

KD12SF80

TRIACs

800V, 12A

Feature

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

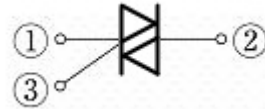
OUTLINE

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}		800	V
R.M.S. on-state current	I _{T(RMS)}	T _c =120°C, Commercial frequency, sine wave, Conduction angle θ=360°C, With heatsink	12	A
Surge on-state current	I _{TSM}	T _j =25°C, 60Hz sine wave, Non-repetive, Conduction angle θ=360°C ※	80	A
Current squared time	I ² t	T _j =25°C, t=8.33ms, Non-repetitive ※	26	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

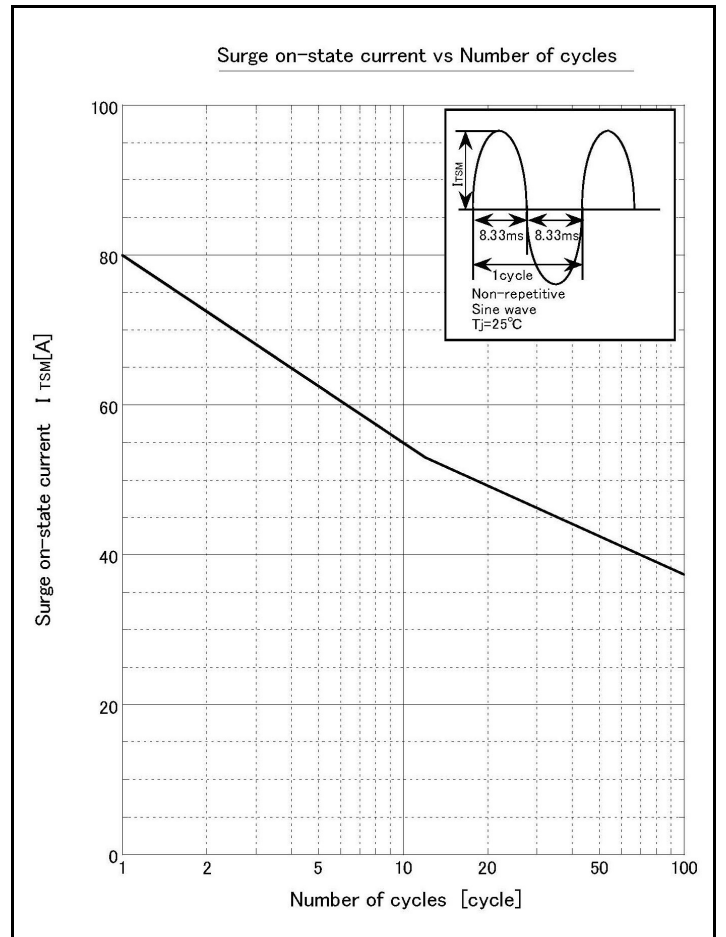
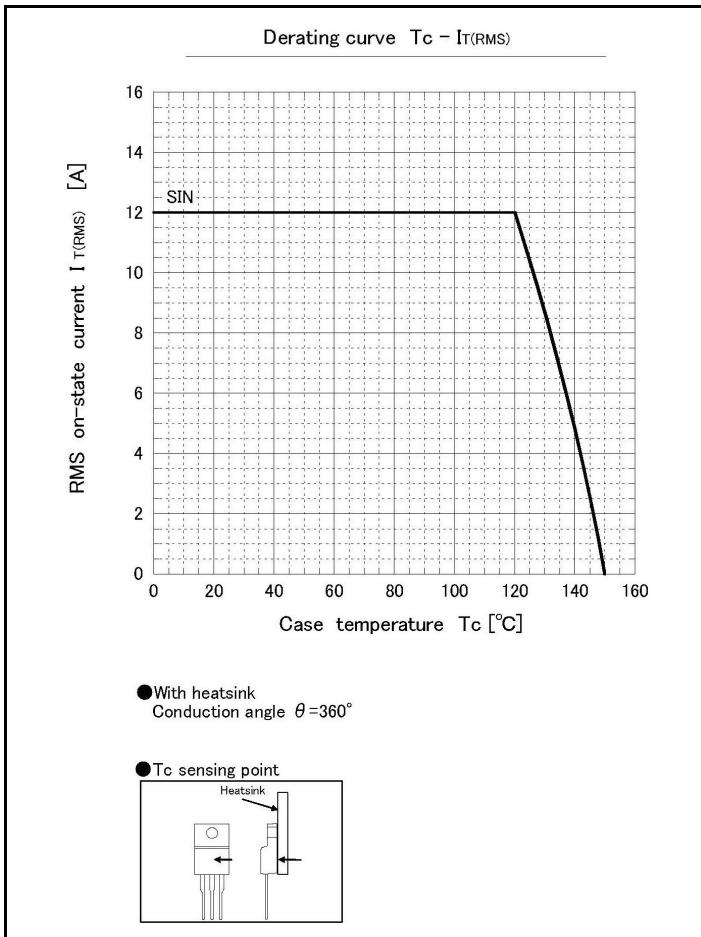
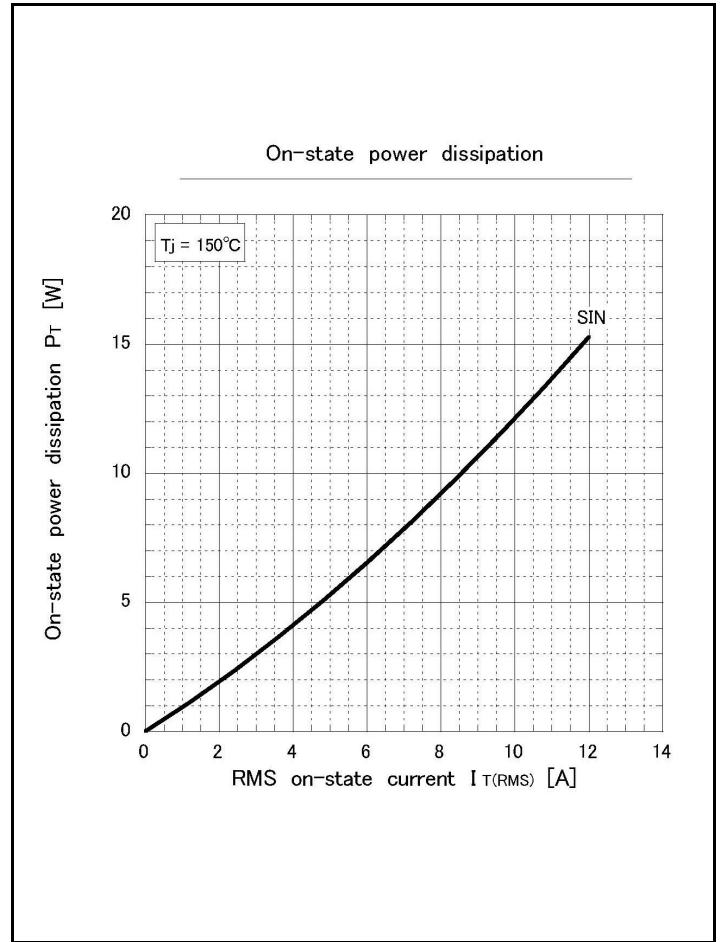
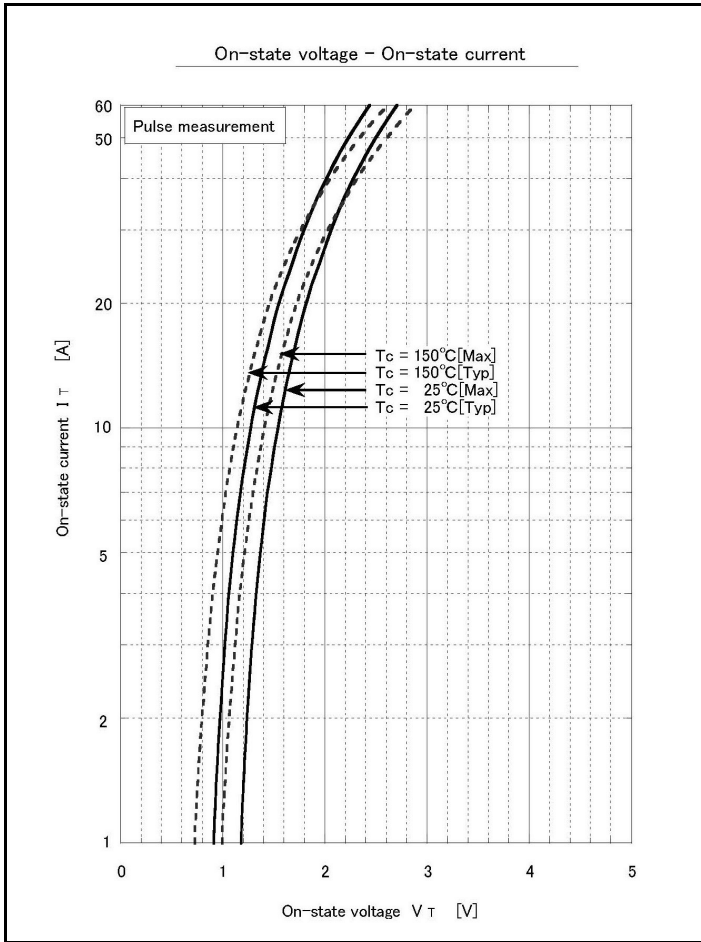
※ : See the original Specifications

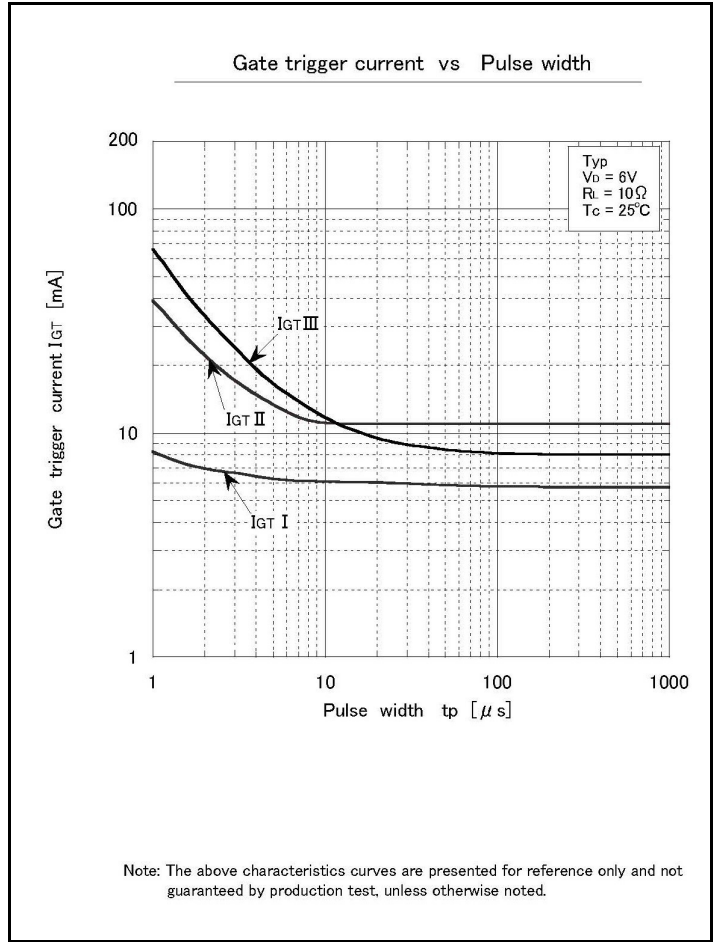
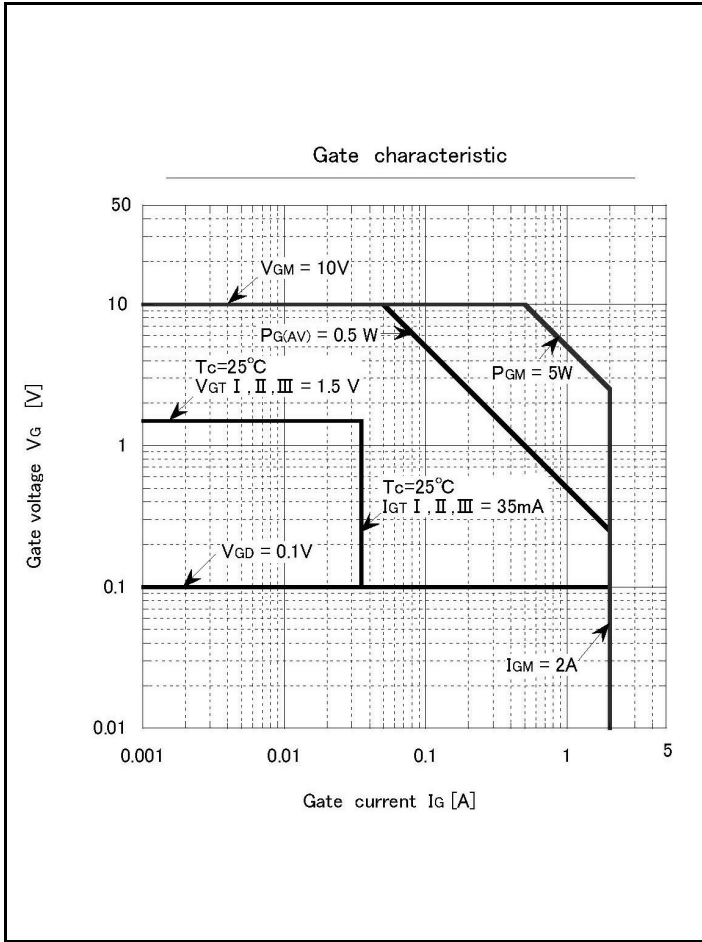
Electrical Characteristics (unless otherwise specified : T_c=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Off-state current	I _{DRM}	VD=800V, Pulse measurement			10	μA
On-state voltage	V _{TM}	ITM=12A, Pulse measurement			1.6	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=1/2VDRM	0.1			V
Gate trigger current	I _{GTI}	VD=6V, RL=10Ω, T1-, T2+, G+			35	mA
Gate trigger current	I _{GTH}	VD=6V, RL=10Ω, T1-, T2+, G-			35	mA
Gate trigger current	I _{GTH}	VD=6V, RL=10Ω, T1+, T2-, G-			35	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	IT=1A			100	mA
Critical rate of rise of off-state voltage	dv/dt	T _j =150°C, VD=2/3VDRM	100			V/μs
Critical rate of rise of commutating voltage	(dv/dt) _c	T _j =150°C, VD=2/3VDRM, (di/dt) _c =-4A/ms	1			V/μs
Thermal resistance	R _{th(j-c)}	Junction to case with heatsink			1.95	°C/W

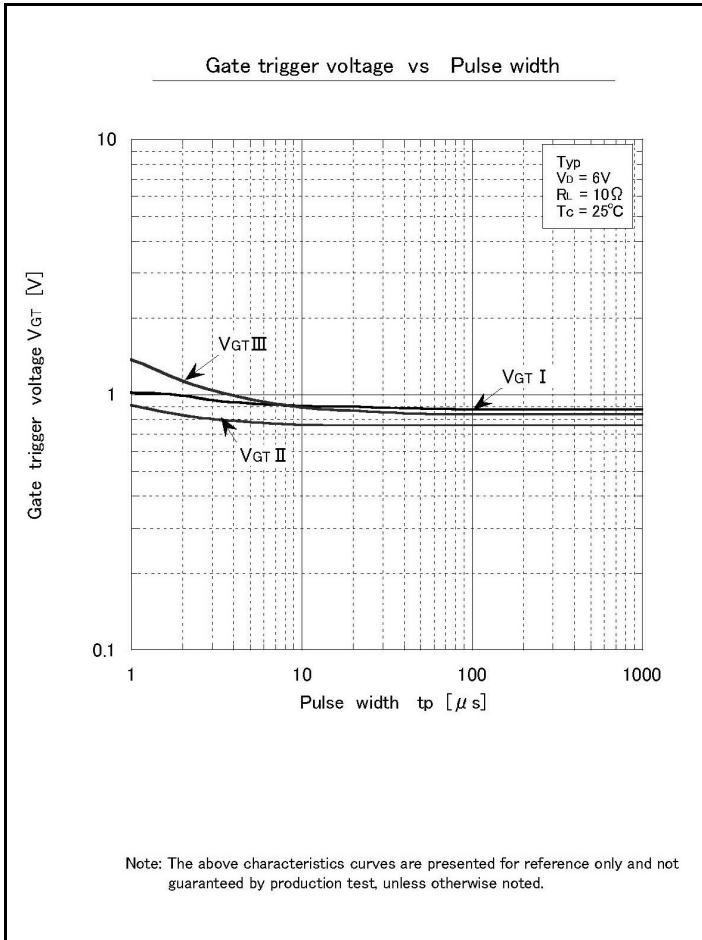
※ :See the original Specifications

CHARACTERISTIC DIAGRAMS

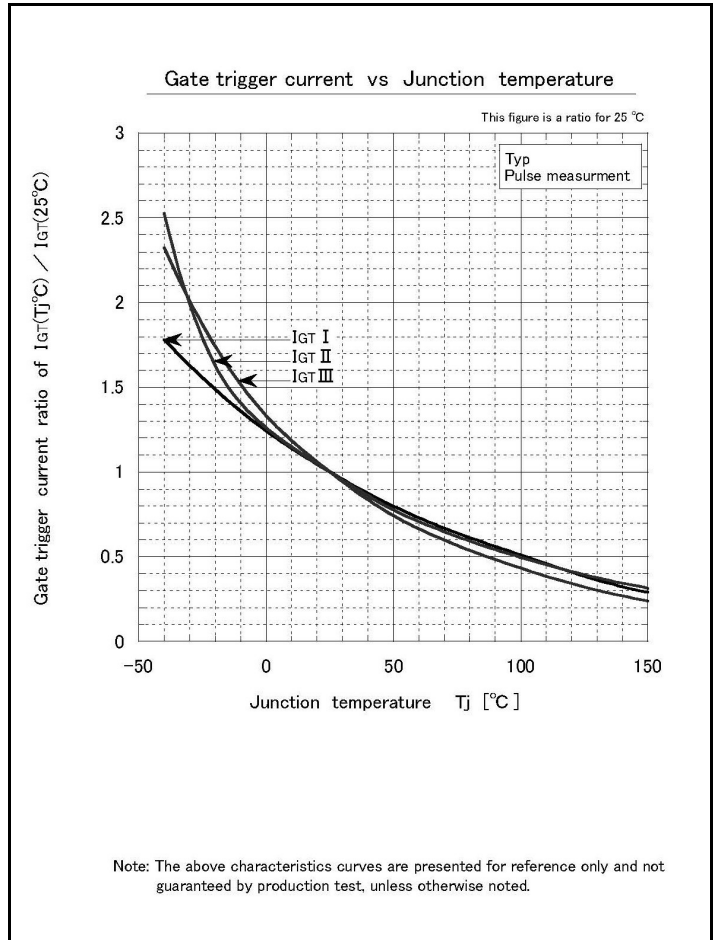




Note: The above characteristics curves are presented for reference only and not guaranteed by production test, unless otherwise noted.

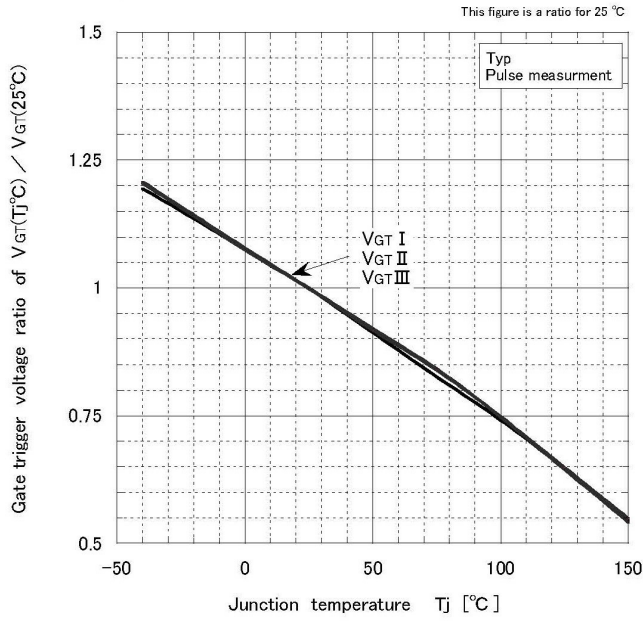


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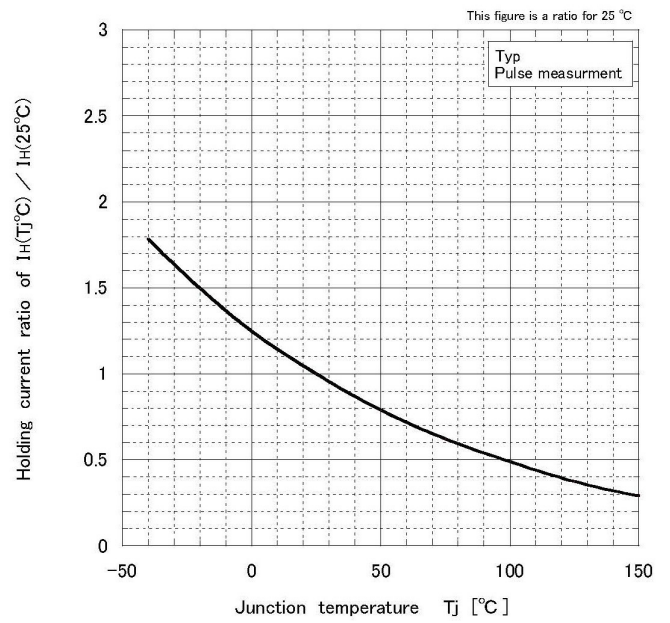
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Gate trigger voltage vs Junction temperature



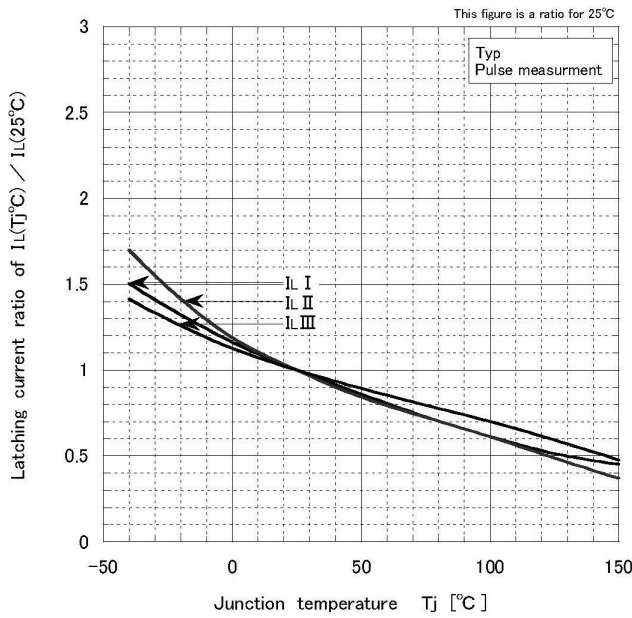
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Holding current vs Junction temperature

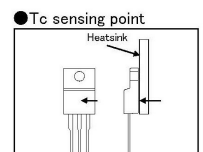
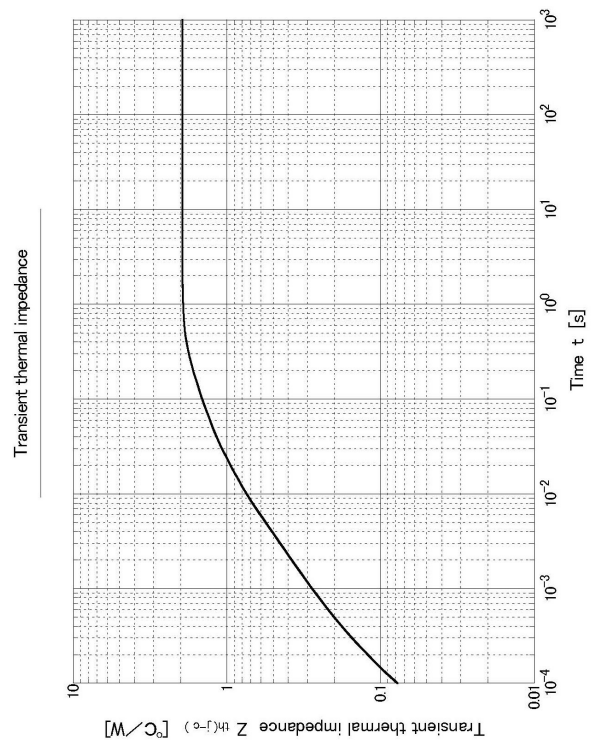


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Latching current vs Junction temperature

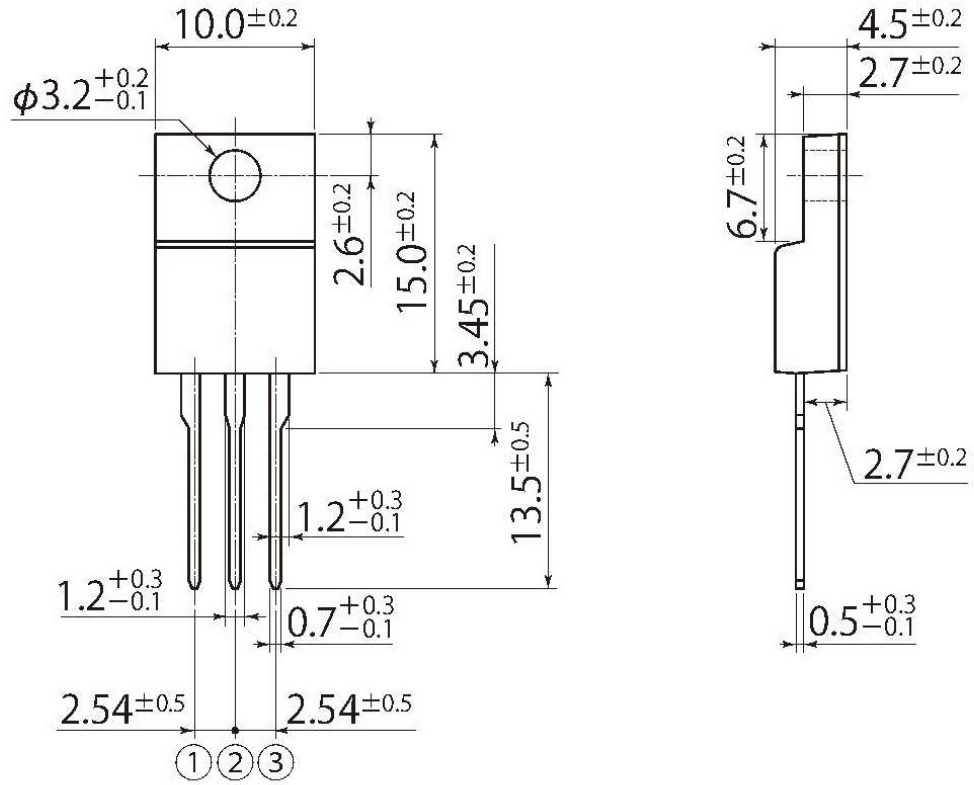


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J8

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



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