

KD3FB60

TRIACs

600V, 3A

Feature

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

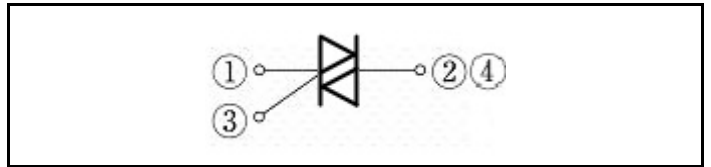
OUTLINE

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 _{stg}		-55 to 150	°C
Junction temperature	T _j		-40 to 150	°C
Repetitive peak off-state voltage	V _{DRM}		600	V
Non-repetitive peak off-state voltage	V _{DSM}	※	720	V
R.M.S. on-state current	I _{T(RMS)}	T _c =133°C, commercial frequency, sine wave, θ=360°C	3	A
Surge on-state current	I _{TSM}	T _j =25°C, 60Hz sine wave, Non-repetive 1 cycle peak ※	30	A
Current squared time	I ² t	T _j =25°C, t=8.33ms, Non-repetitive	3.7	A ² S
Critical rate of rise of on-state current	di/dt		50	A/μs
Peak gate dissipation	P _{GM}	f=60Hz, Duty ≤10%	1.8	W
Average gate dissipation	P _{G(AV)}		0.3	W
Peak gate current	I _{GM}	f=60Hz, Duty ≤10%	0.3	A
Peak gate voltage	V _{GM}		6	V

※ : See the original Specifications

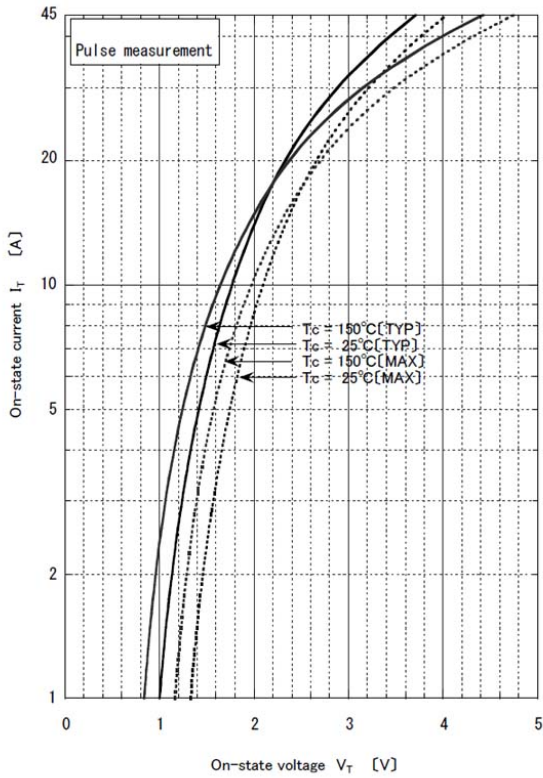
Electrical Characteristics (unless otherwise specified : T_c=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Off-state current	I _{DRM}	VD=600V, Pulse measurement			10	μA
On-state voltage	V _{TM}	ITM=4.5A, Pulse measurement			1.7	V
Gate trigger voltage	V _{GTI}	VD=6V, RL=10Ω, T1-, T2+, G+			1.5	V
Gate trigger voltage	V _{GTH}	VD=6V, RL=10Ω, T1-, T2+, G-			1.5	V
Gate trigger voltage	V _{GTH}	VD=6V, RL=10Ω, T1+, T2-, G-			1.5	V
Gate trigger voltage	V _{GTV}	VD=6V, RL=10Ω, T1+, T2-, G+			- *	V
Gate non-trigger voltage	V _{GD}	T _j =150°C, VD=1/2V _{DRM}	0.1			V
Gate trigger current	I _{GTI}	VD=6V, RL=10Ω, T1-, T2+, G+			15	mA
Gate trigger current	I _{GTH}	VD=6V, RL=10Ω, T1-, T2+, G-			15	mA
Gate trigger current	I _{GTH}	VD=6V, RL=10Ω, T1+, T2-, G-			15	mA
Gate trigger current	I _{GTV}	VD=6V, RL=10Ω, T1+, T2-, G+			- *	mA
Latching current	I _{LI}	IG=0.1A, T1-, T2+, G+			100	mA
Latching current	I _{LII}	IG=0.1A, T1-, T2+, G-			100	mA
Latching current	I _{LIII}	IG=0.1A, T1+, T2-, G-			100	mA
Latching current	I _{LIV}	IG=0.1A, T1+, T2-, G+			- *	mA
Holding current	I _H	ITM=1A			100	mA
Critical rate of rise of commutating voltage	(dv/dt) _c	T _j =150°C, VD=2/3V _{DRM} , (di/dt) _c =-1.5A/ms	1			V/μs
Thermal resistance	R _{th(j-c)}	Junction to case with heatsink			3	°C/W

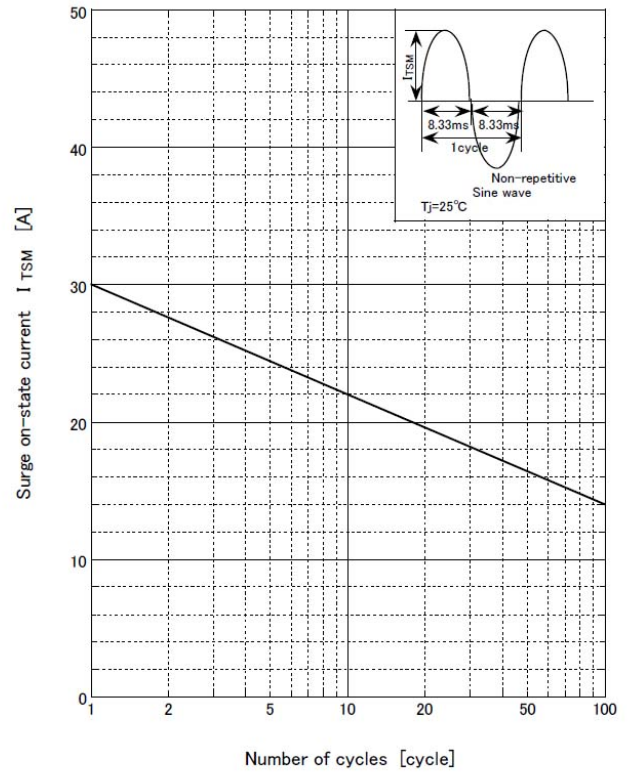
* : See the original Specifications

CHARACTERISTIC DIAGRAMS

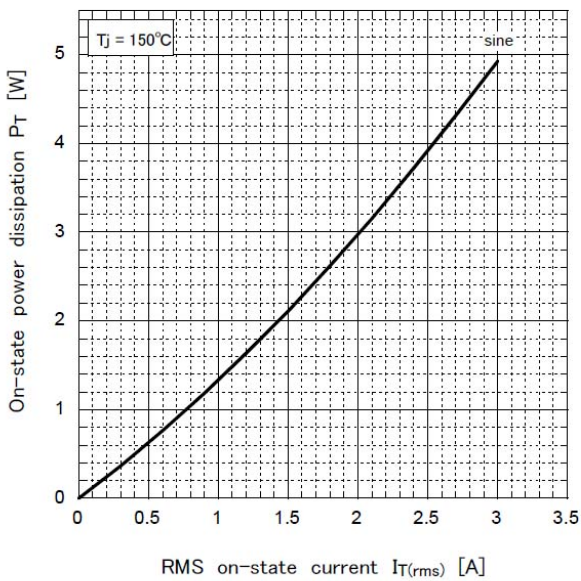
On-state voltage - On-state current



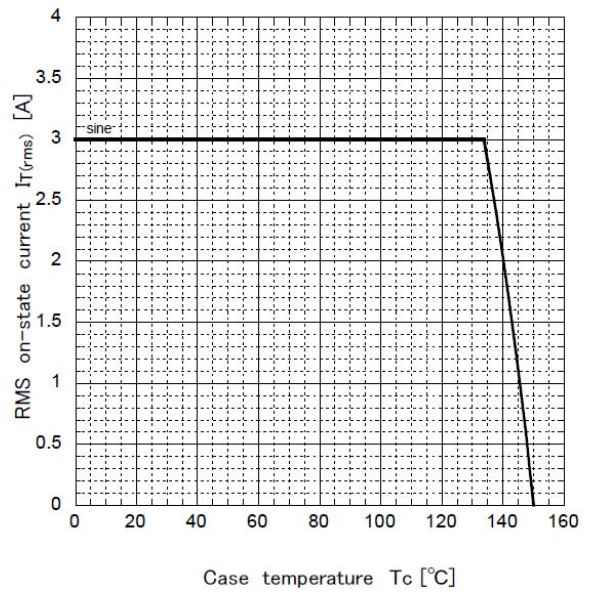
Surge on-state current capability

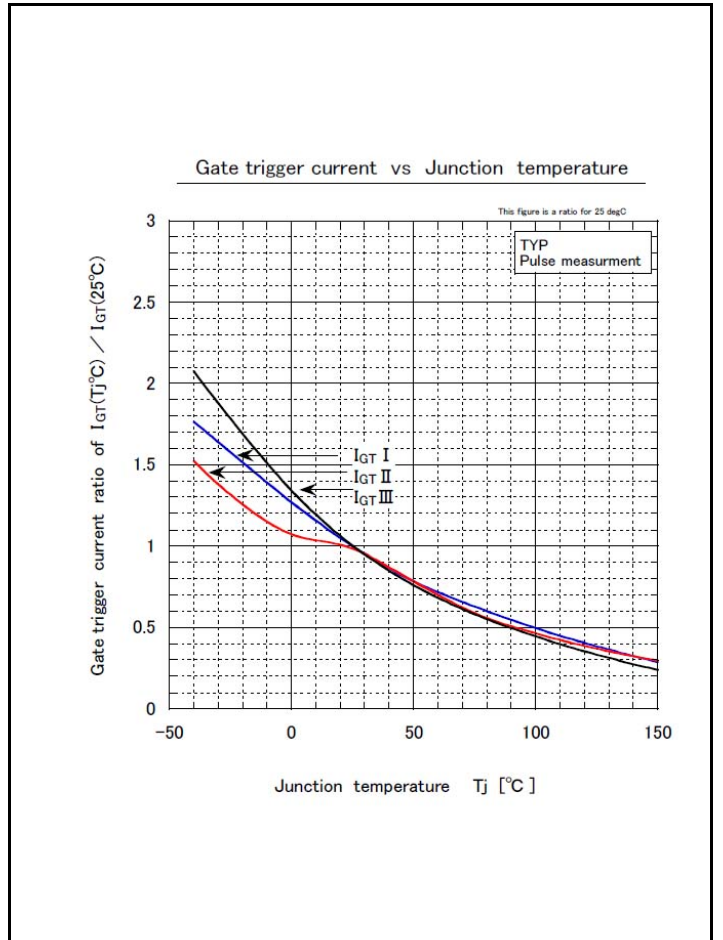
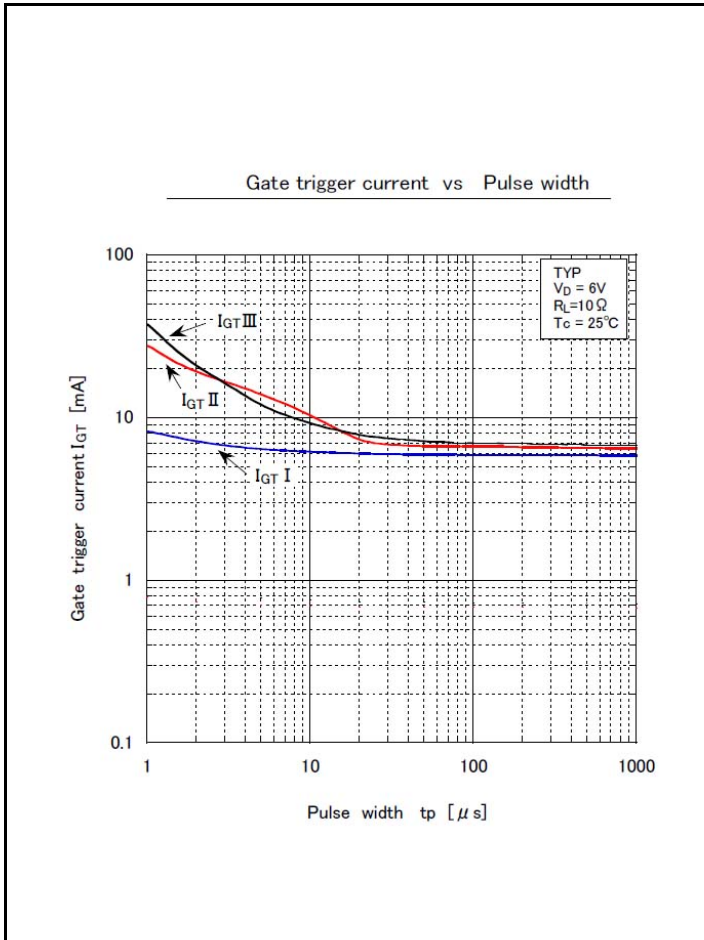
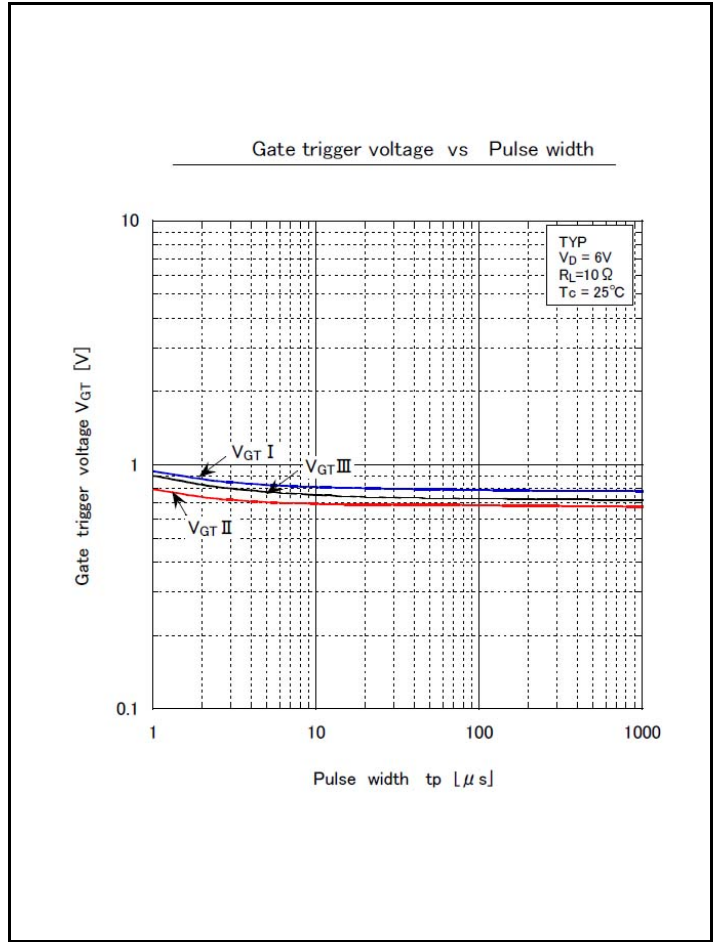
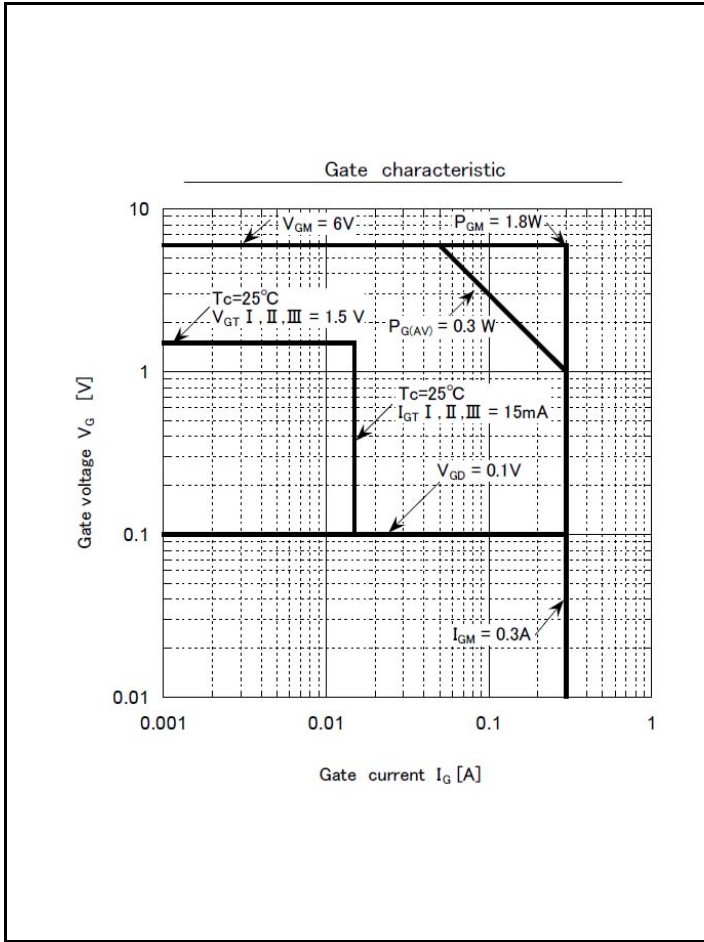


On-state power dissipation

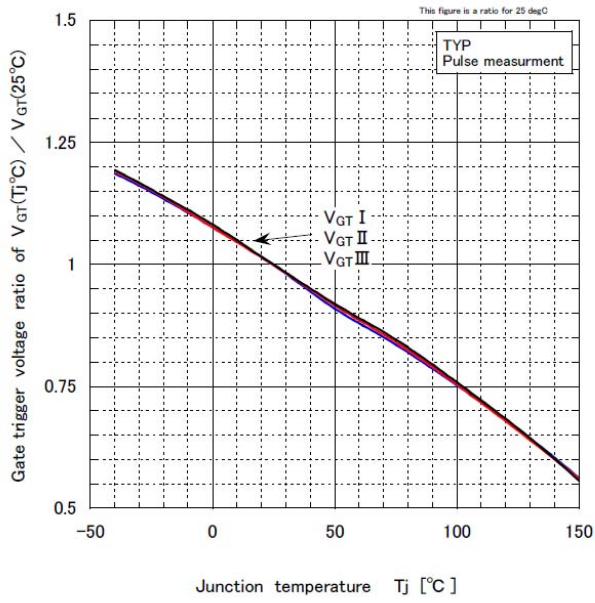


Derating curve $T_c - I_{T(rms)}$

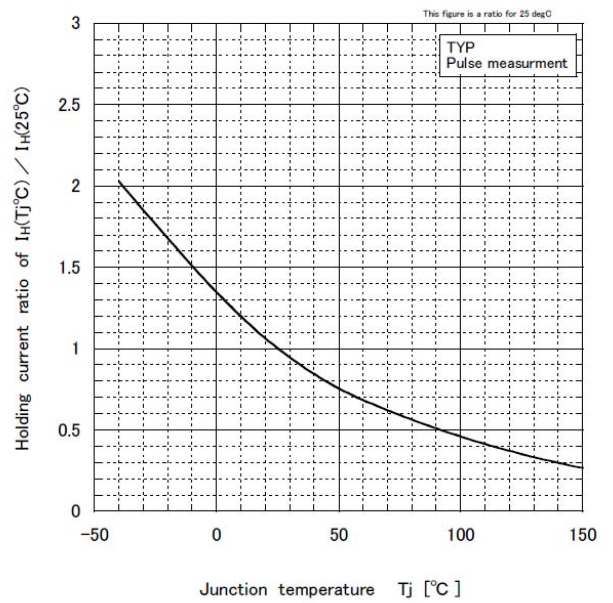




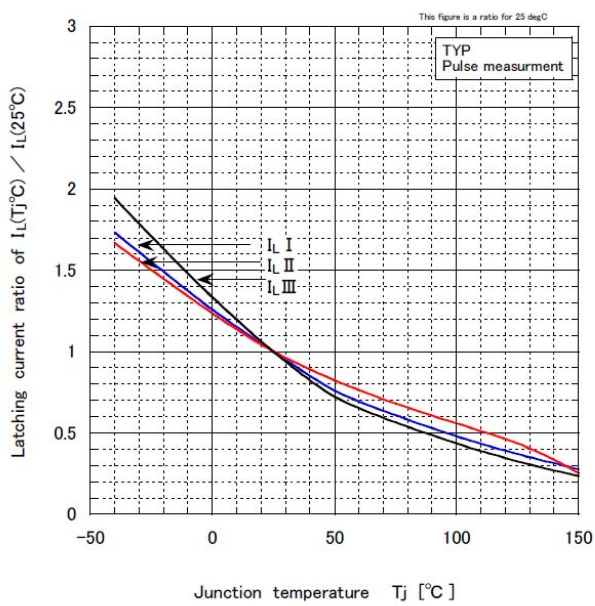
Gate trigger voltage vs Junction temperature



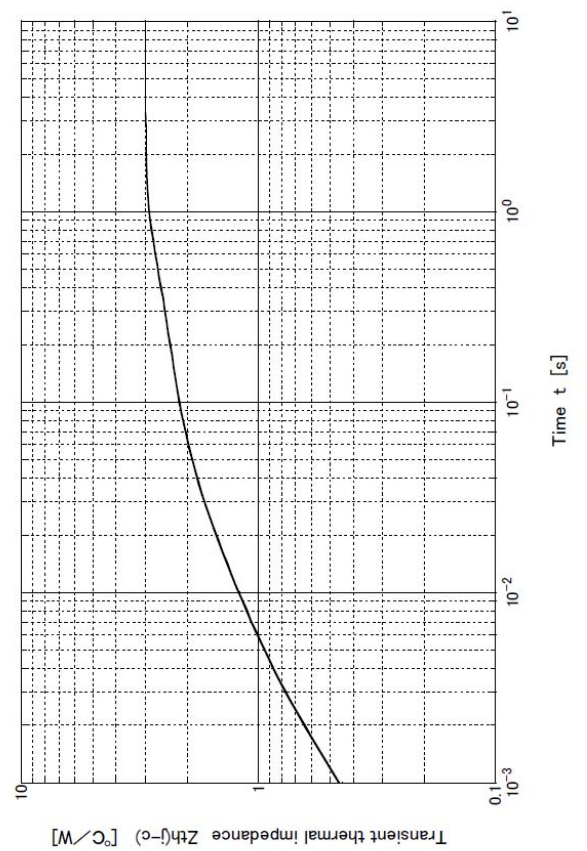
Holding current vs Junction temperature



Latching current vs Junction temperature

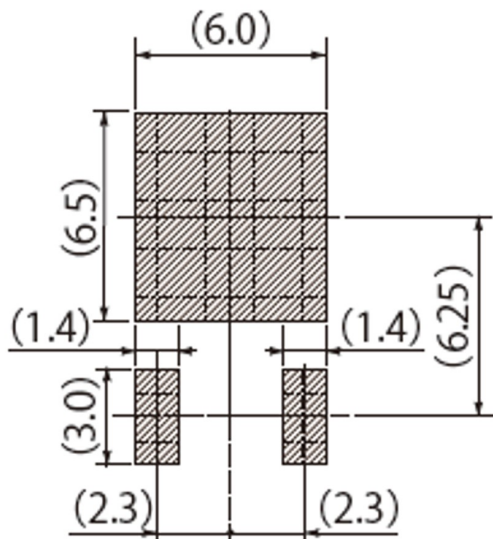
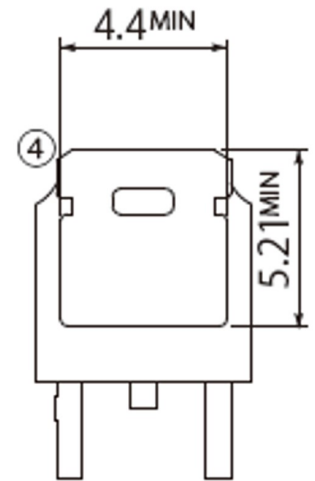
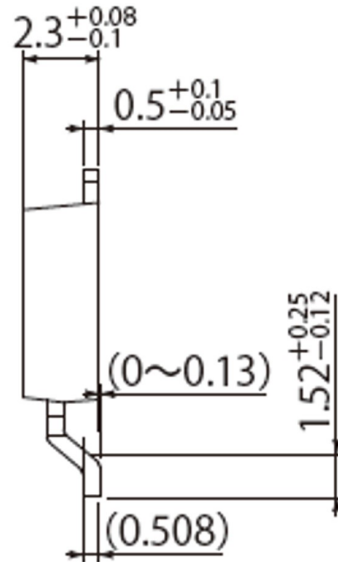
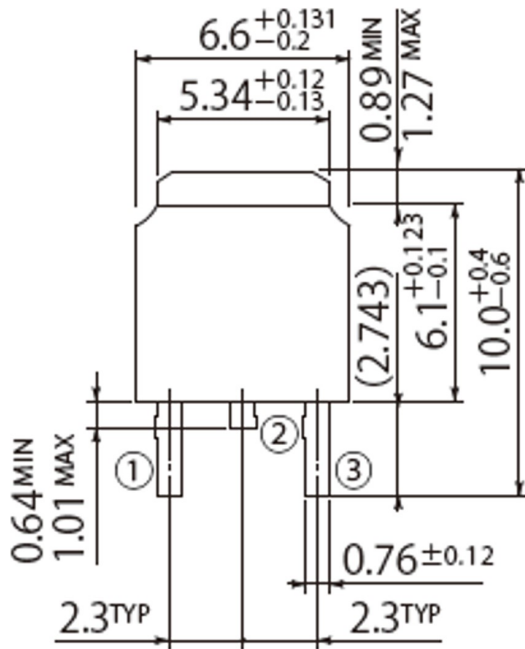


Transient thermal impedance



G2

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



Referential Soldering Pad

Notes

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