

KD3SF60E

TRIACs

600V, 3A

Feature

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

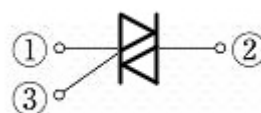
OUTLINE

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}		600	V
Non-repetitive peak off-state voltage	V _{DSM}	※	720	V
R.M.S. on-state current	I _{T(RMS)}	T _c =136°C, commercial frequency, sine wave, θ=360°C	3	A
Surge on-state current	I _{TSM}	T _j =25°C, 60Hz sine wave, Non-repetitive 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%	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

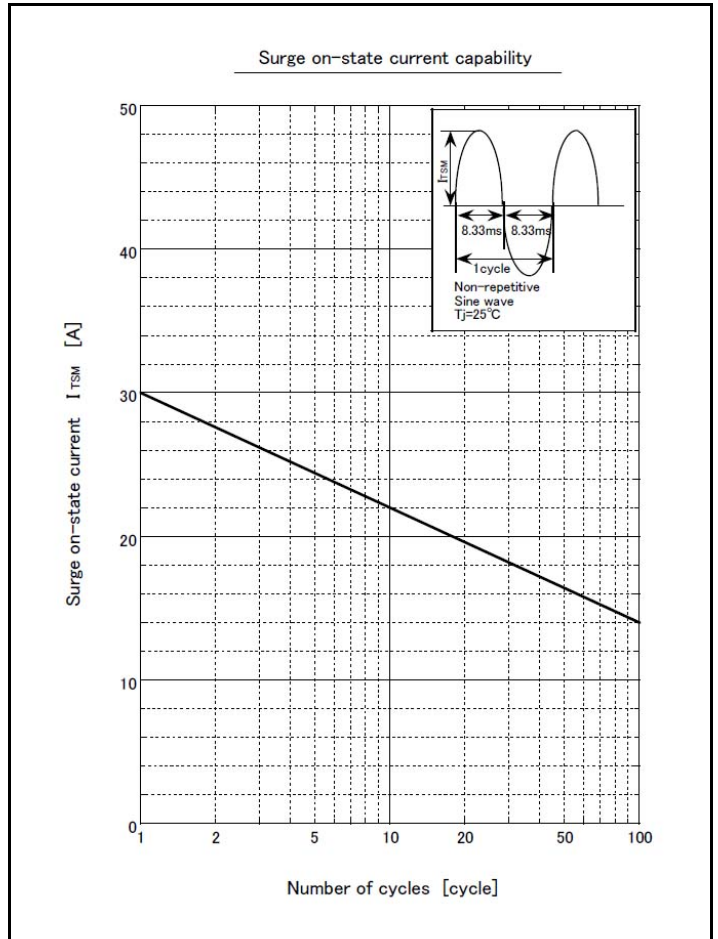
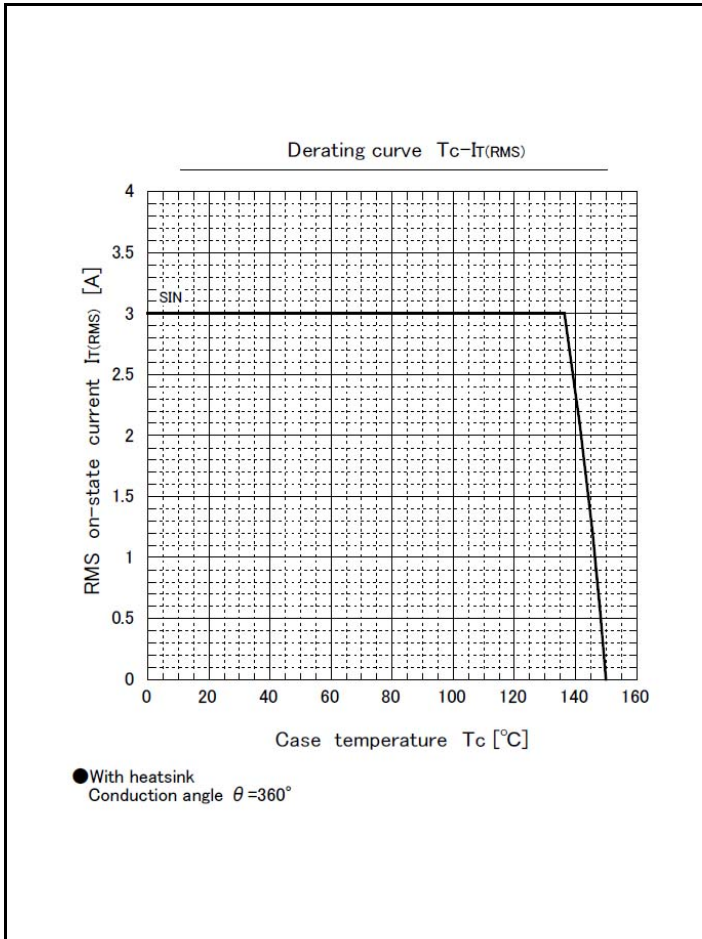
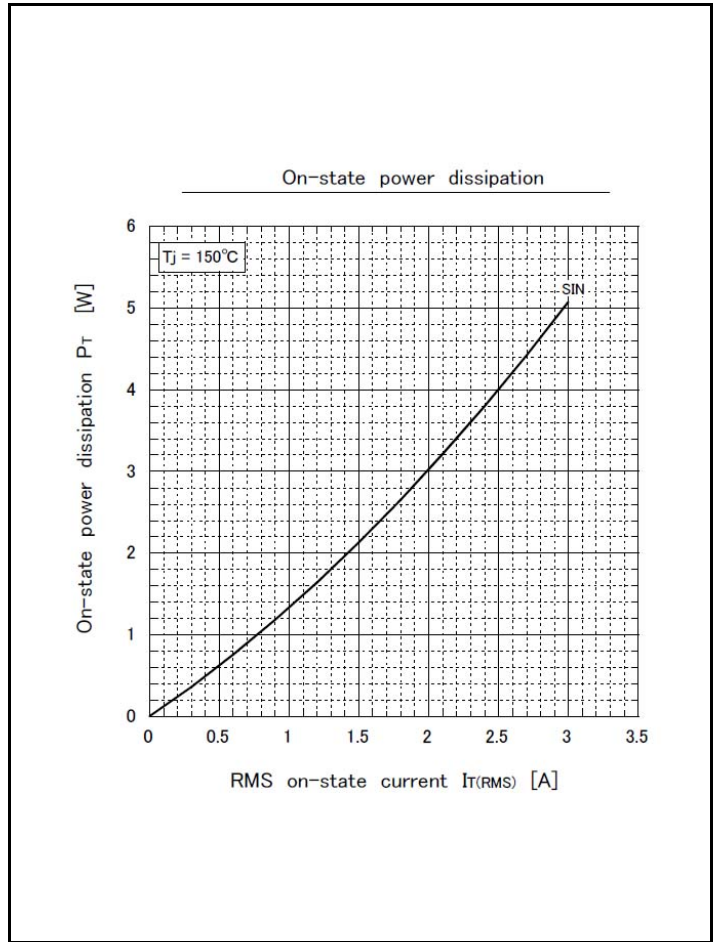
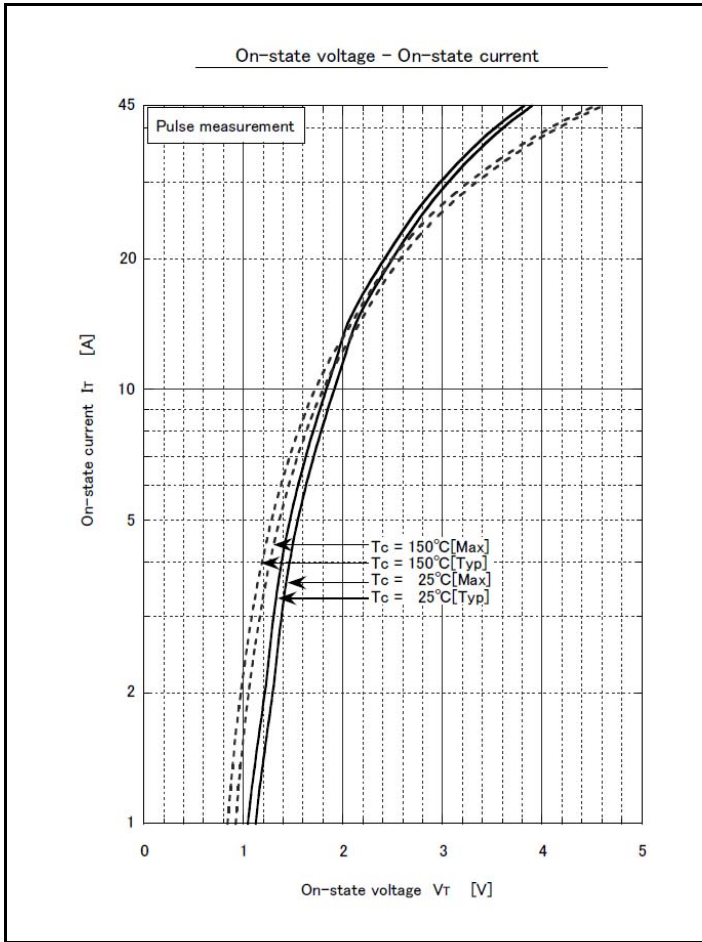
※ :See the original Specifications

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

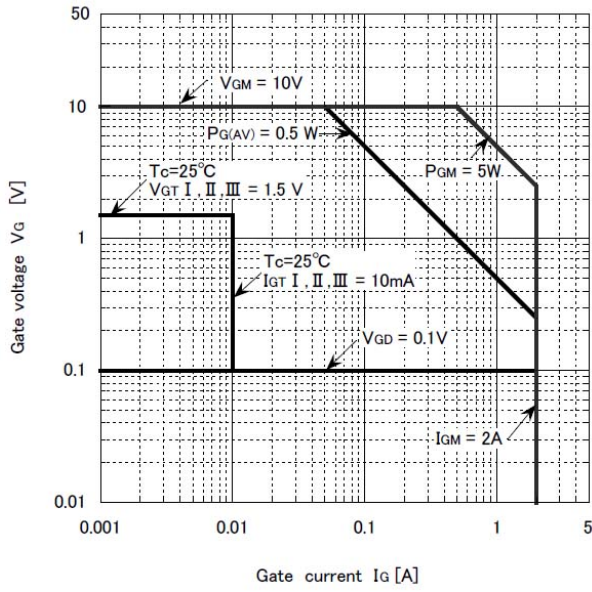
Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Off-state current	I_{DRM}	VD=600V, Pulse measurement			10	μ A
On-state voltage	V_{TM}	ITM=4.5A, Pulse measurement			1.5	V
Gate trigger voltage	V_{GTI}	VD=6V, RL=10 Ω , T1-, T2+, G+			1.5	V
Gate trigger voltage	V_{GTII}	VD=6V, RL=10 Ω , T1-, T2+, G-			1.5	V
Gate trigger voltage	V_{GTIII}	VD=6V, RL=10 Ω , T1+, T2-, G-			1.5	V
Gate trigger voltage	V_{GTIV}	VD=6V, RL=10 Ω , T1+, T2-, G+			- *	V
Gate non-trigger voltage	V_{GD}	Tj=150°C, VD=1/2VDRM	0.1			V
Gate trigger current	I_{GTI}	VD=6V, RL=10 Ω , T1-, T2+, G+			10	mA
Gate trigger current	I_{GTII}	VD=6V, RL=10 Ω , T1-, T2+, G-			10	mA
Gate trigger current	I_{GTIII}	VD=6V, RL=10 Ω , T1+, T2-, G-			10	mA
Gate trigger current	I_{GTIV}	VD=6V, RL=10 Ω , 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
Thermal resistance	Rth(j-c)	Junction to case with heatsink			2.62	°C/W

* :See the original Specifications

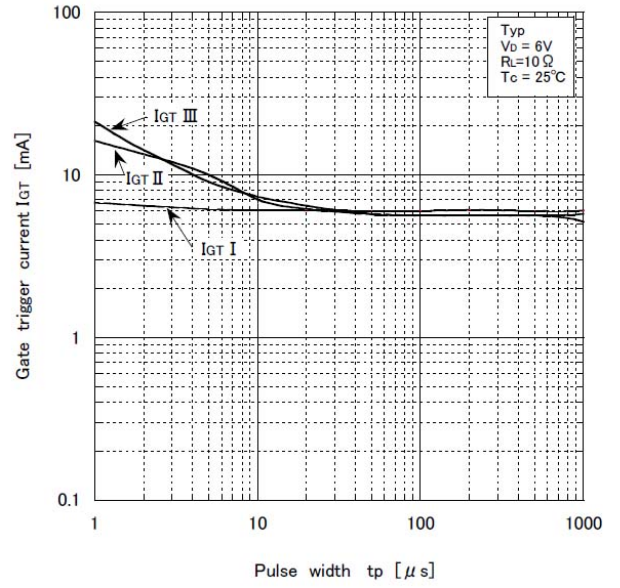
CHARACTERISTIC DIAGRAMS



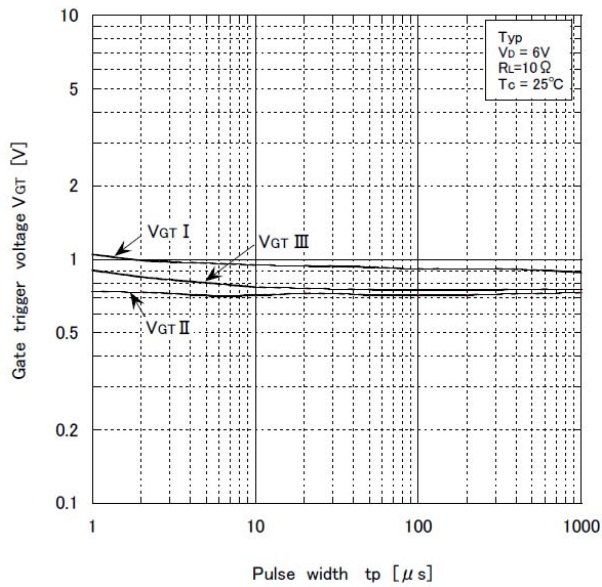
Gate characteristic



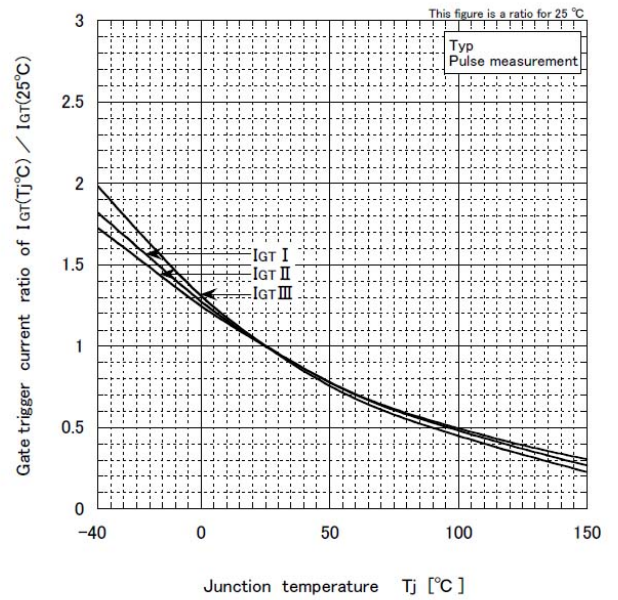
Gate trigger current - Pulse width



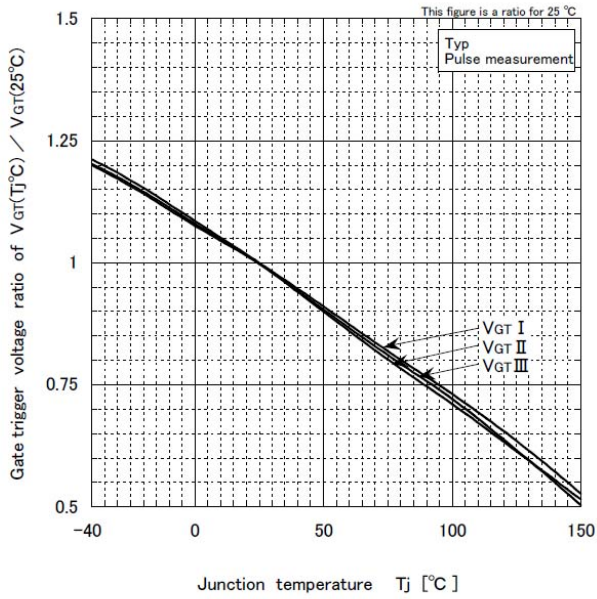
Gate trigger voltage - Pulse width



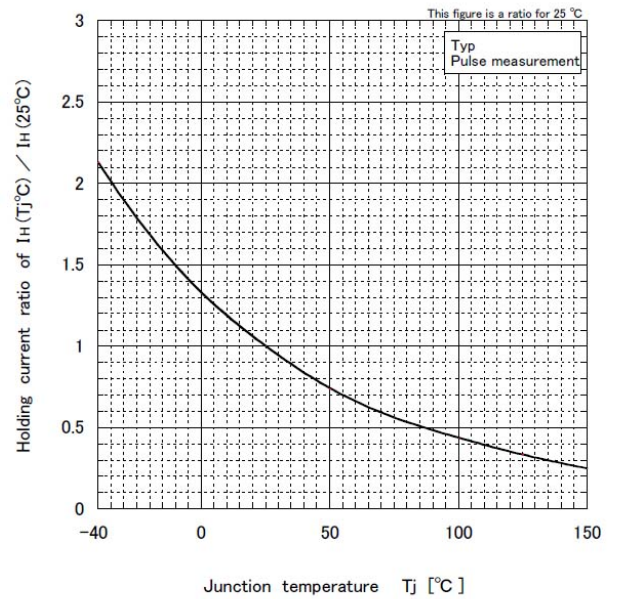
Gate trigger current - Junction temperature



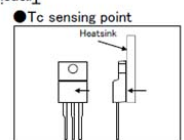
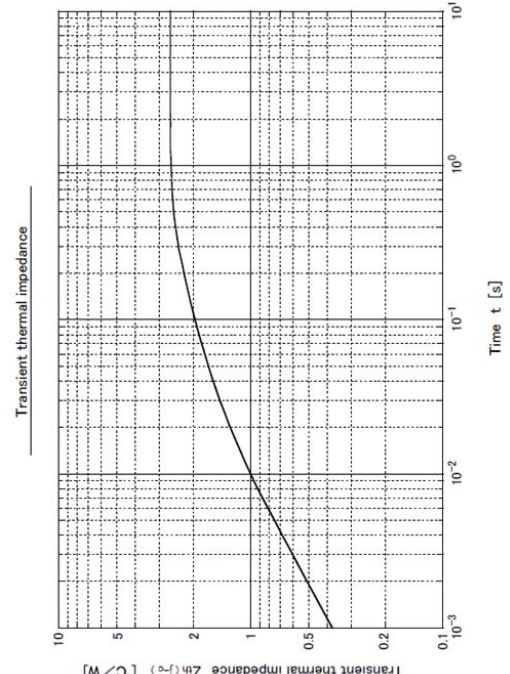
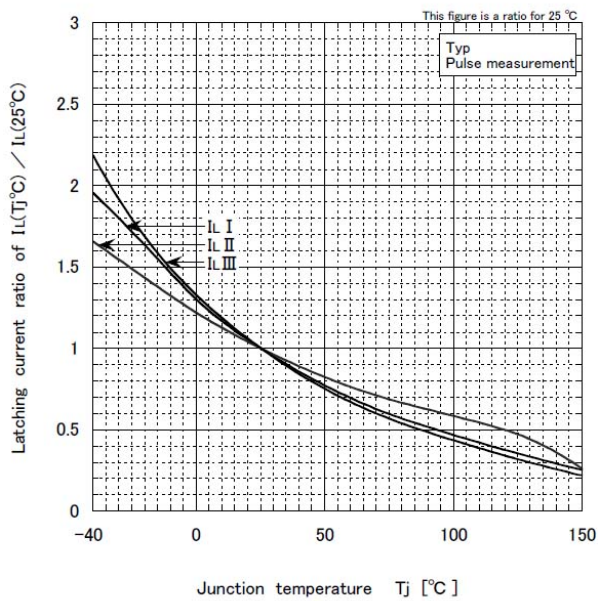
Gate trigger voltage - Junction temperature



Holding current - Junction temperature



Latching current - Junction temperature



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