KC5FB60H

Thyristors
600V, 5A

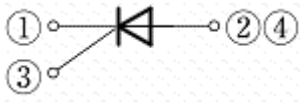
Feature

- 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℃)

Item	Symbol	Conditions	Ratings	Unit
Storage temperrature	T_{stg}		-55 to 150	℃
Junction temperature	Tj		-40 to 125	℃
Repetitive peak off-state voltage	V_{DRM}	RGK=220Ω	600	V
Repetitive peak reverse voltage	V_{RRM}	RGK=220Ω	600	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

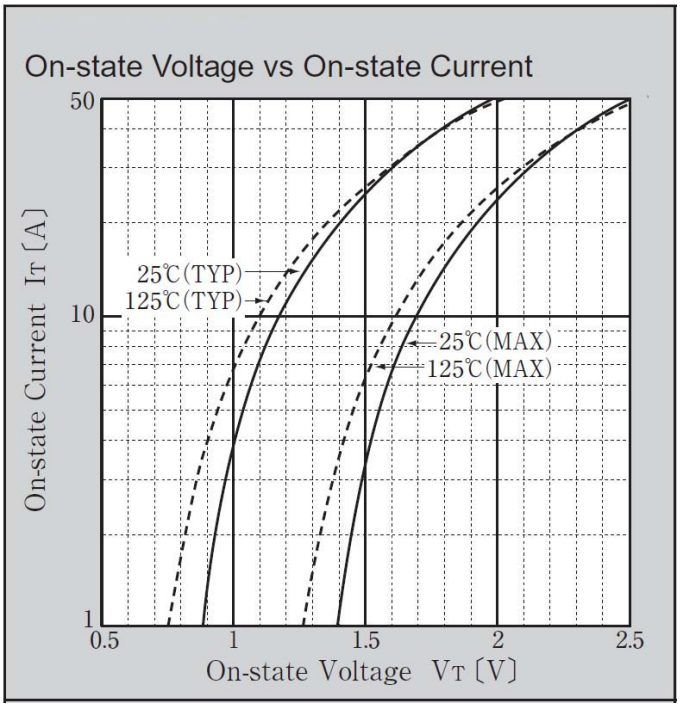
Electrical Characteristics (unless otherwise specified : Tc=25°C)

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

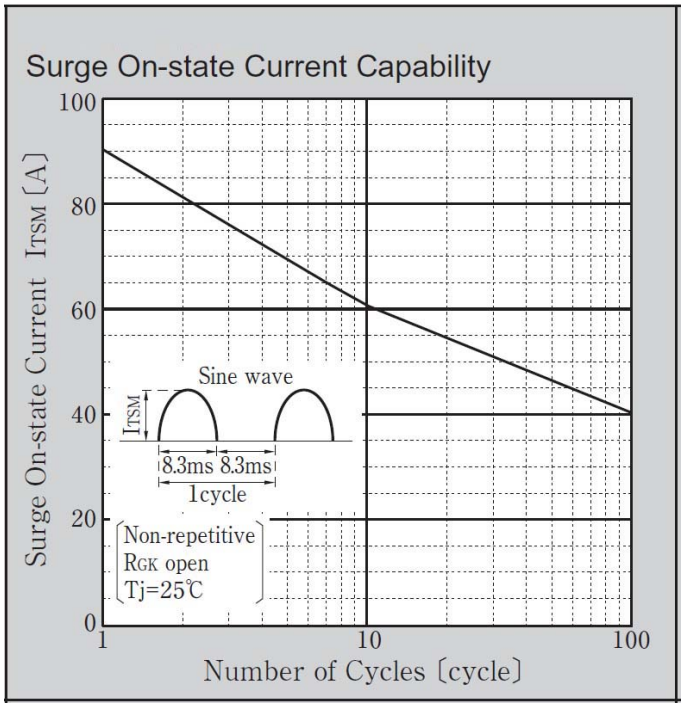
※ :See the original Specifications

CHARACTERISTIC DIAGRAMS

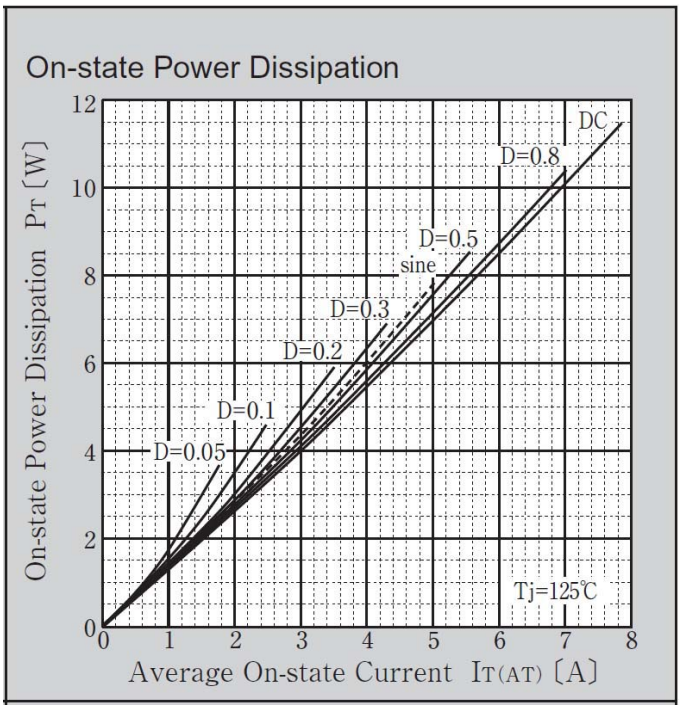
On-state Voltage vs On-state Current



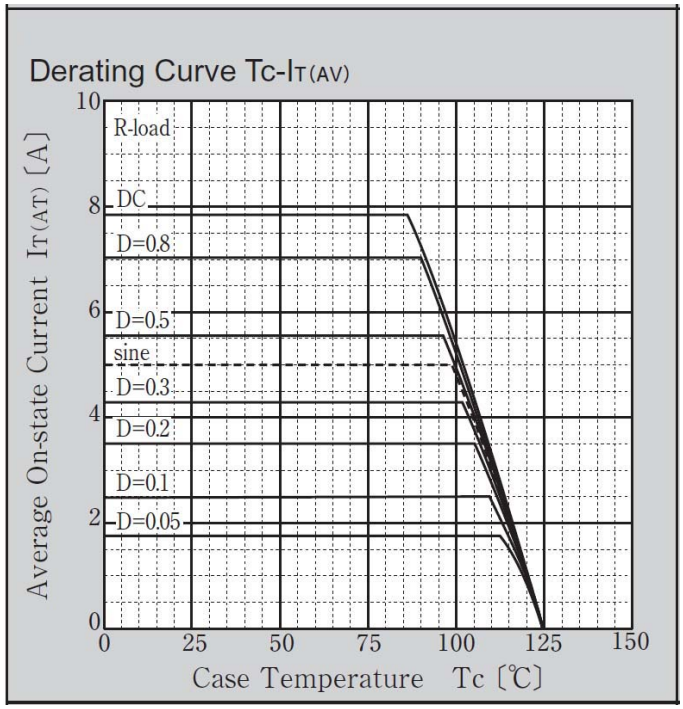
Surge On-state Current Capability



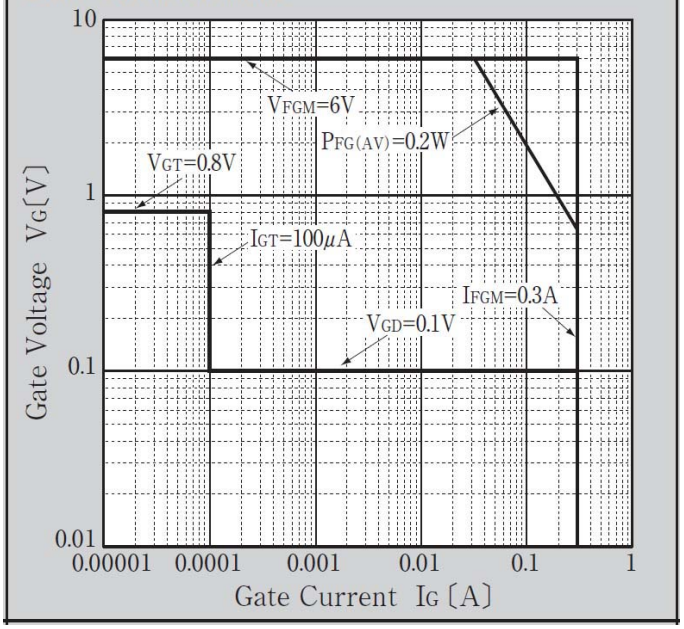
On-state Power Dissipation



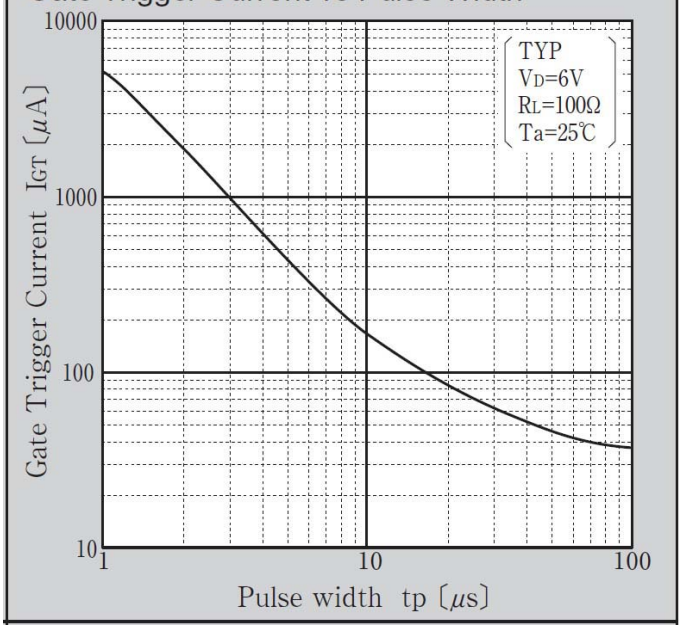
Derating Curve Tc-IT(AV)



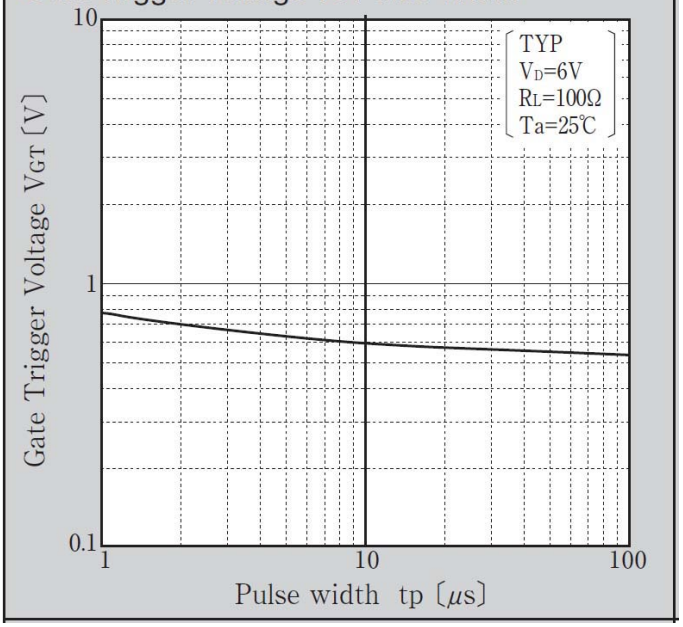
Gate Characteristic



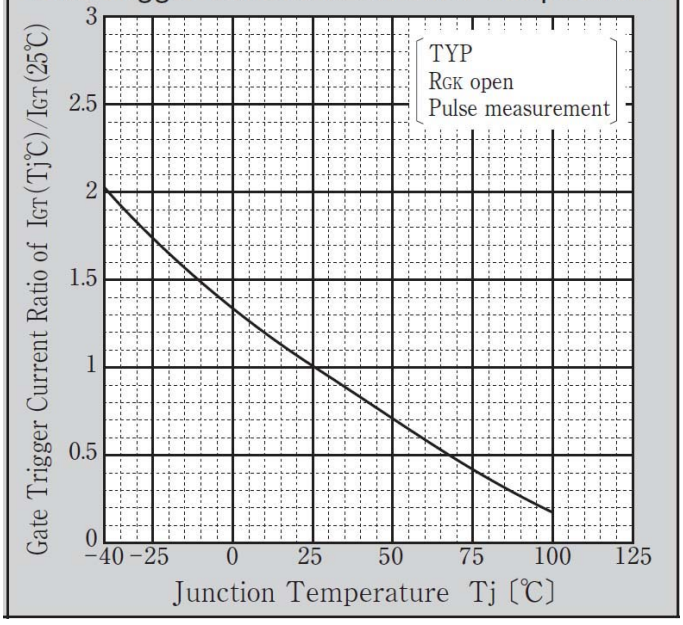
Gate Trigger Current vs Pulse Width

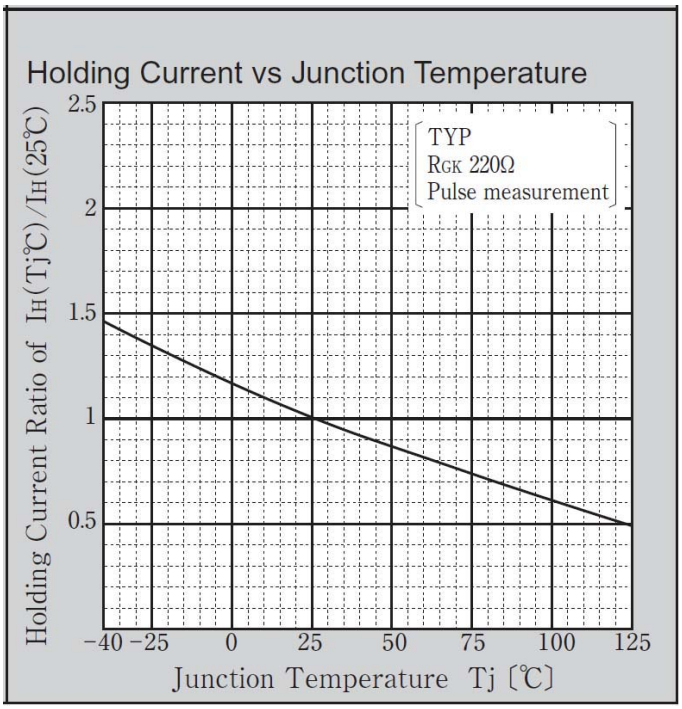


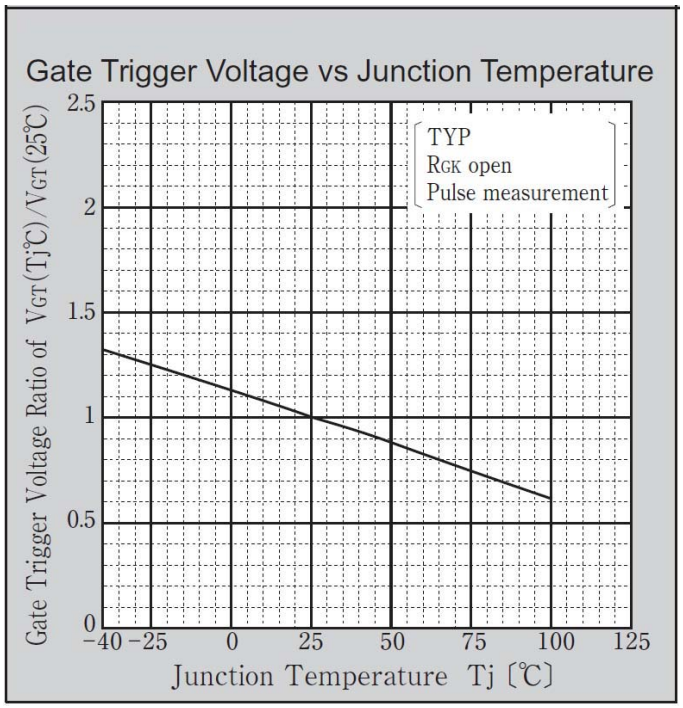
Gate Trigger Voltage vs Pulse Width



Gate Trigger Current vs Junction Temperature




Holding Current vs Junction Temperature
Holding Current Ratio of IH(Tj℃)/IH(25℃)
2.5
2
1.5
1
0.5
TYP
RGK 220Ω
Pulse measurement
−40 −25 0 25 50 75 100 125
Junction Temperature Tj〔℃〕

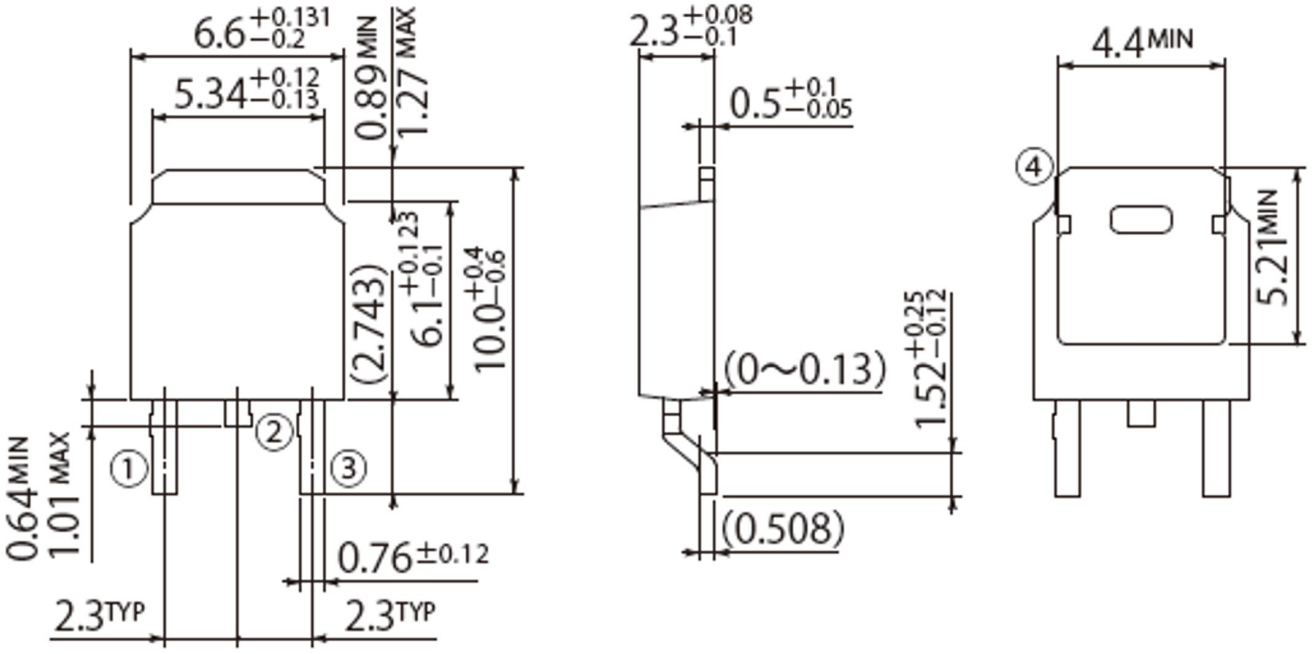

Gate Trigger Voltage vs Junction Temperature
Gate Trigger Voltage Ratio of VGT(Tj℃)/VGT(25℃)
2.5
2
1.5
1
0.5
0
TYP
RGK open
Pulse measurement
−40 −25 0 25 50 75 100 125
Junction Temperature Tj〔℃〕

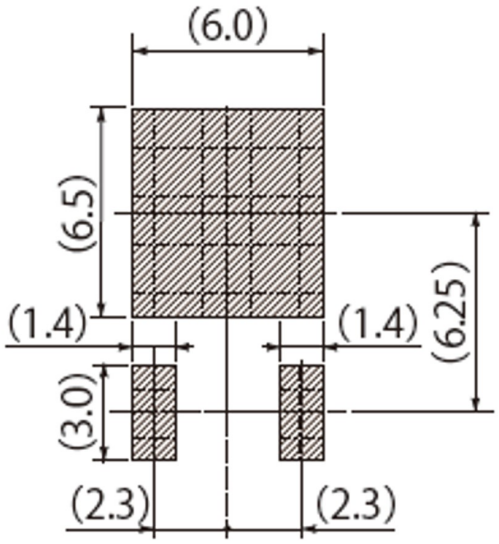
Outline Dimensions

unit:mm

G2

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





Referential Soldering Pad

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