

KD5SF60

TRIACs

600V, 5A

Feature

- Full molded
- High voltage
- $T_j=150^{\circ}\text{C}$
- Stable surge-on current capability
- Pb free terminal
- RoHS:Yes

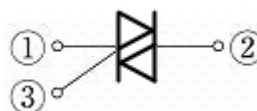
OUTLINE

Package (House Name): FTO-220AG

Package (JEITA Code): SC-91



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)}	Tc=121°C, commercial frequency, sine wave, θ=360°C	5	A
Surge on-state current	I _{TSM}	Tj=25°C, 60Hz sine wave, Non-repetitive 1 cycle peak	50	A
Current squared time	I ² t	Tj=25°C, t=8.33ms, Non-repetitive	10.4	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%	5	W
Average gate dissipation	P _{G(AV)}		0.5	W
Peak gate current	I _{GM}	f=60Hz, Duty≤10%	2	A
Peak gate voltage	V _{GM}		10	V
Dielectric strength	V _{dis}	Terminals to case, AC 1 minute	2	kV
Mounting Torque	TOR	(Recommended torque:0.3N・m)	0.5	N・m

※ :See the original Specifications

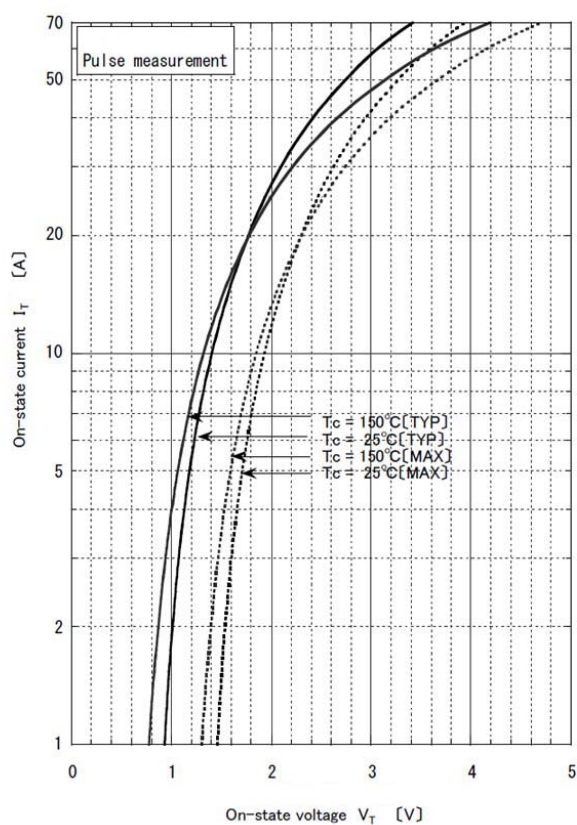
Electrical Characteristics (unless otherwise specified : T_c=25°C)

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=7A, Pulse measurement			1.8	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 _{GTH}	VD=6V, RL=10Ω, T1-, T2+, G+			20	mA
Gate trigger current	I _{GTH}	VD=6V, RL=10Ω, T1-, T2+, G-			20	mA
Gate trigger current	I _{GTH}	VD=6V, RL=10Ω, T1+, T2-, G-			20	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 _{LI}	IG=0.1A, T1-, T2+, G-			100	mA
Latching current	I _{LI}	IG=0.1A, T1+, T2-, G-			100	mA
Latching current	I _{LI}	IG=0.1A, T1+, T2-, G+			- ※	mA
Holding current	I _H	IT=1A			100	mA
Critical rate of rise of off-state voltage	dv/dt	T _j =150°C, VD=2/3V _{DRM}	100			V/μs
Critical rate of rise of commutating voltage	(dv/dt) _c	T _j =150°C, VD=2/3V _{DRM} , (di/dt) _c =-2.5A/ms	1			V/μs
Thermal resistance	R _{th(j-c)}	Junction to case with heatsink			2.29	°C/W

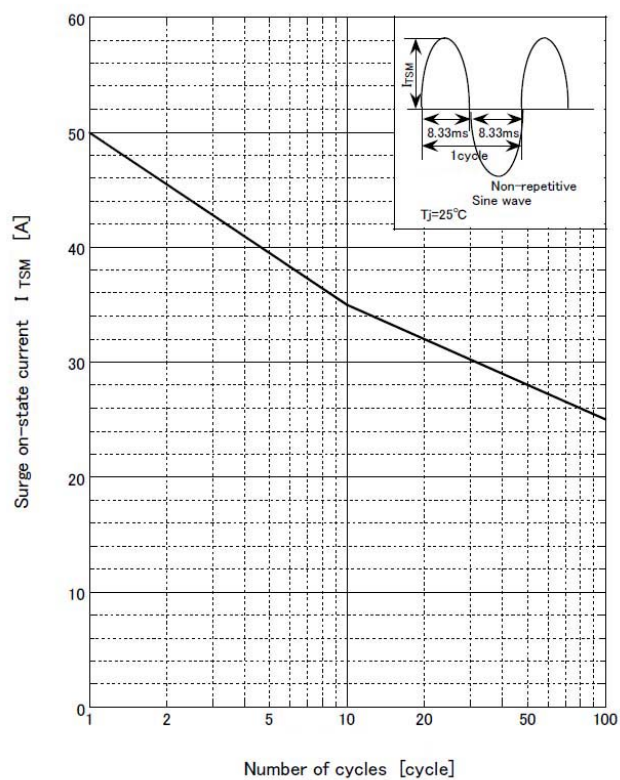
※ :See the original Specifications

CHARACTERISTIC DIAGRAMS

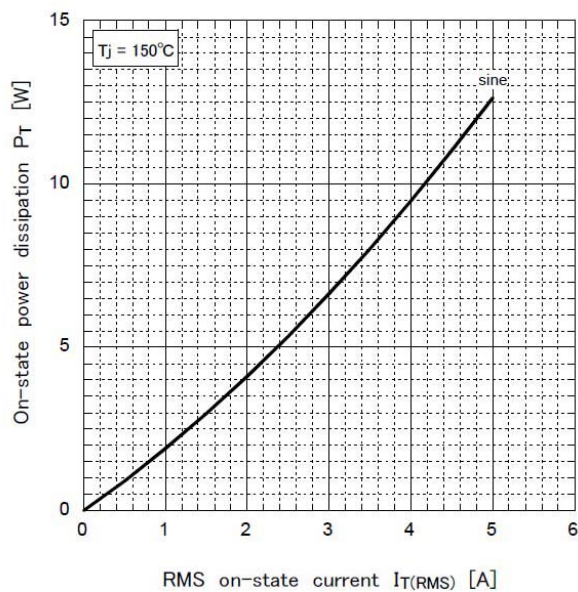
On-state voltage – On-state current



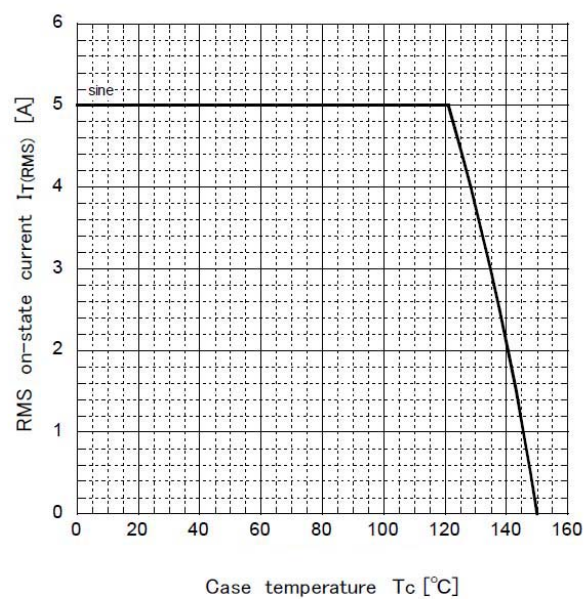
Surge on-state current capability

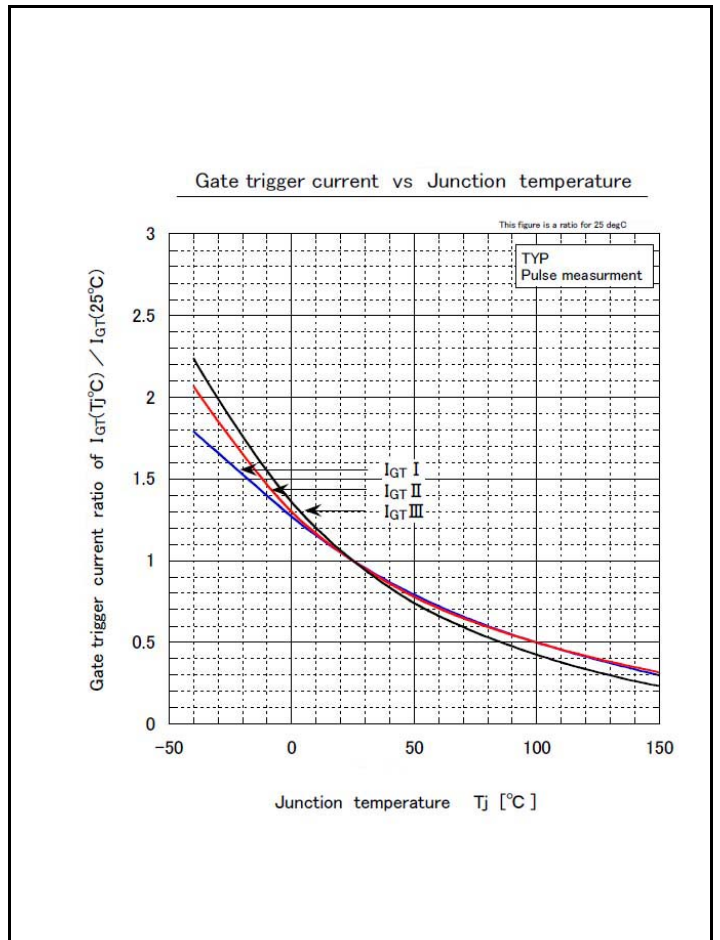
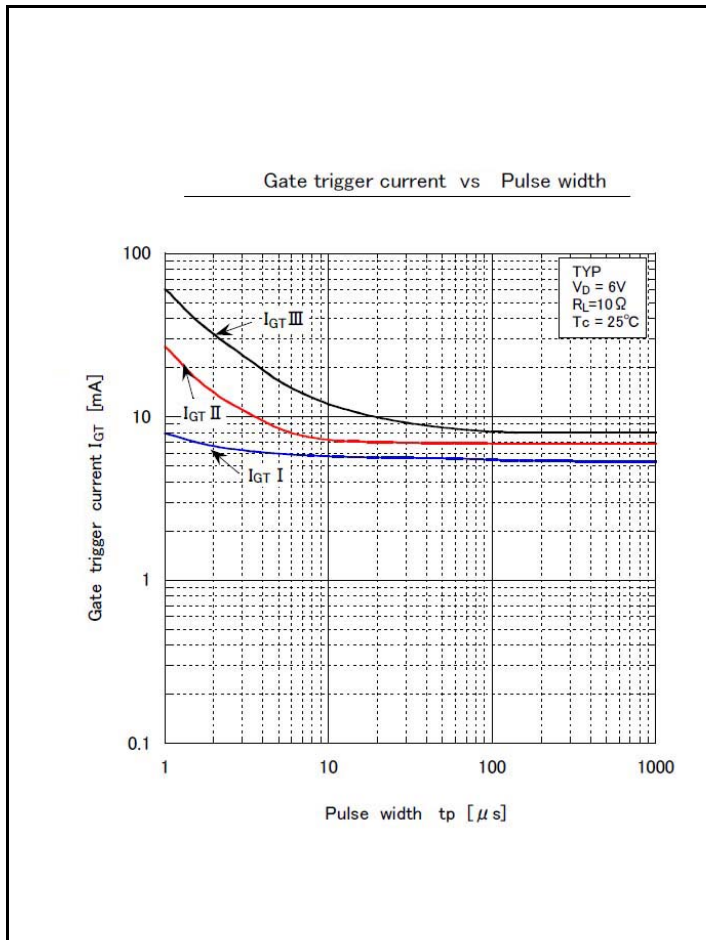
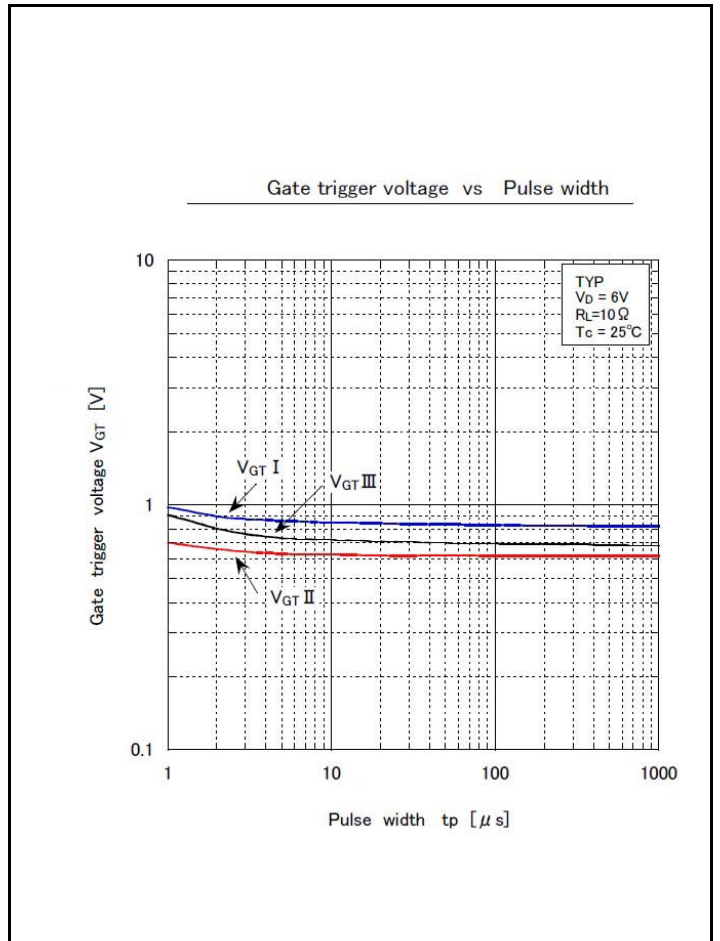
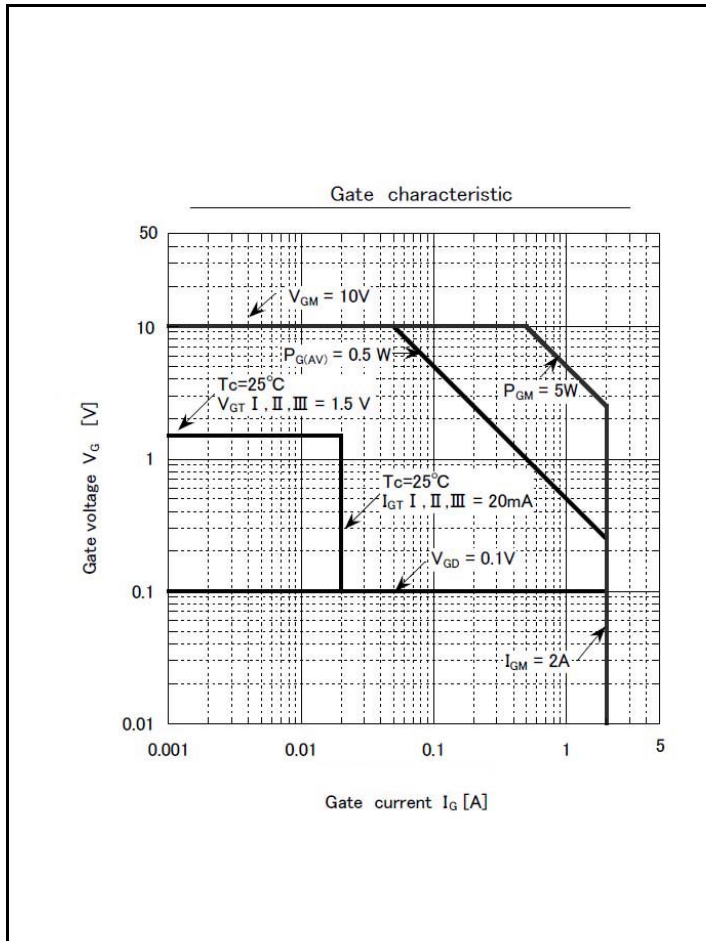


On-state power dissipation

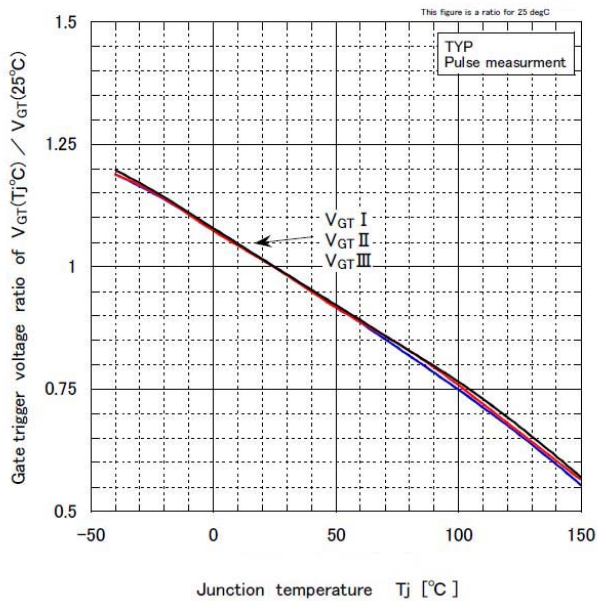


Derating curve T_c - $I_{T(RMS)}$

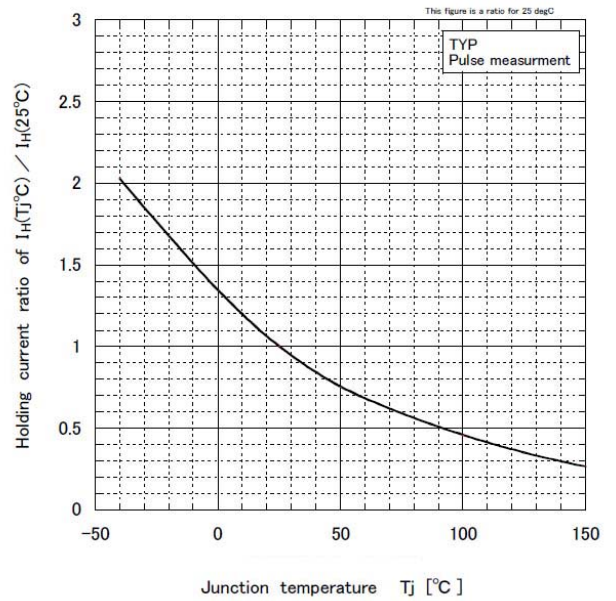




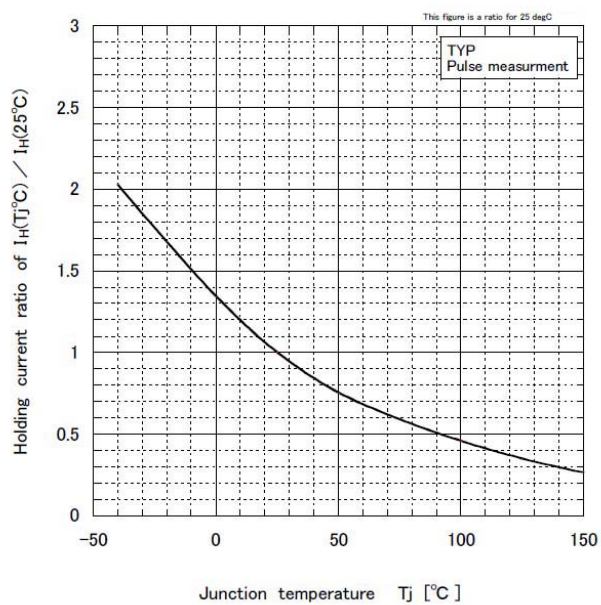
Gate trigger voltage vs Junction temperature



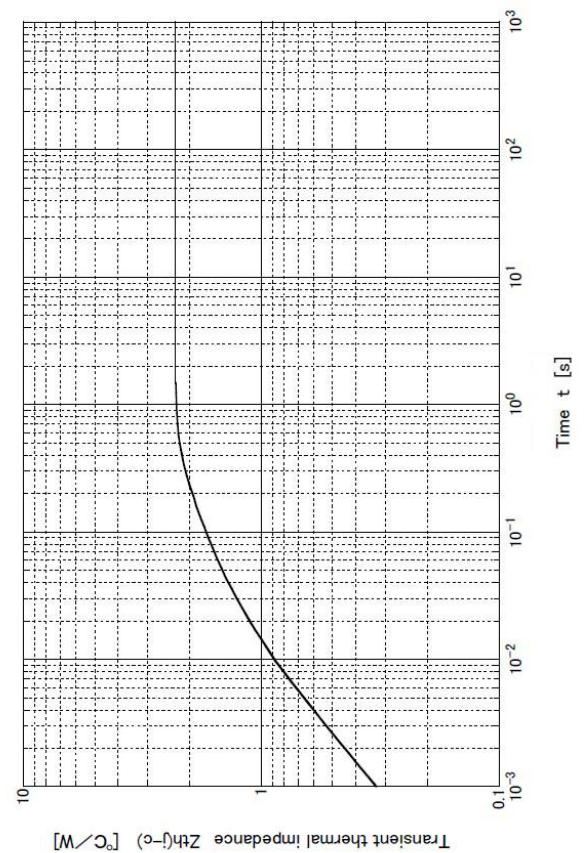
Holding current vs Junction temperature



Holding current vs Junction temperature



Transient thermal impedance

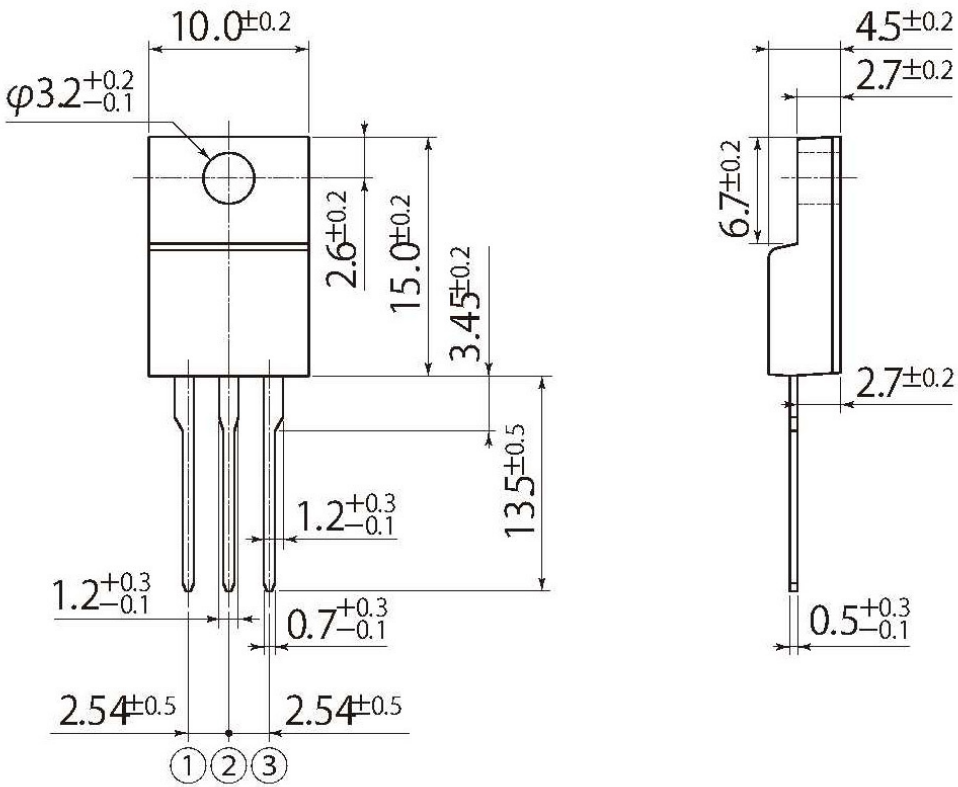


unit:mm

scale: 2/1

J8

JEDEC Code	—
JEITA Code	SC-91
House Name	FTO-220AG(3pin)



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