	T <sub>j</sub> =25°C, tp=8.3ms, Non repetitive	33.6	A <sup>2</sup> s
Peak gate dissipation	P <sub>FGM</sub>	f≥60Hz, Duty≤10%	2	W
Average gate dissipation	P <sub>FG(AV)</sub>		0.2	W
Peak gate forward current	I <sub>FGM</sub>	f=60Hz, Duty≤10%	0.3	A
Peak gate reverse voltage	V <sub>RGM</sub>		6	V
Critical rate of rise of on-state current	di/dt		50	A/μs

\* : See the original Specifications

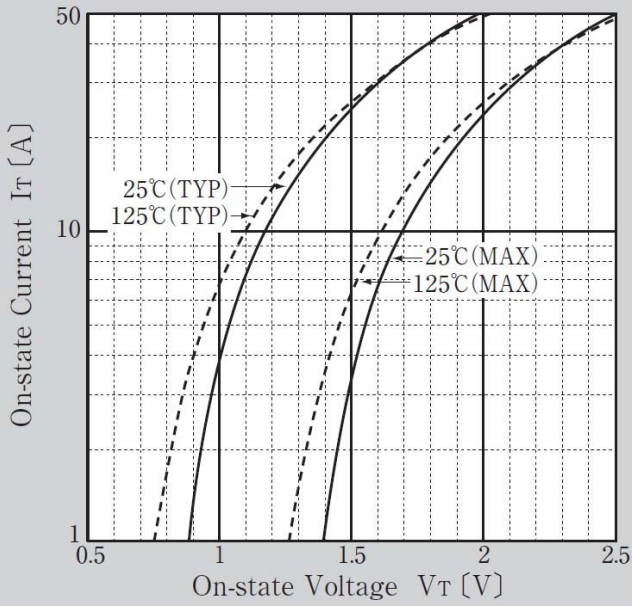
**Electrical Characteristics** (unless otherwise specified : Tc=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Repetitive off-state current	$I_{DRM}$	VD=600V, RGK=220Ω, Pulse measurement			10	μA
Repetitive reverse current	$I_{RRM}$	VR=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			0.8	V
Gate trigger current	$I_{GT}$	VD=6V, RL=100Ω	1		100	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			3	°C/W

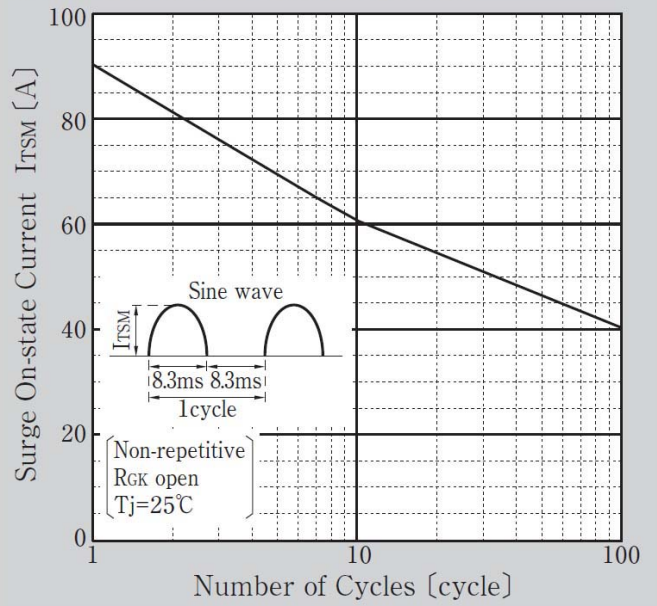
※ :See the original Specifications

# CHARACTERISTIC DIAGRAMS

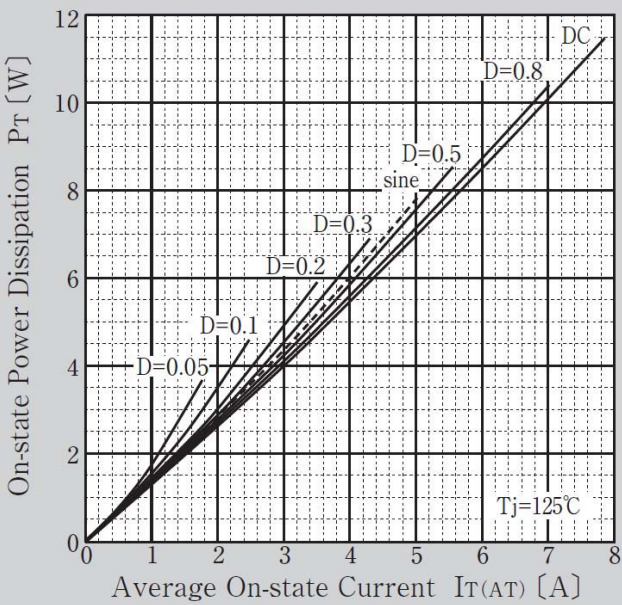
### On-state Voltage vs On-state Current



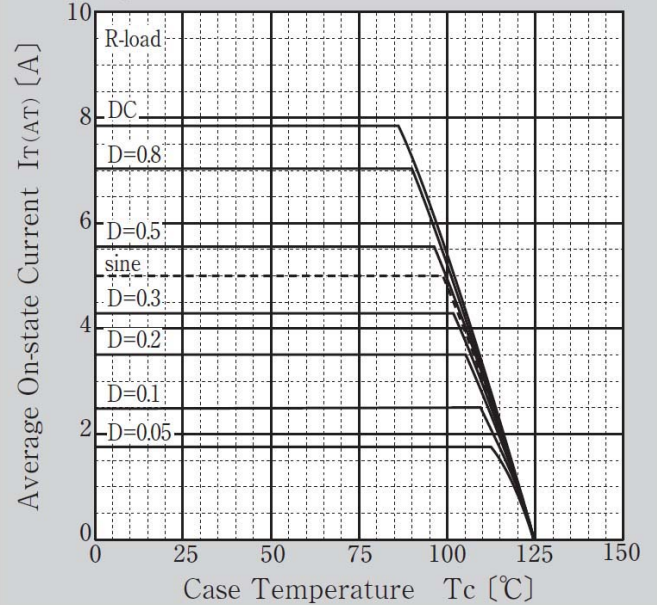
### Surge On-state Current Capability

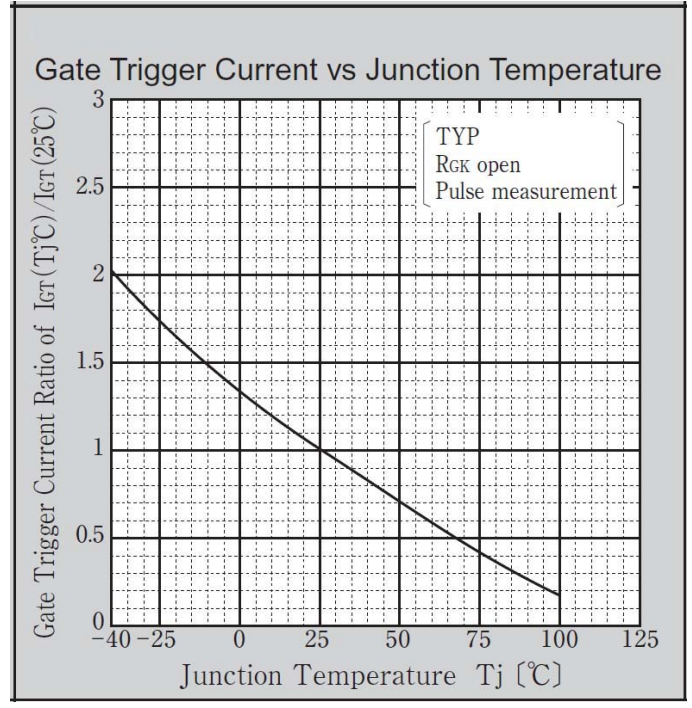
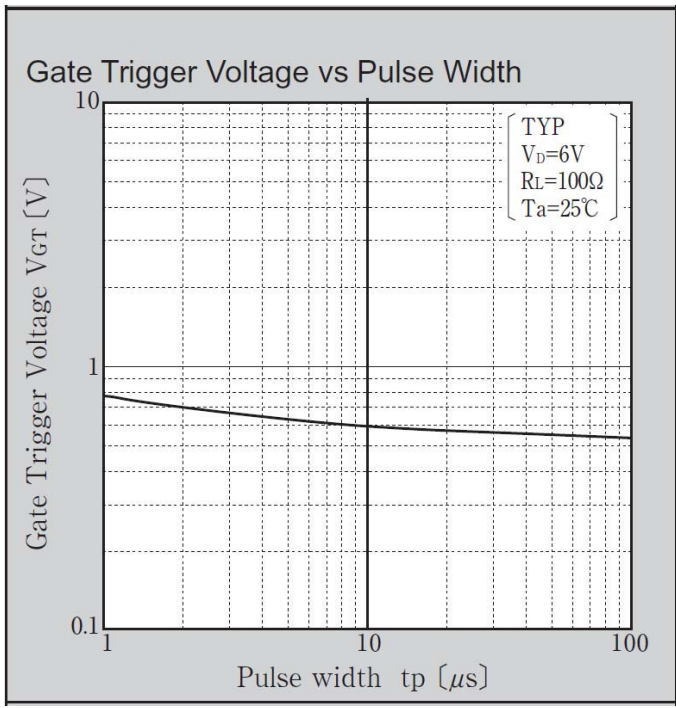
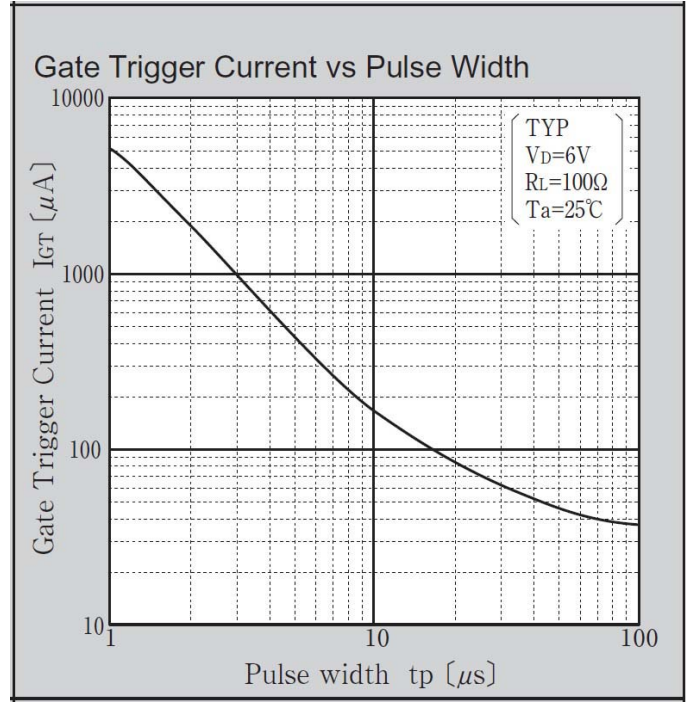
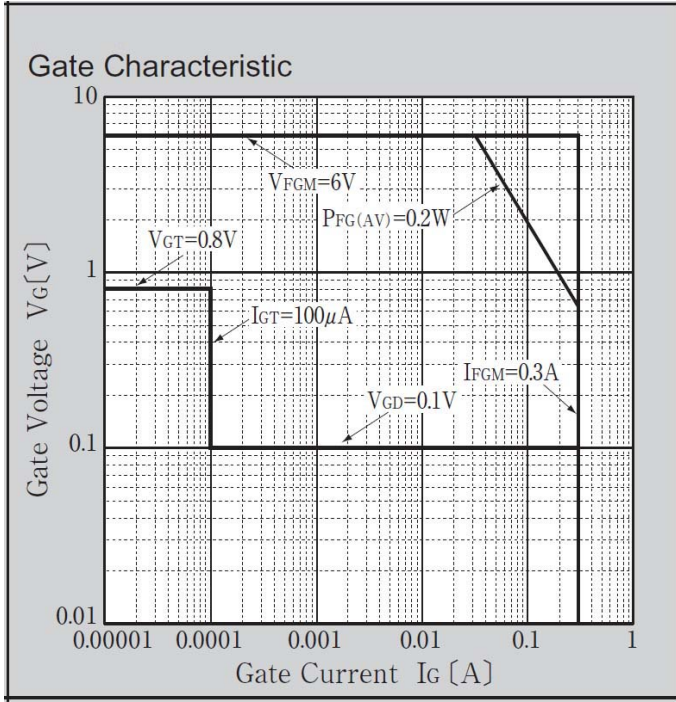


### On-state Power Dissipation

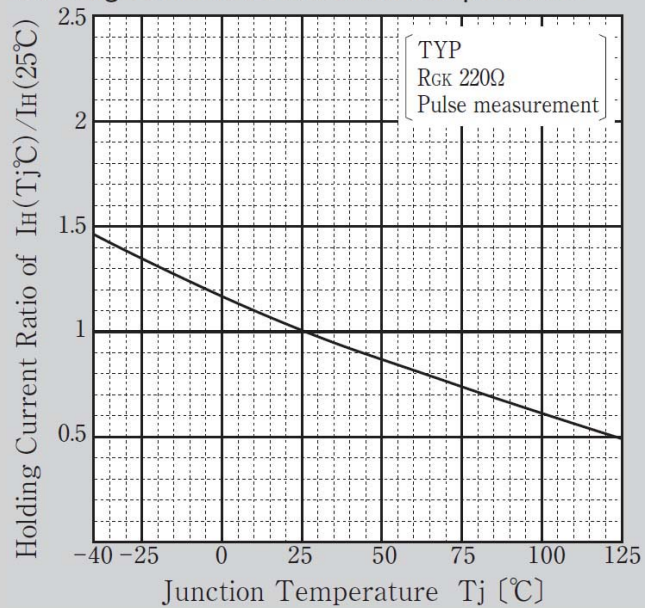


### Derating Curve $T_c$ - $I_{T(AV)}$

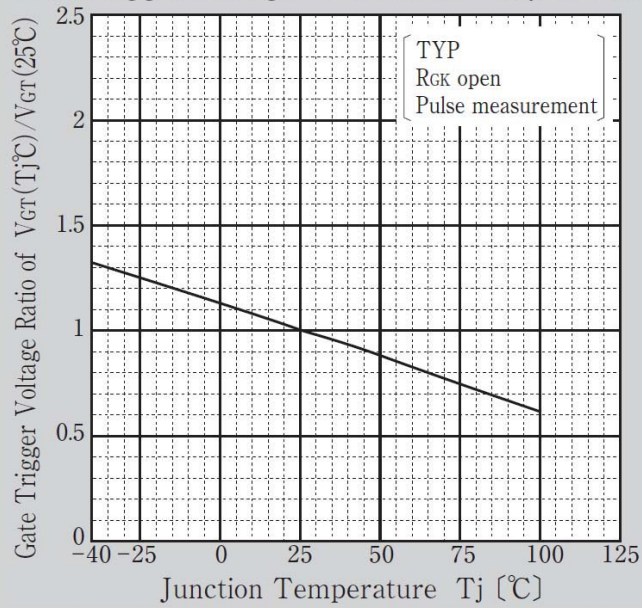




Holding Current vs Junction Temperature

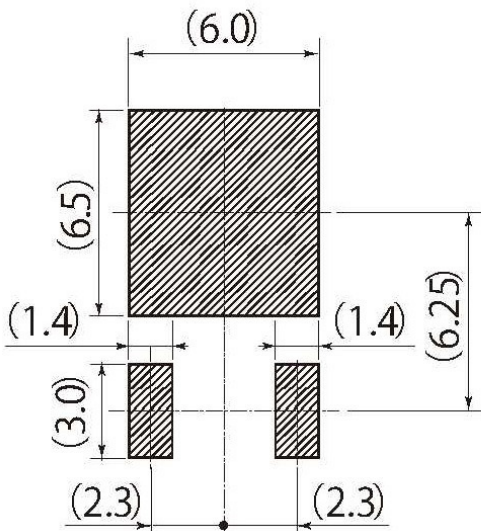
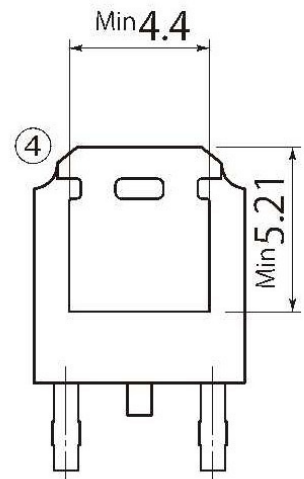
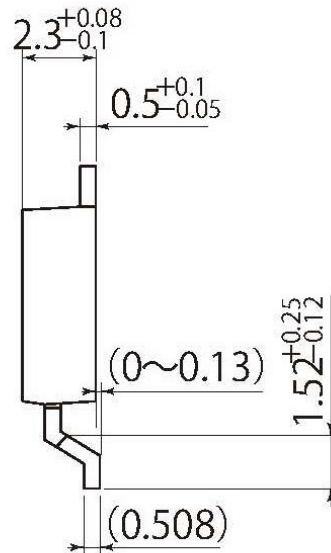
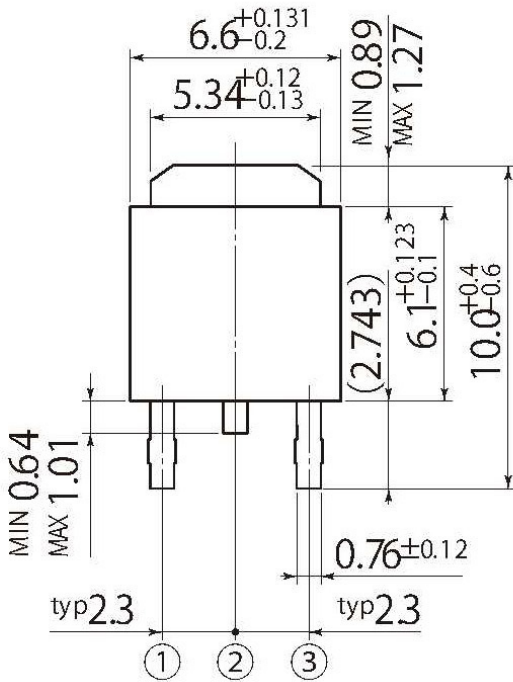


Gate Trigger Voltage vs Junction Temperature



G2

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



Referential Soldering Pad

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

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