ShinDengen

KC5SF60HRT

Thyristors
600V, 5A

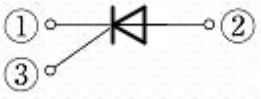
Feature

- Full Molded
- High Voltage
- High Sensitivity
- Tj=150°C
- Suitable for an Inrush Current Protection Circuit
- 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 temperrature	T_{stg}		-55 to 150	°C
Junction temperature	Tj		-40 to 150	°C
Repetitive peak off-state voltage	V_{DRM}	RGK=220Ω	600	V
Repetitive peak reverse voltage	V_{RRM}	(not guaranteed)	-	V
Average on-state Current	I_T(AV)	Tc=127°C, 50Hz sine wave, θ=180°, with heatsink	5	A
Peak surge on-state current	I_{TSM}	Tj=25°C, 50Hz sine wave, Non repetitive	82	A
Current squared time	I^2t	Tj=25°C, tp=10ms, Non repetitive	33.6	A^2s
Peak gate dissipation	P_{FGM}	f≧50Hz, Duty≦10%	5	W
Average gate dissipation	P_{FG}(AV)		0.5	W
Peak gate forward current	I_{FGM}	f=50Hz, Duty≦10%	2	A
Peak gate reverse voltage	V_{RGM}	f≧50Hz, Duty≦10%	6	V
Critical rate of rise of on-state current	di/dt		50	A/μs
Dielectric strength	Vdis	Terminals to case, AC 1 minute	2	kV
Mounting torque	TOR	(Recommended torque：0.3N･m)	0.5	N･m

※ ：See the original Specifications

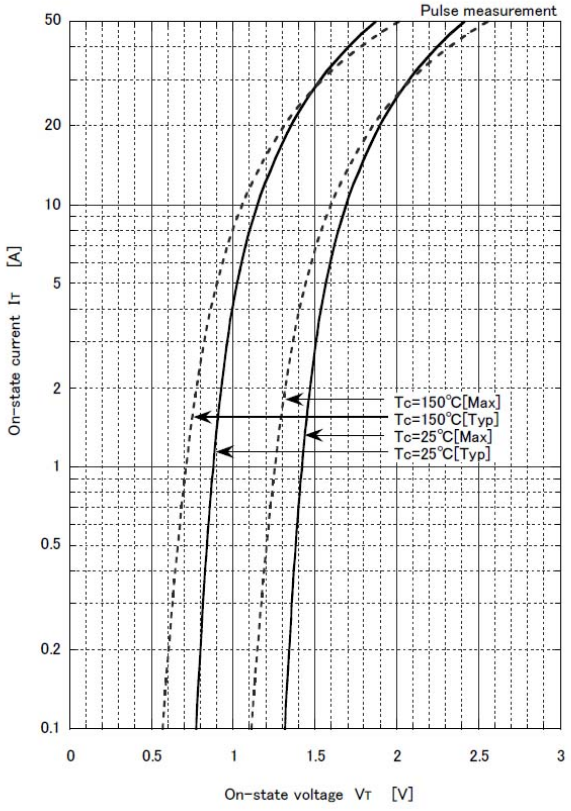
Electrical Characteristics (unless otherwise specified : Tc=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Repetitive off-state current	I_{DRM}	VD=600V, RGK=220Ω, Pulse measurement			10	μA
On-state voltage	V_T	IT=15A, Pulse measurement			1.8	V
Gate trigger voltage	V_{GT}	VD=6V, RL=100Ω			0.8	V
Gate trigger current	I_{GT}	VD=6V, RL=100Ω			100	μA
Gate non-trigger voltage	V_{GD}	Tj=150°C, VD=1/2VDRM, RGK=220Ω	0.1			V
Holding Current	I_H	IT=0.1A, RGK=220Ω			5	mA
Thermal Resistance	Rth(j-c)	Junction to case, With heatsink			2.73	°C/W

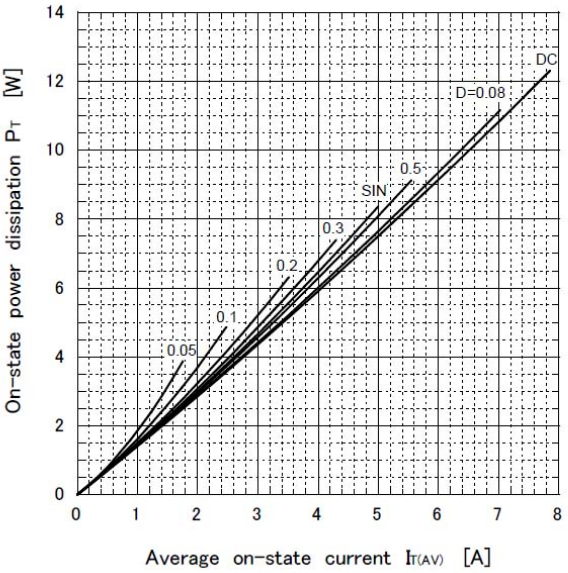
※ ：See the original Specifications

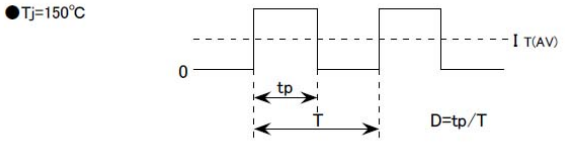
CHARACTERISTIC DIAGRAMS

On-state voltage – On-state current

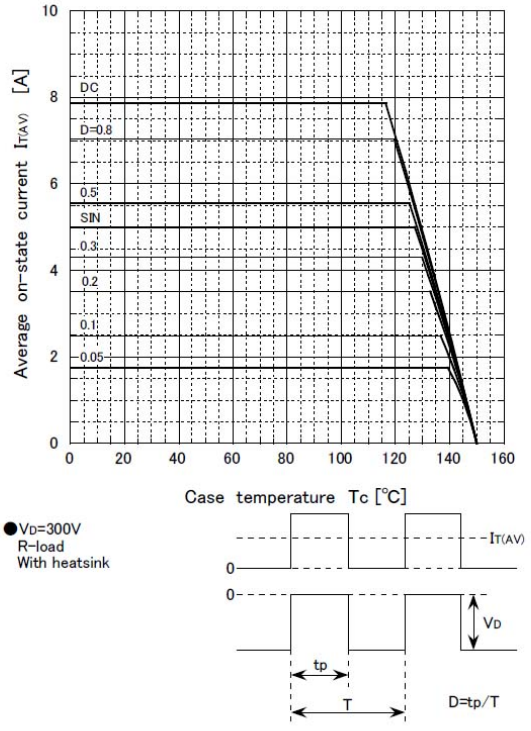


On-state power dissipation

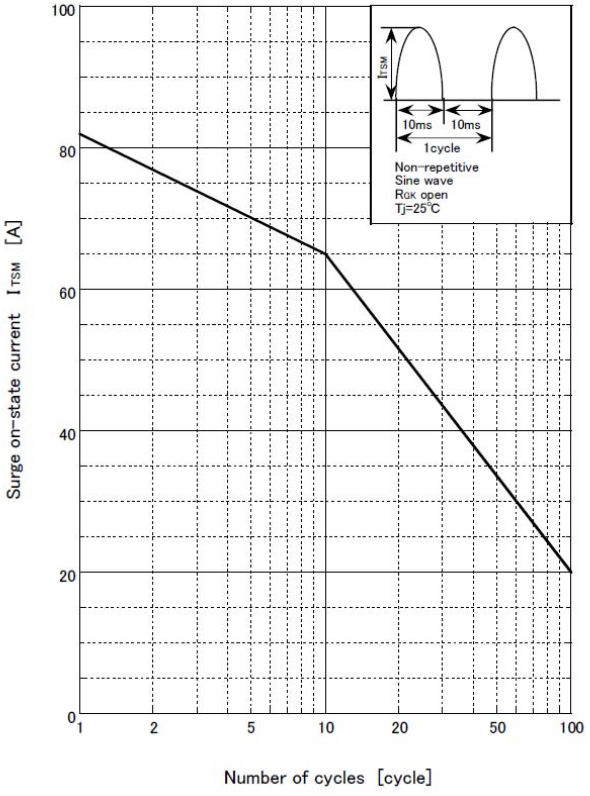




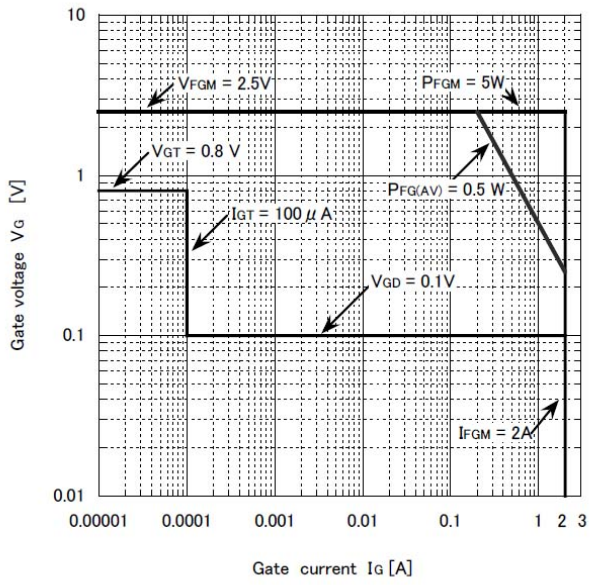
Derating curve Tc-IT(AV)



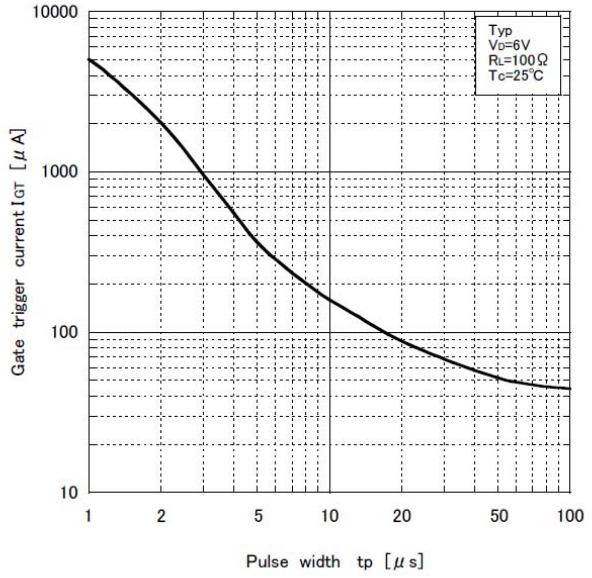
Surge on-state current capability



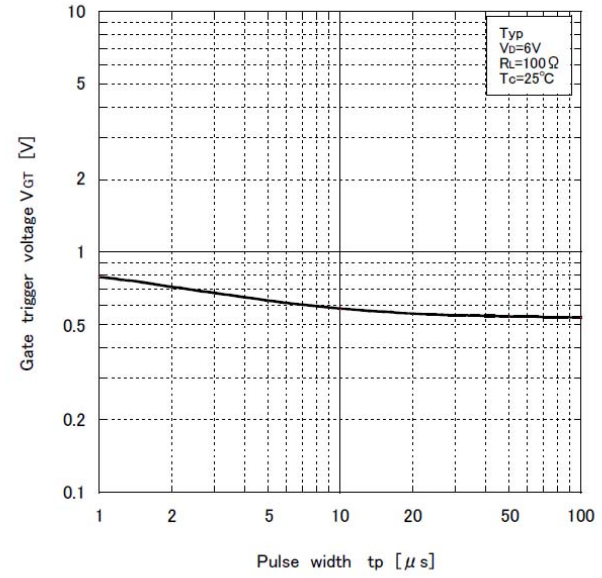
Gate characteristic



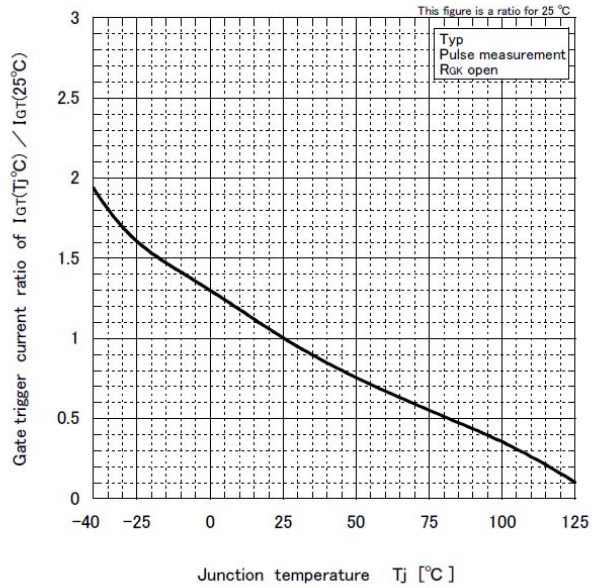
Gate trigger current – Pulse width



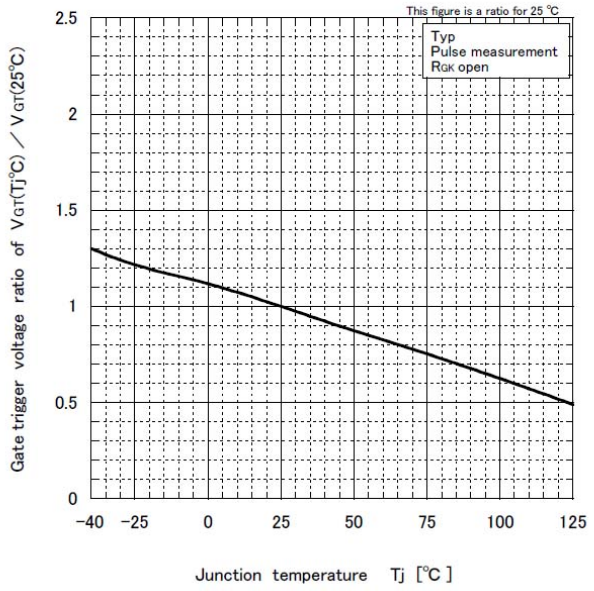
Gate trigger voltage – Pulse width



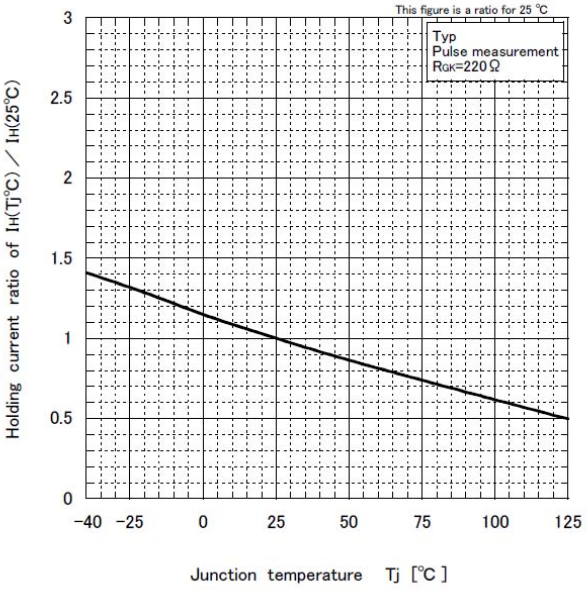
Gate trigger current – Junction temperature

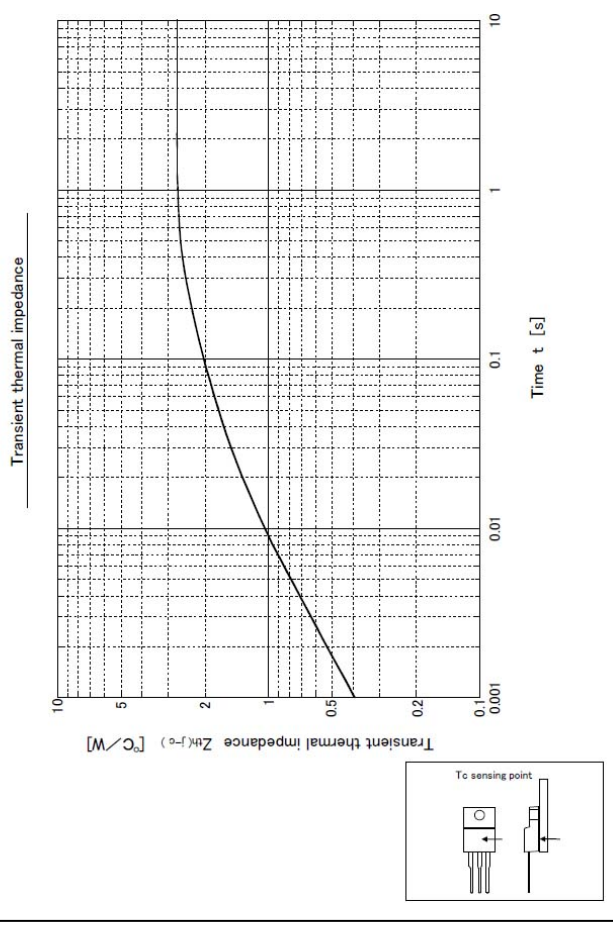


Gate trigger voltage – Junction temperature



Holding current – Junction temperature



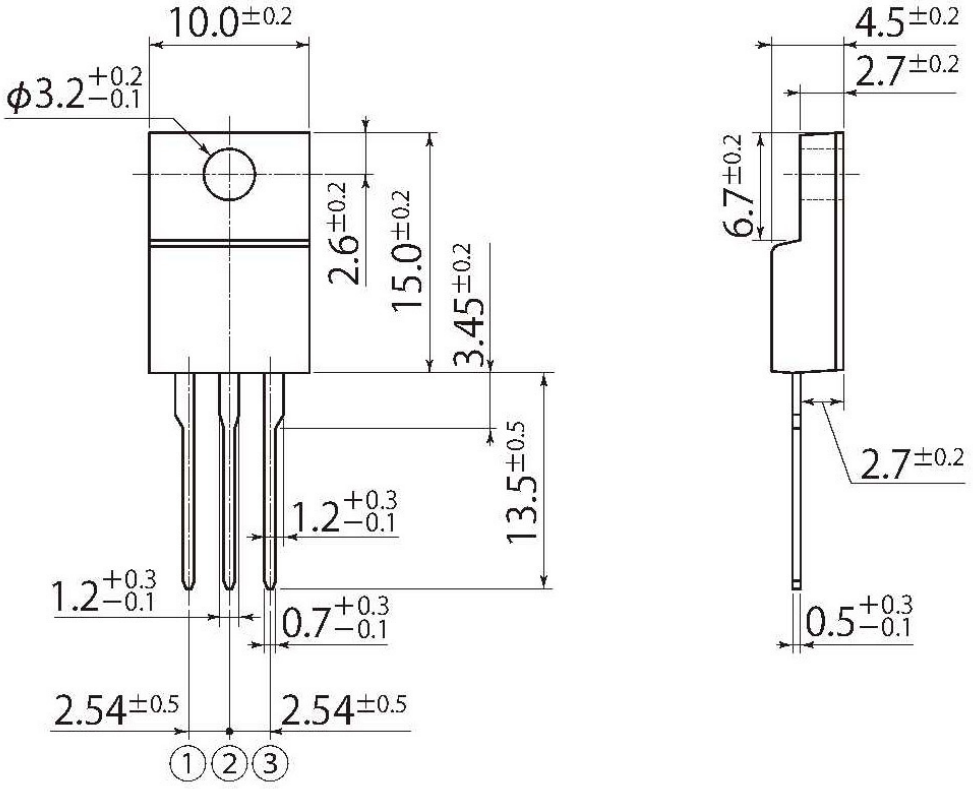


Outline Dimensions

unit:mm

J8

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



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