

# KD3SF60E

# TRIACs 600V, 3A

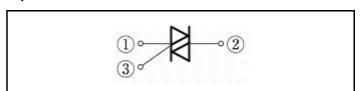
### **Feature**

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

### **OUTLINE**



## **Equivalent circuit**



# **Absolute Maximum Ratings** (unless otherwise specified : Tc=25°C)

Item	Symbol	Conditions	Ratings	Unit
Storage temperrature	Tstg		-55 to 150	°C
Junction temperature	Tj		-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 <sub>T(RMS)</sub>	Tc=136°C, commercial frequency, sine wave, θ=360°C	3	А
Surge on-state current	I <sub>TSM</sub>	Tj=25°C, 60Hz sine wave, Non-repetive 1 cycle peak *	30	А
Current squared time	l <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	$P_{GM}$	f=60Hz, Duty≦10%	5	W
Average gate dissipation	P <sub>G</sub> (AV)		0.5	W
Peak gate current	$I_{GM}$	f=60Hz, Duty≦10%	2	Α
Peak gate voltage	$V_{GM}$		10	V
Dielectric strength	Vdis	Terminals to case, AC 1 minute	2	kV
Mounting Torque	TOR	(Recommended torque:0.3N·m)	0.5	N∙m

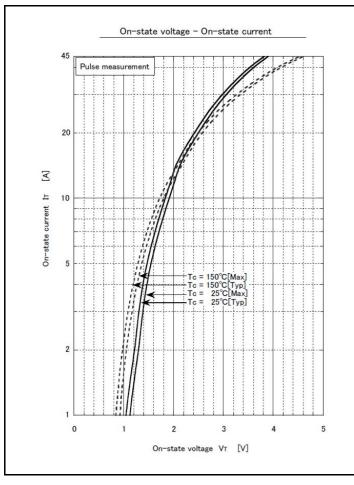
<sup>\*</sup> :See the original Specifications

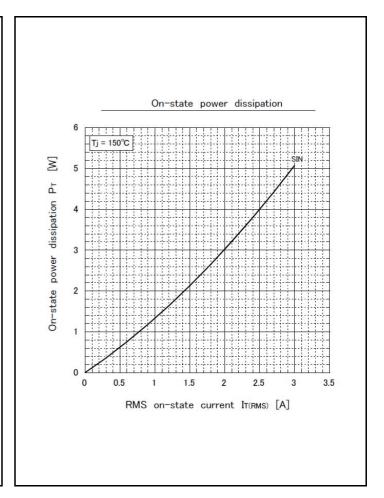
# **Electrical Characteristics** (unless otherwise specified : Tc=25°C)

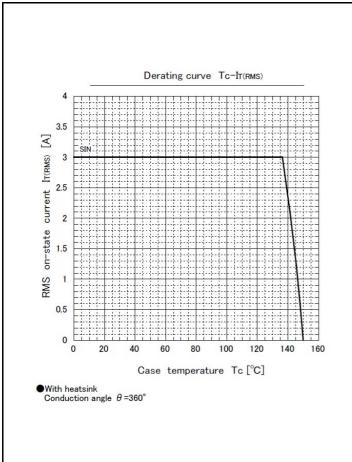
Item	Symbol	Conditions		Ratings		
	Symbol		MIN	TYP	MAX	Unit
Off-state current	I <sub>DRM</sub>	VD=600V, Pulse measurement			10	μA
On-state voltage	$V_{TM}$	ITM=4.5A, Pulse measurement			1.5	V
Gate trigger voltage	V <sub>GTI</sub>	VD=6V, RL=10Ω, T1-, T2+, G+			1.5	V
Gate trigger voltage	V <sub>GTII</sub>	VD=6V, RL=10Ω, T1-, T2+, G-			1.5	V
Gate trigger voltage	V <sub>GTIII</sub>	VD=6V, RL=10Ω, T1+, T2-, G-			1.5	V
Gate trigger voltage	$V_{GTIV}$	VD=6V, RL=10Ω, T1+, T2-, G+			- *	V
Gate non-trigger voltage	$V_{GD}$	Tj=150°C, VD=1/2VDRM	0.1			V
Gate trigger current	I <sub>GTI</sub>	VD=6V, RL=10Ω, T1-, T2+, G+			10	mA
Gate trigger current	I <sub>GTII</sub>	VD=6V, RL=10Ω, T1-, T2+, G-			10	mA
Gate trigger current	I <sub>GTIII</sub>	VD=6V, RL=10Ω, T1+, T2-, G-			10	mA
Gate trigger current	I <sub>GTIV</sub>	VD=6V, RL=10Ω, T1+, T2-, G+			- *	mA
Latching current	I <sub>LI</sub>	IG=0.1A, T1-, T2+, G+			100	mA
Latching current	I <sub>LII</sub>	IG=0.1A, T1-, T2+, G-			100	mA
Latching current	I <sub>LIII</sub>	IG=0.1A, T1+, T2-, G-			100	mA
Latching current	I <sub>LIV</sub>	IG=0.1A, T1+, T2-, G+			- *	mA
Holding current	I <sub>H</sub>	IT=1A			100	mA
Thermal resistance	Rth(j-c)	Junction to case with heatsink			2.62	°C/W

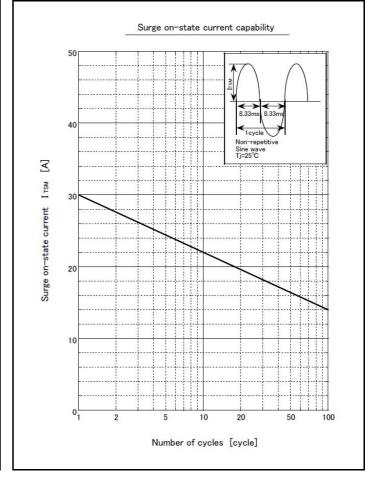
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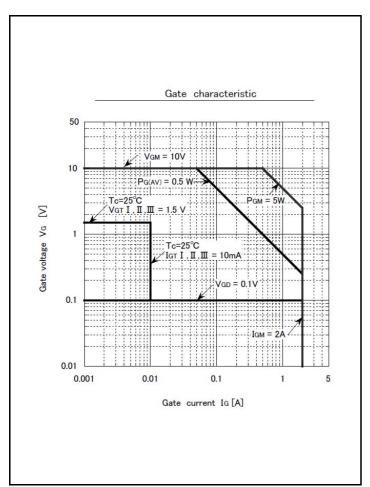
### **CHARACTERISTIC DIAGRAMS**

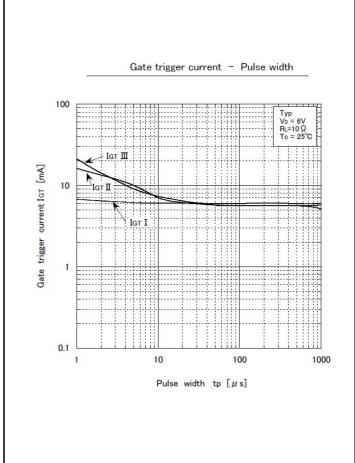


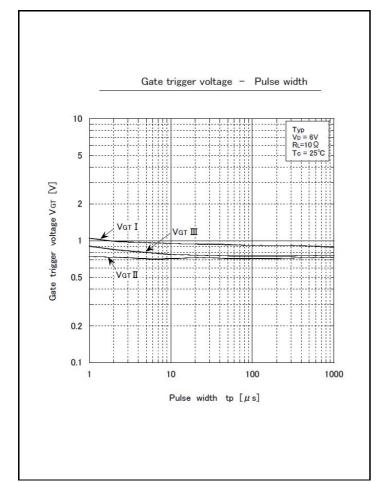


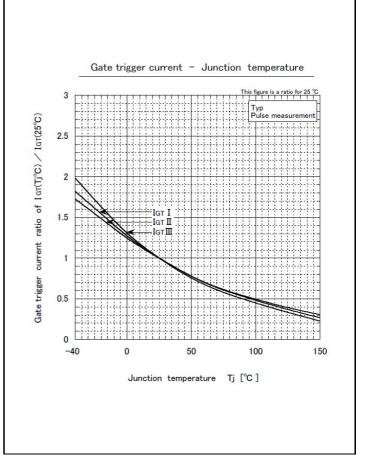


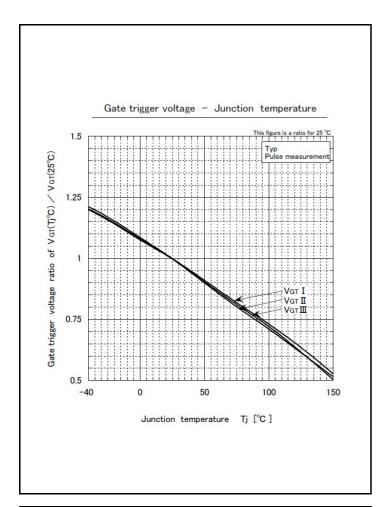


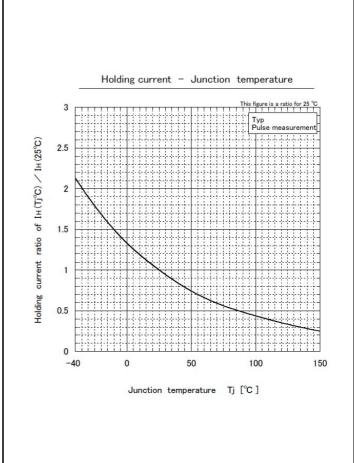


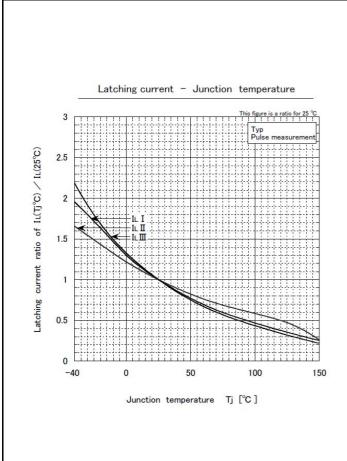


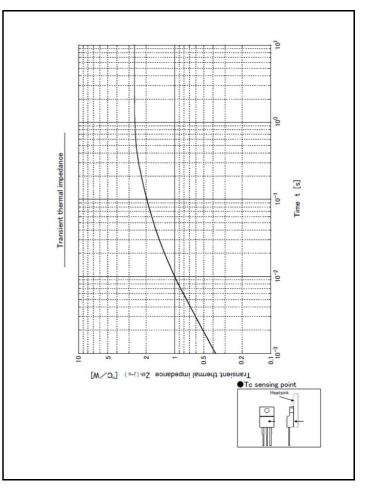








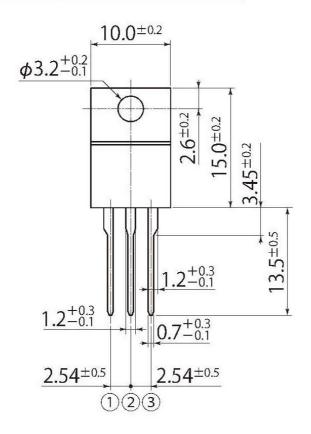


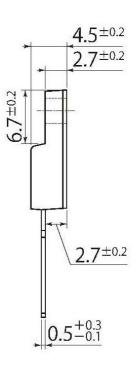


unit:mm

J8

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





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