

# KD3FB60

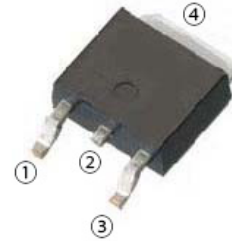
TRIACs  
600V, 3A

## Feature

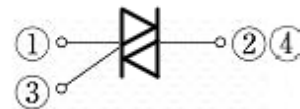
- Small SMD
- High voltage
- Tj=150°C
- Stable surge-on current capability
- Pb free terminal
- RoHS:Yes

## 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 150	°C
Repetitive peak off-state voltage	V <sub>DRM</sub>		600	V
Non-repetitive peak off-state voltage	V <sub>DSM</sub>	※	720	V
R.M.S. on-state current	I <sub>T(RMS)</sub>	Tc=133°C, commercial frequency, sine wave, θ=360°C	3	A
Surge on-state current	I <sub>TSM</sub>	Tj=25°C, 60Hz sine wave, Non-repetive 1 cycle peak ※	30	A
Current squared time	I <sup>2</sup> t	Tj=25°C, t=8.33ms, Non-repetitive	3.7	A <sup>2</sup> S
Critical rate of rise of on-state current	di/dt		50	A/μs
Peak gate dissipation	P <sub>GM</sub>	f=60Hz, Duty ≤ 10%	1.8	W
Average gate dissipation	P <sub>G(AV)</sub>		0.3	W
Peak gate current	I <sub>GM</sub>	f=60Hz, Duty ≤ 10%	0.3	A
Peak gate voltage	V <sub>GM</sub>		6	V

※ : See the original Specifications

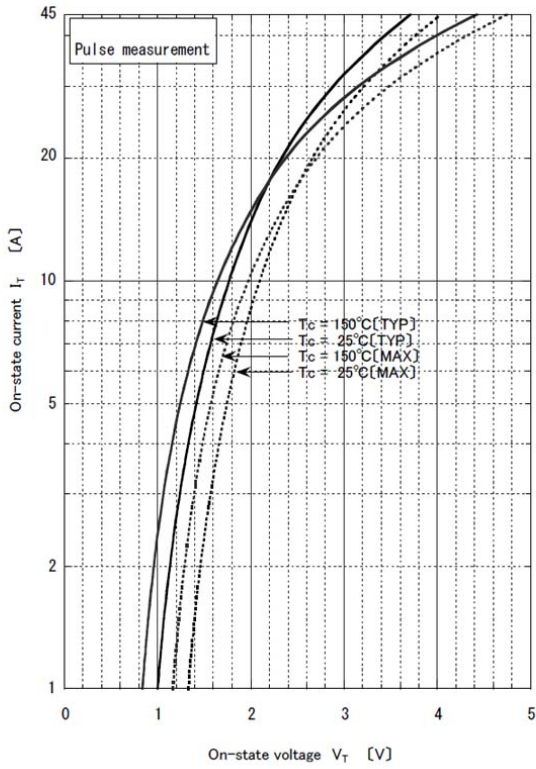
**Electrical Characteristics** (unless otherwise specified : Tc=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Off-state current	$I_{DRM}$	VD=600V, Pulse measurement			10	$\mu A$
On-state voltage	$V_{TM}$	ITM=4.5A, Pulse measurement			1.7	V
Gate trigger voltage	$V_{GT I}$	VD=6V, RL=10 $\Omega$ , T1-, T2+, G+			1.5	V
Gate trigger voltage	$V_{GT II}$	VD=6V, RL=10 $\Omega$ , T1-, T2+, G-			1.5	V
Gate trigger voltage	$V_{GT III}$	VD=6V, RL=10 $\Omega$ , T1+, T2-, G-			1.5	V
Gate trigger voltage	$V_{GT IV}$	VD=6V, RL=10 $\Omega$ , T1+, T2-, G+			- ※	V
Gate non-trigger voltage	$V_{GD}$	Tj=150°C, VD=1/2VDRM	0.1			V
Gate trigger current	$I_{GT I}$	VD=6V, RL=10 $\Omega$ , T1-, T2+, G+			15	mA
Gate trigger current	$I_{GT II}$	VD=6V, RL=10 $\Omega$ , T1-, T2+, G-			15	mA
Gate trigger current	$I_{GT III}$	VD=6V, RL=10 $\Omega$ , T1+, T2-, G-			15	mA
Gate trigger current	$I_{GT IV}$	VD=6V, RL=10 $\Omega$ , T1+, T2-, G+			- ※	mA
Latching current	$I_{L I}$	IG=0.1A, T1-, T2+, G+			100	mA
Latching current	$I_{L II}$	IG=0.1A, T1-, T2+, G-			100	mA
Latching current	$I_{L III}$	IG=0.1A, T1+, T2-, G-			100	mA
Latching current	$I_{L IV}$	IG=0.1A, T1+, T2-, G+			- ※	mA
Holding current	$I_H$	ITM=1A			100	mA
Critical rate of rise of commutating voltage	(dv/dt) <sub>c</sub>	Tj=150°C, VD=2/3VDRM, (di/dt) <sub>c</sub> =-1.5A/ms	1			V/ $\mu s$
Thermal resistance	Rth(j-c)	Junction to case with heatsink			3	°C/W

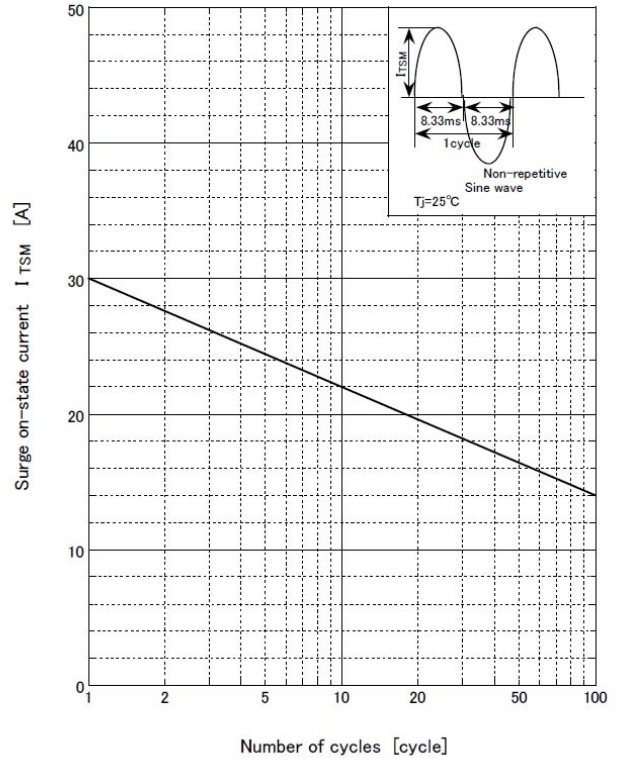
※ : See the original Specifications

# CHARACTERISTIC DIAGRAMS

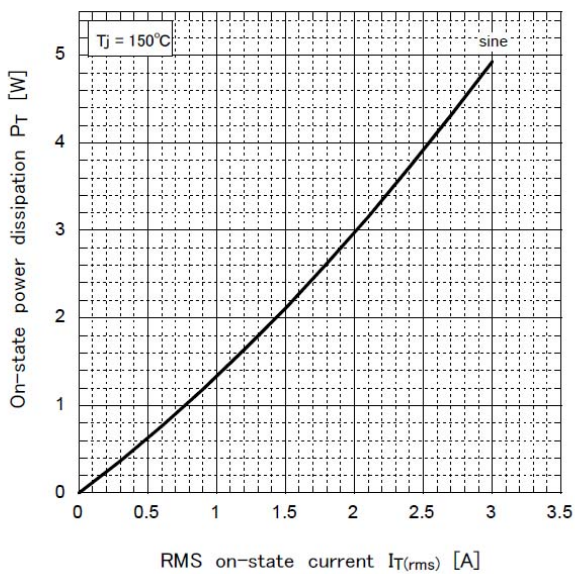
On-state voltage - On-state current



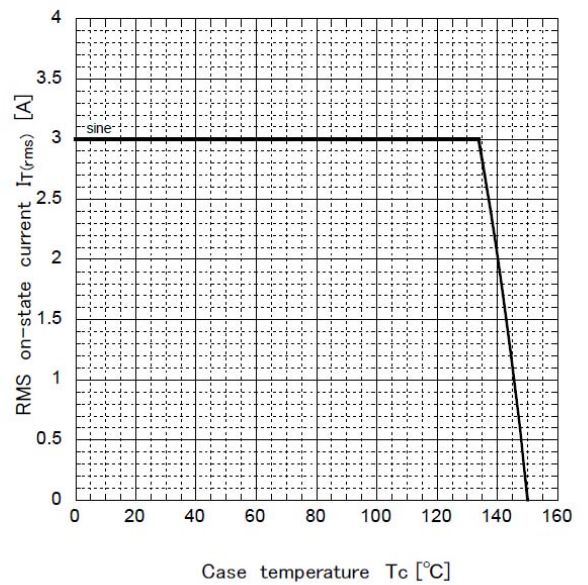
Surge on-state current capability

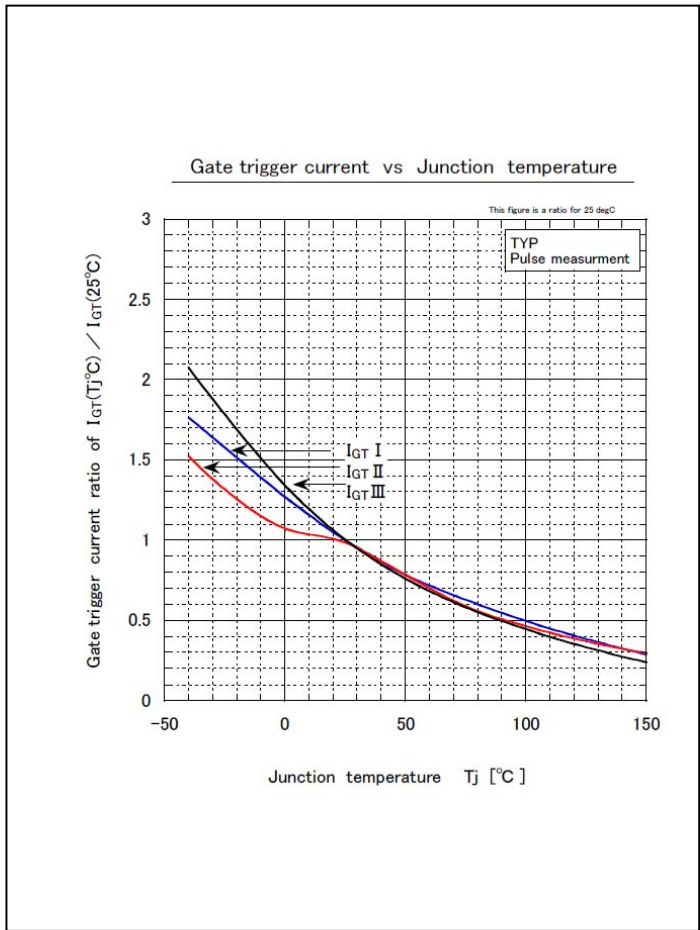
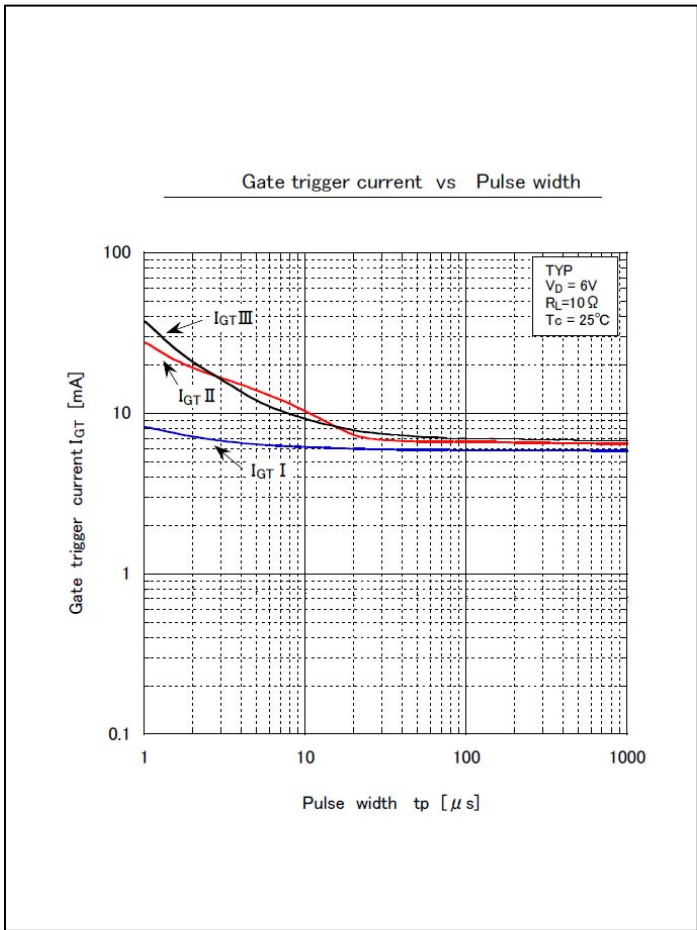
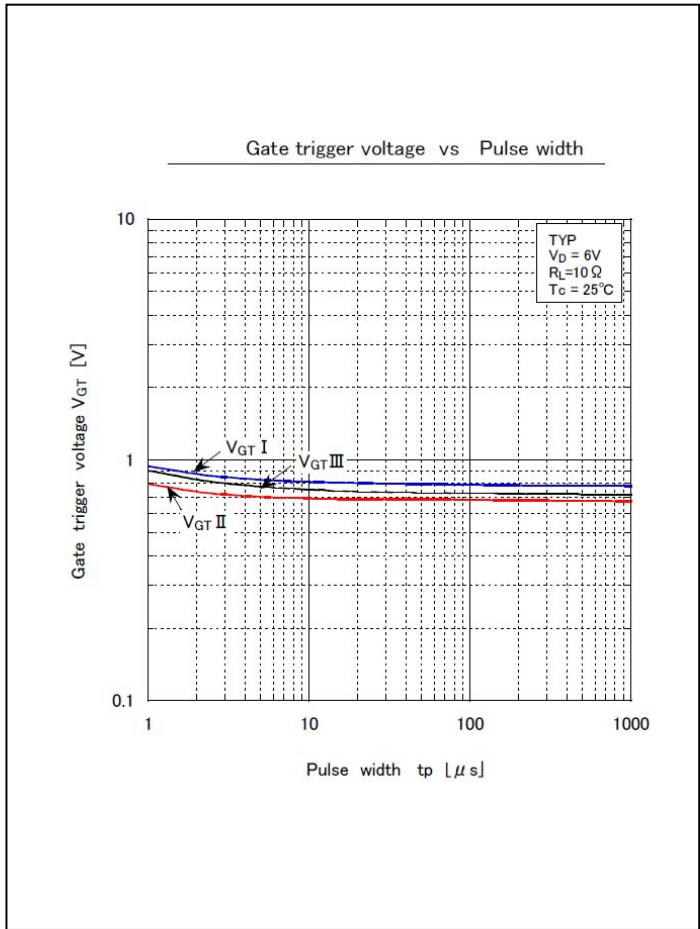
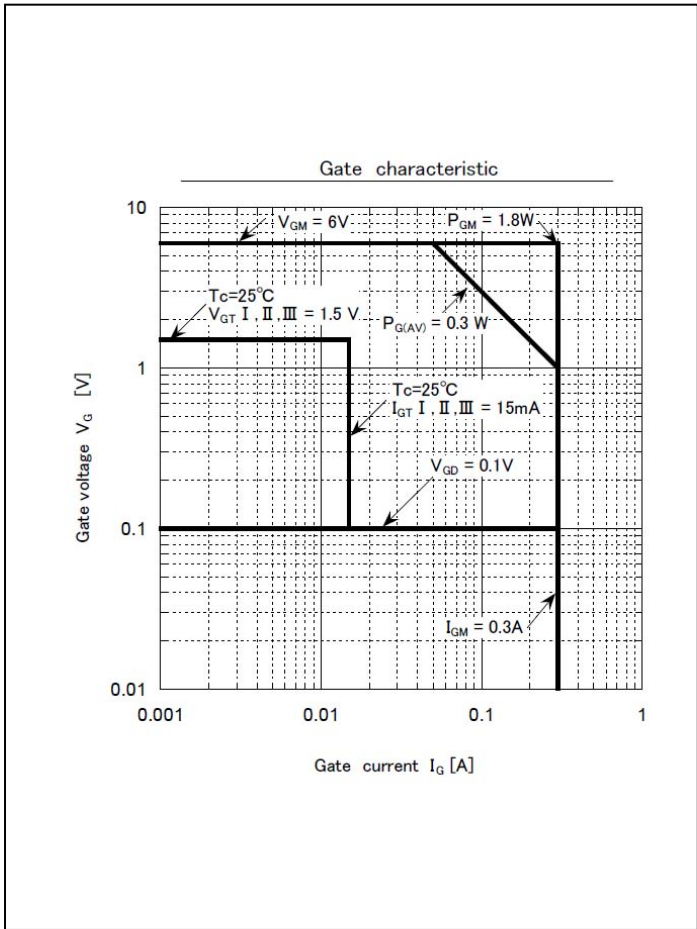


On-state power dissipation

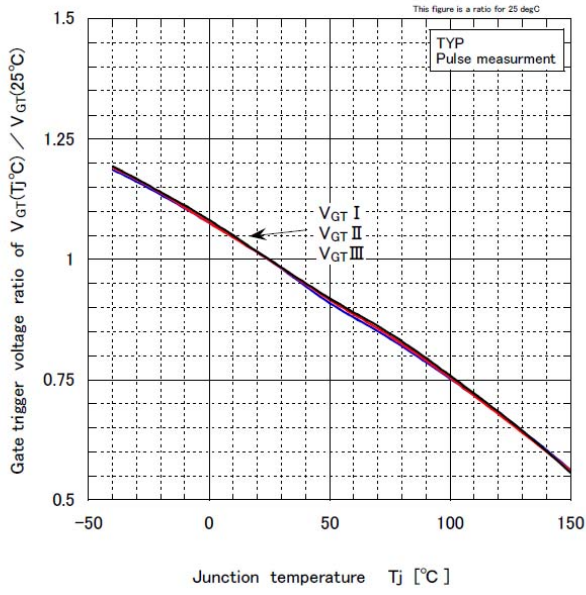


Derating curve  $T_c$ - $I_{T(rms)}$

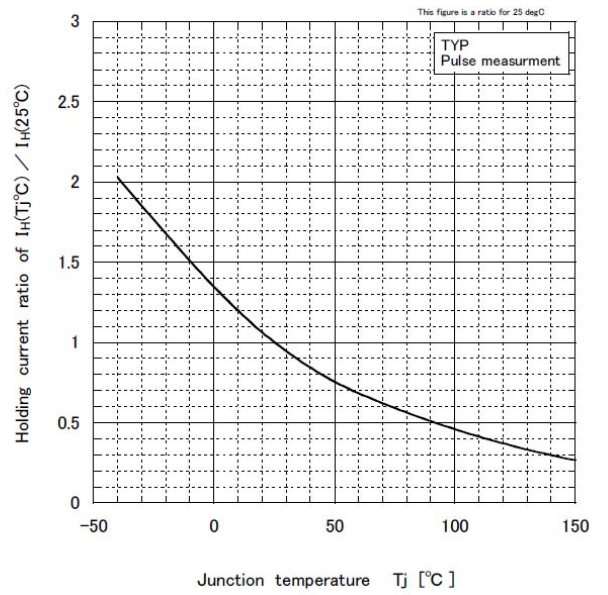




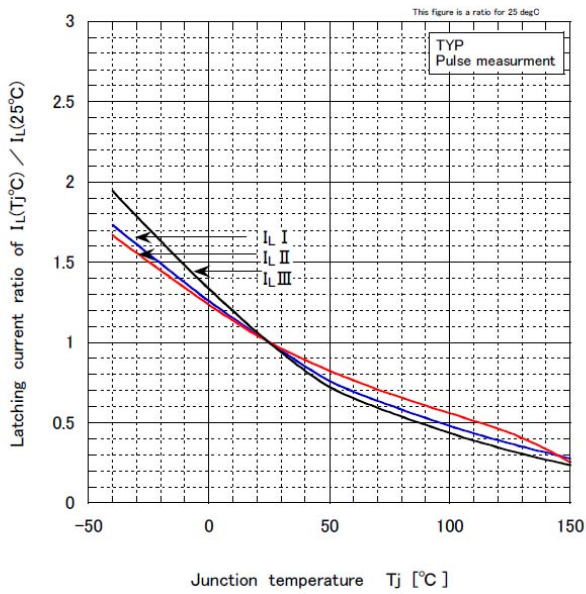
Gate trigger voltage vs Junction temperature



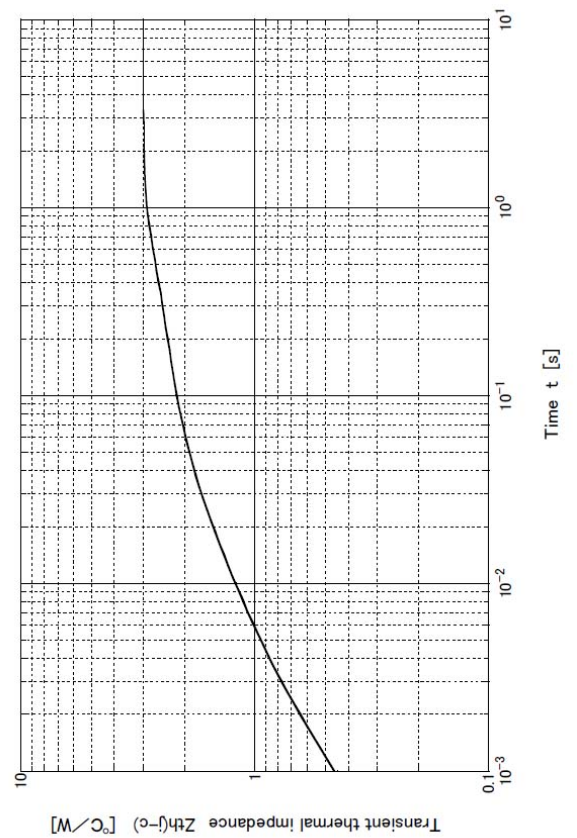
Holding current vs Junction temperature



Latching current vs Junction temperature



Transient thermal impedance

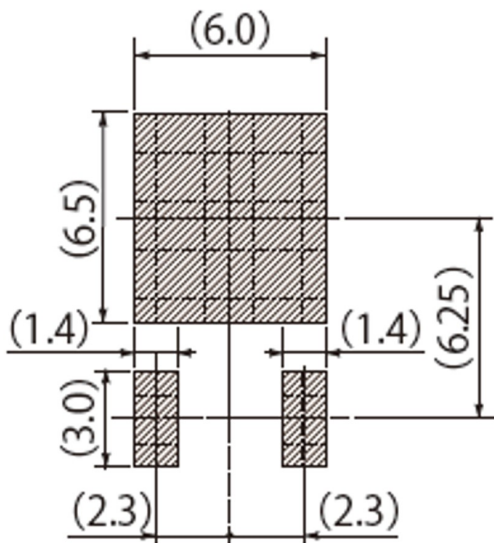
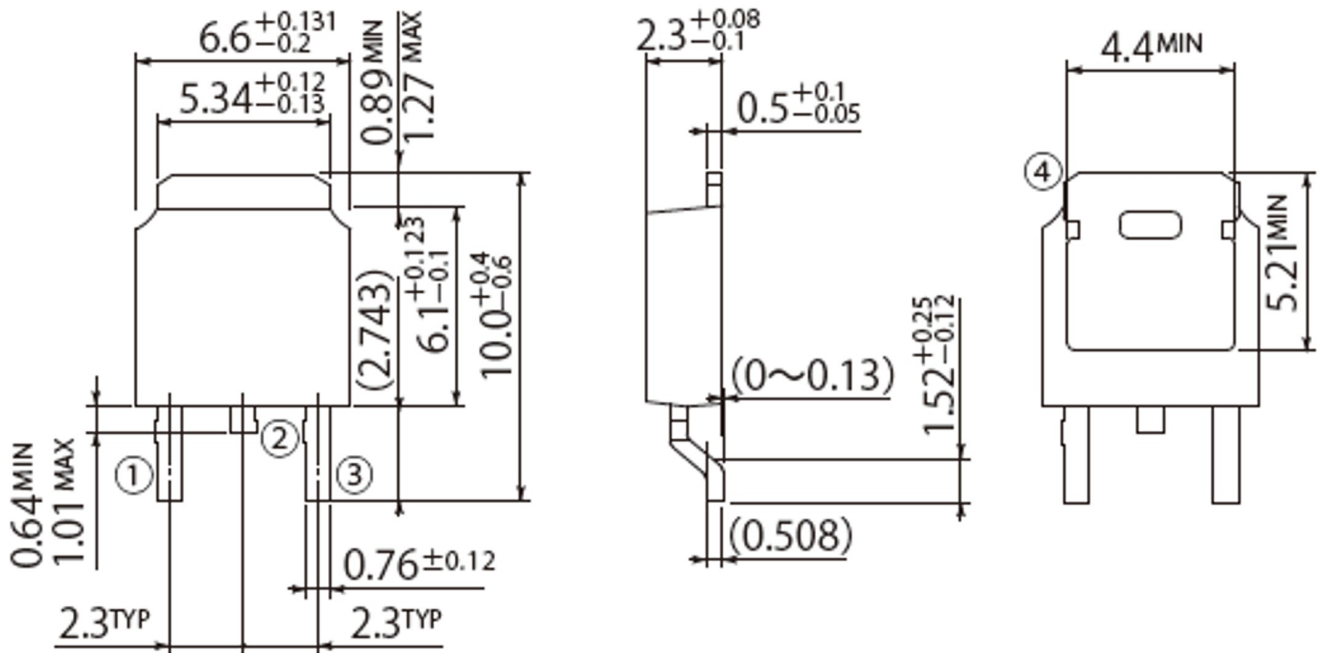


# Outline Dimensions

unit:mm

G2

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



Referential Soldering Pad

## Notes

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