

# KC5FB60HRT

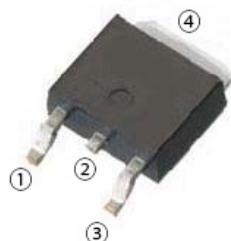
Thyristors  
600V, 5A

## Feature

- Small SMD
- High Voltage
- High Sensitivity
- $T_j=150^\circ\text{C}$
- 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 : $T_c=25^\circ\text{C}$ )

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	$V_{DRM}$	$RGK=220\Omega$	600	V
Repetitive peak reverse voltage	$V_{RRM}$	(not guaranteed)	-	V
Average on-state Current	$I_T(\text{AV})$	$T_c=123^\circ\text{C}$ , 60Hz sine wave, $\theta=180^\circ$	5	A
Peak surge on-state current	$I_{TSM}$	$T_j=25^\circ\text{C}$ , 60Hz sine wave, $\theta=180^\circ$ , Non repetitive	90	A
Current squared time	$I^2t$	$T_j=25^\circ\text{C}$ , $tp=8.3\text{ms}$ , Non repetitive	33.6	$\text{A}^2\text{s}$
Peak gate dissipation	$P_{FGM}$	$f\geq60\text{Hz}$ , Duty $\leq 10\%$	2	W
Average gate dissipation	$P_{FG}(\text{AV})$		0.2	W
Peak gate forward current	$I_{FGM}$	$f=60\text{Hz}$ , Duty $\leq 10\%$	0.3	A
Peak gate reverse voltage	$V_{RGM}$		6	V
Critical rate of rise of on-state current	$di/dt$		50	$\text{A}/\mu\text{s}$

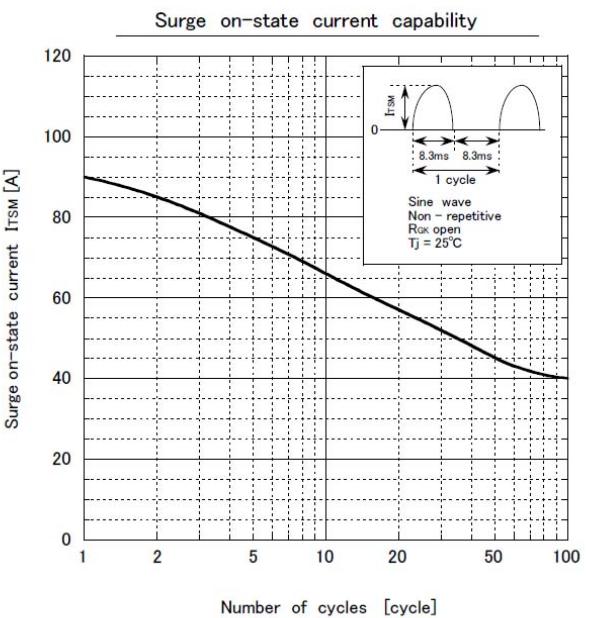
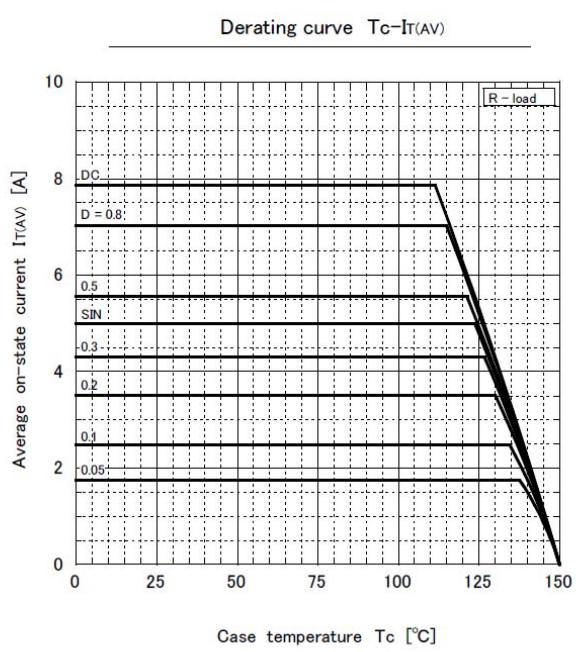
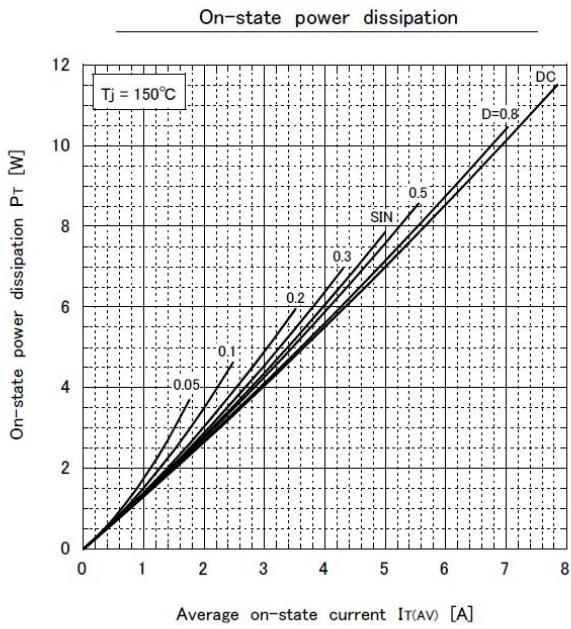
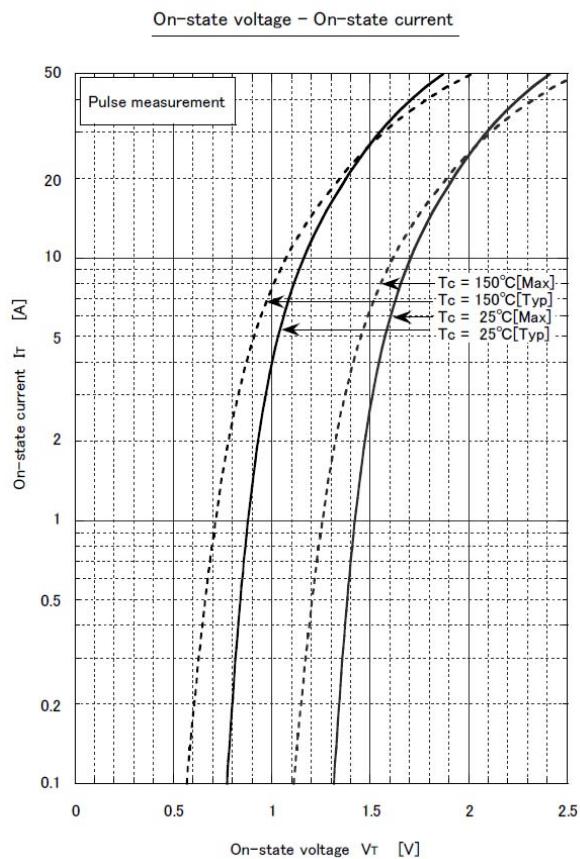
※ : See the original Specifications

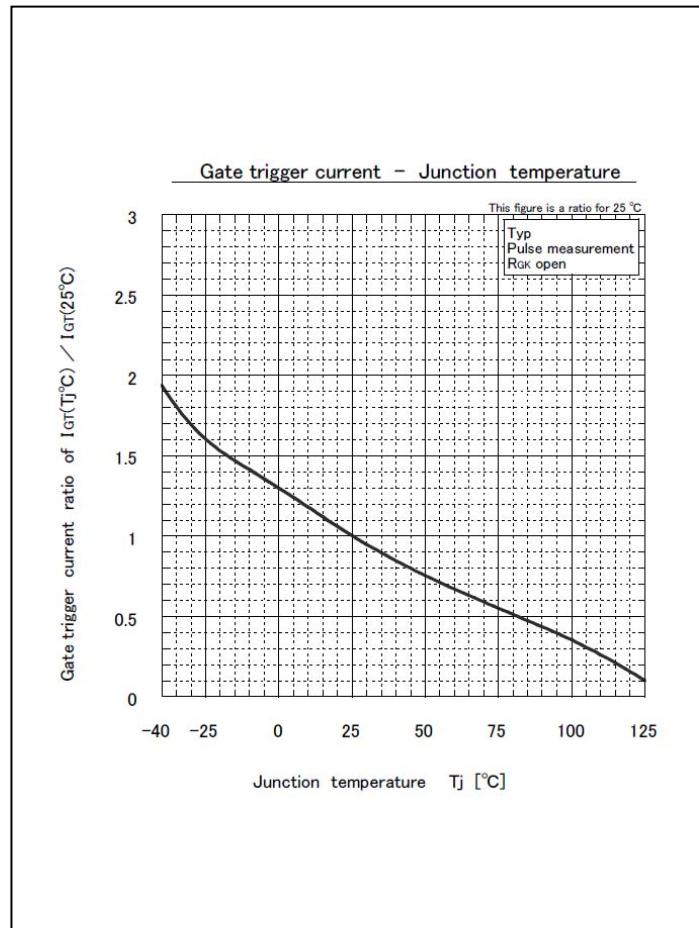
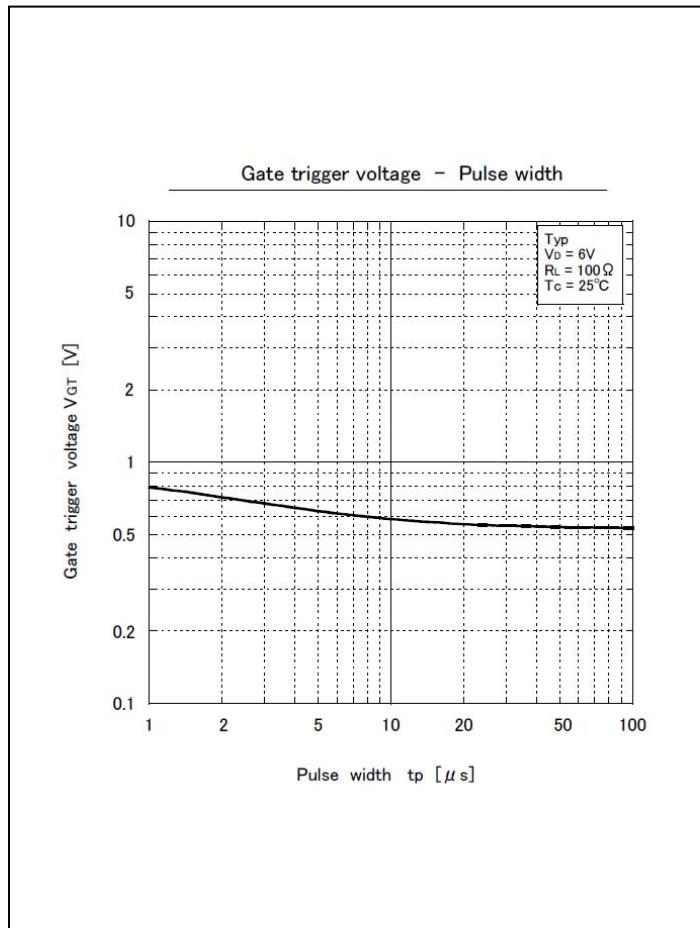
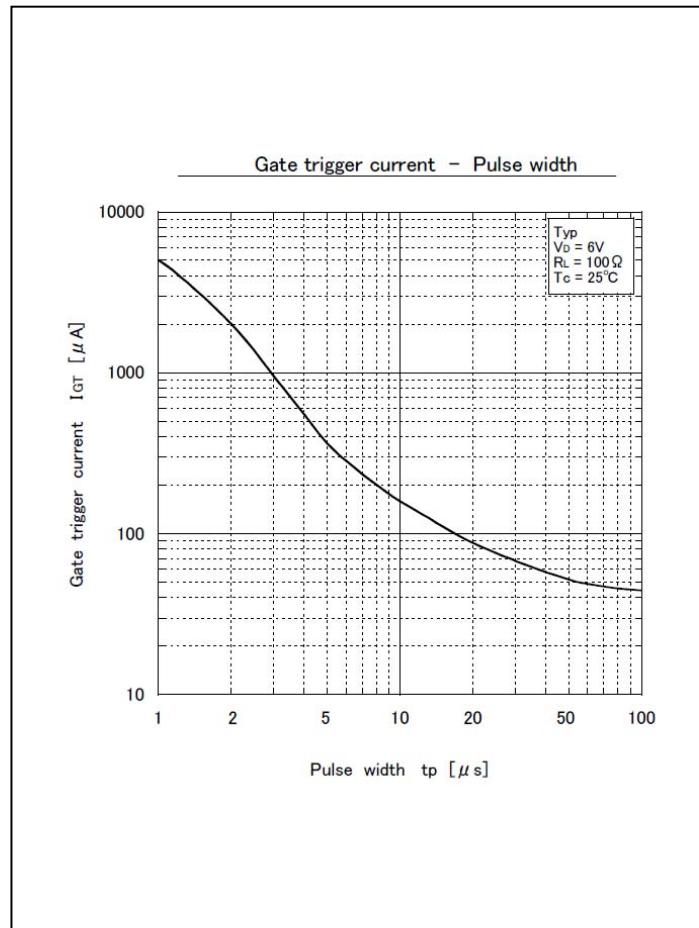
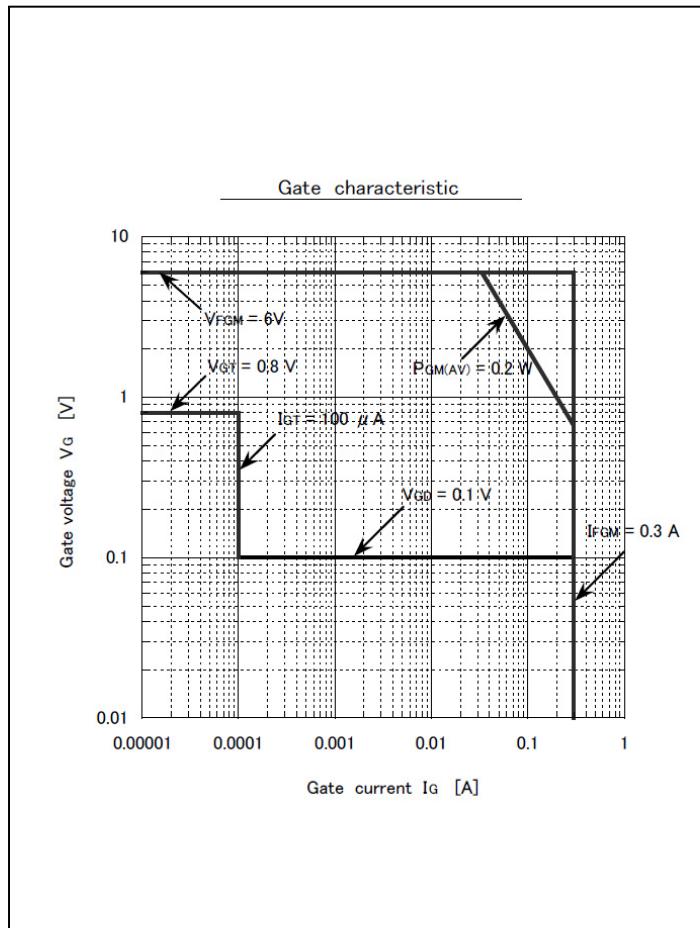
**Electrical Characteristics** (unless otherwise specified :  $T_c=25^\circ\text{C}$ )

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Repetitive off-state current	$I_{DRM}$	$VD=600V$ , $RGK=220\Omega$ , Pulse measurement			10	$\mu\text{A}$
On-state voltage	$V_T$	$IT=15\text{A}$ , Pulse measurement			1.8	$\text{V}$
Gate trigger voltage	$V_{GT}$	$VD=6\text{V}$ , $RL=100\Omega$ , Pulse measurement			0.8	$\text{V}$
Gate trigger current	$I_{GT}$	$VD=6\text{V}$ , $RL=100\Omega$ , Pulse measurement	1		100	$\mu\text{A}$
Gate non-trigger voltage	$V_{GD}$	$T_j=150^\circ\text{C}$ , $VD=1/2V_{DRM}$ , $RGK=220\Omega$	0.1			$\text{V}$
Holding Current	$I_H$	$IT=0.1\text{A}$ , $RGK=220\Omega$	0.2		5	$\text{mA}$
Thermal Resistance	$R_{th(j-c)}$	Junction to case			3	$^\circ\text{C}/\text{W}$

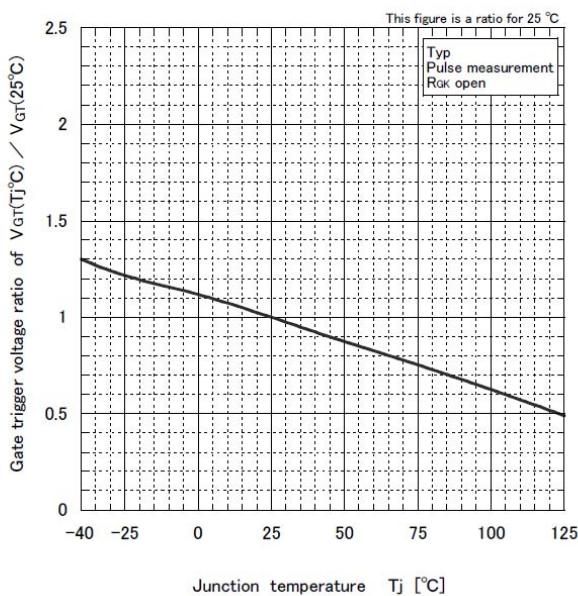
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## CHARACTERISTIC DIAGRAMS

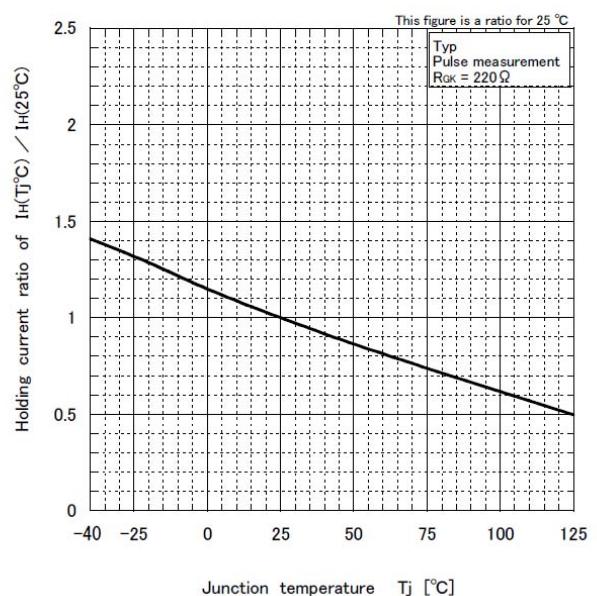




Gate trigger voltage – Junction temperature



Holding current – Junction temperature

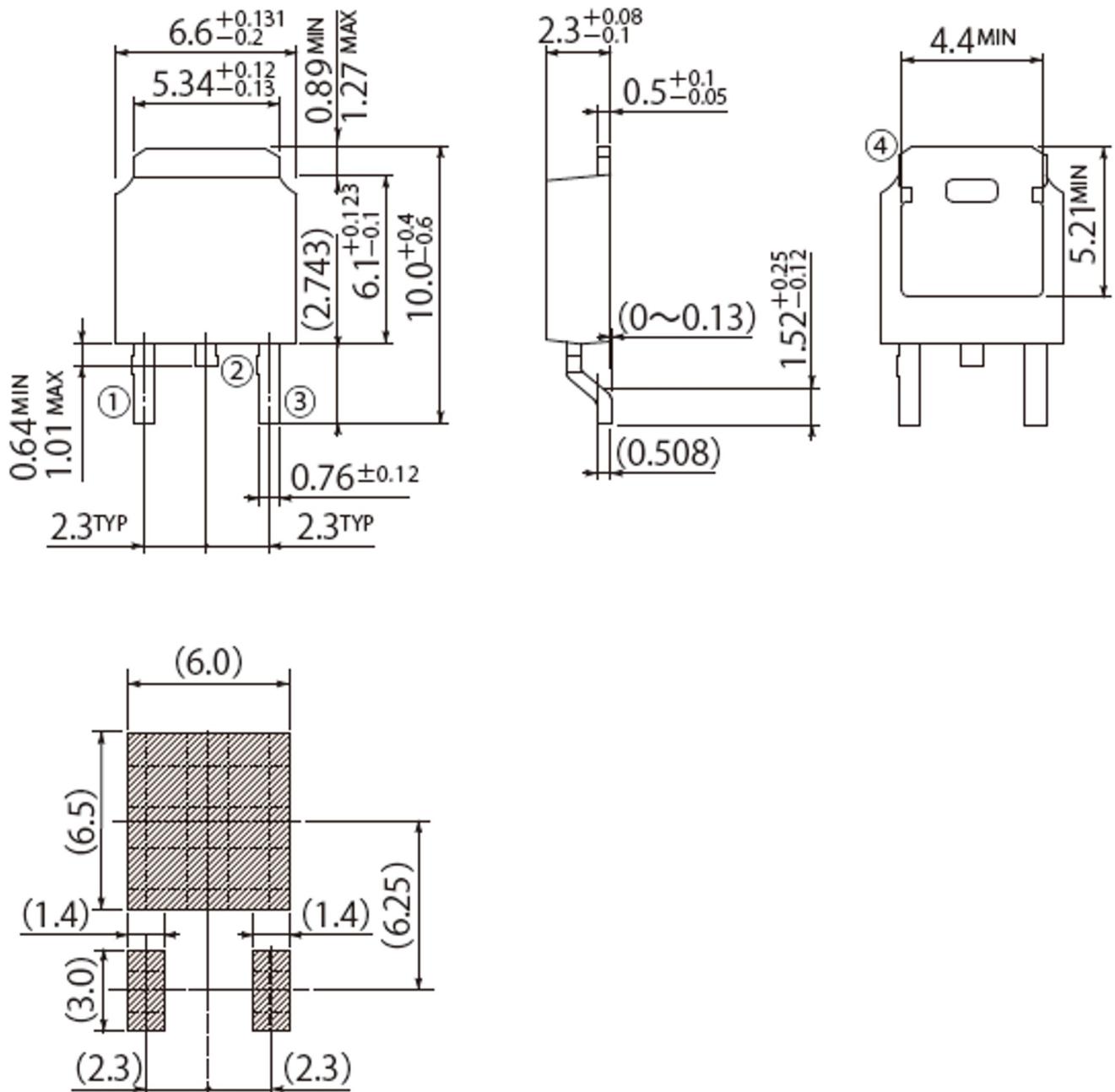


## Outline Dimensions

unit:mm

G2

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



## Referential Soldering Pad

## Notes

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### 【Specific applications】

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