

# SF20LC30M

## Fast Recovery Diodes

300V, 20A

### Feature

- Full Molded
- High Recovery Speed
- Dielectric Strength 2kV
- Pb free terminal
- RoHS:Yes

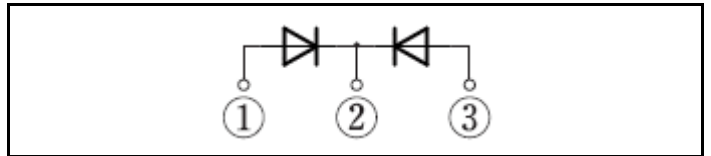
### OUTLINE

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 <sub>stg</sub>		-55 to 150	°C
Junction temperature	T <sub>j</sub>		-55 to 150	°C
Repetitive peak reverse voltage	V <sub>RRM</sub>		300	V
Average forward current	I <sub>F(AV)</sub>	50Hz sine wave, Resistance load, Rating for each diode I <sub>F(AV)</sub> /2, With heatsink, T <sub>c</sub> =107°C	20	A
Surge forward current	I <sub>FSM</sub>	50Hz sine wave, Non-repetitive 1 cycle, Peak value, T <sub>j</sub> =25°C	250	A
Surge forward current	I <sub>FSM1</sub>	t <sub>p</sub> =1ms, Sine wave, Non-repetitive, Peak value, Per diode, T <sub>j</sub> =25°C	630	A
Dielectric strength	V <sub>dis</sub>	Terminals to case, AC 1 minute	2	kV
Mounting torque	TOR	(Recommended torque : 0.3N·m)	0.5	N·m

※ : See the original Specifications

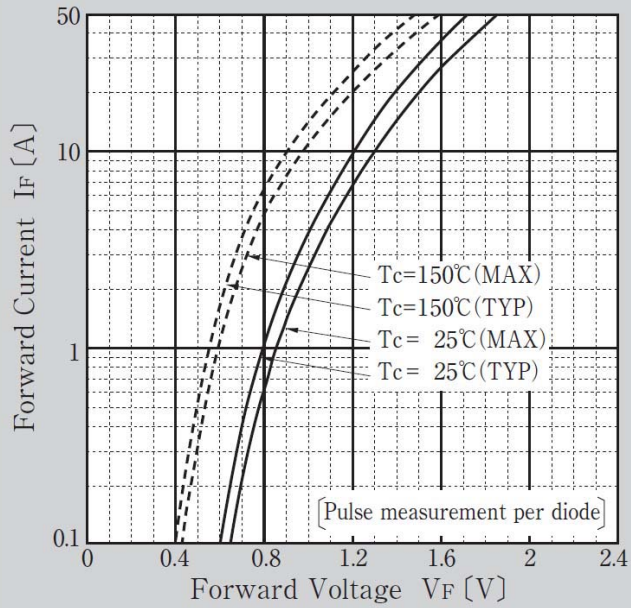
**Electrical Characteristics** (unless otherwise specified : Tc=25°C)

Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	$V_F$	IF=10A, Pulse measurement, Per diode		1.21	1.3	V
Reverse current	$I_R$	VR=300V, Pulse measurement, Per diode			25	$\mu$ A
Reverse recovery time	trr	IF=0.5A, IR=1.0A, 0.25IR, Per Diode			30	ns
Total capacitance	Ct	f=1MHz, VR=10V, Per diode		90		pF
Thermal resistance	Rth(j-c)	Junction to case			1.7	°C/W

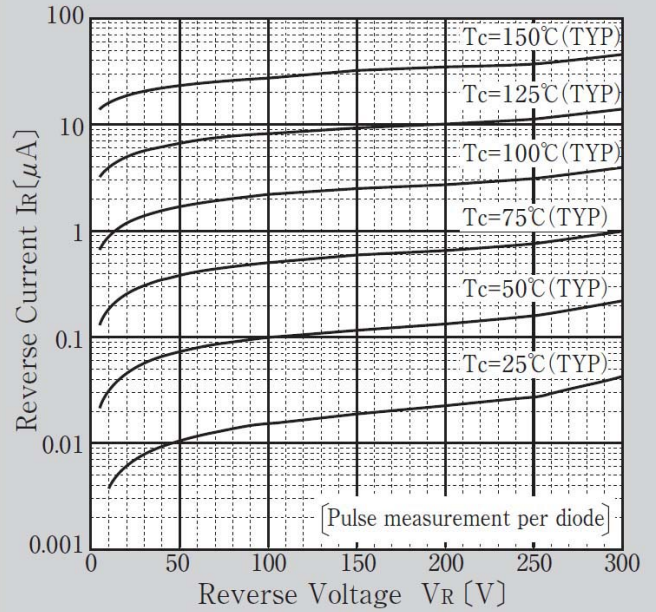
\* :See the original Specifications

# CHARACTERISTIC DIAGRAMS

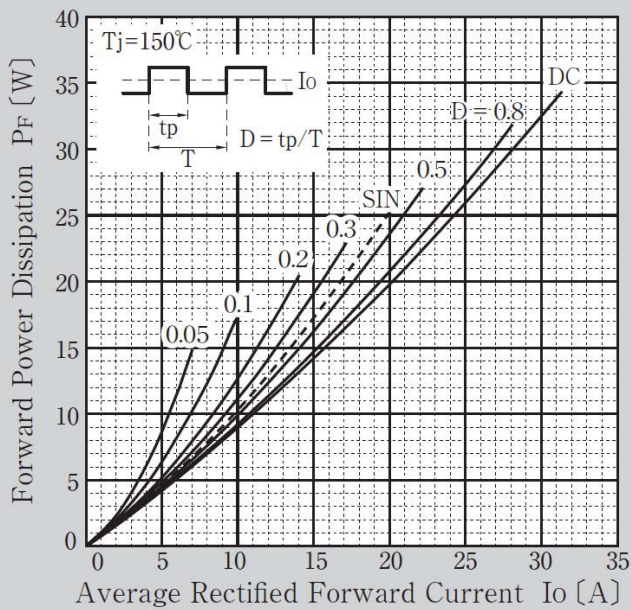
### Forward Voltage



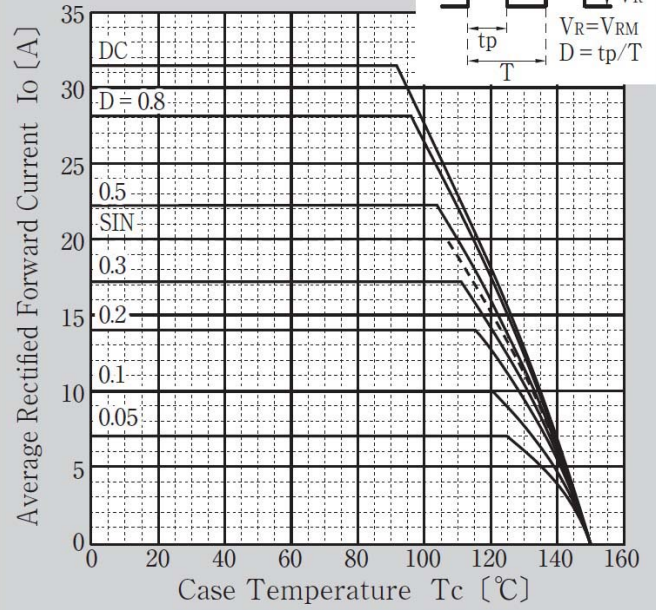
### Reverse Current



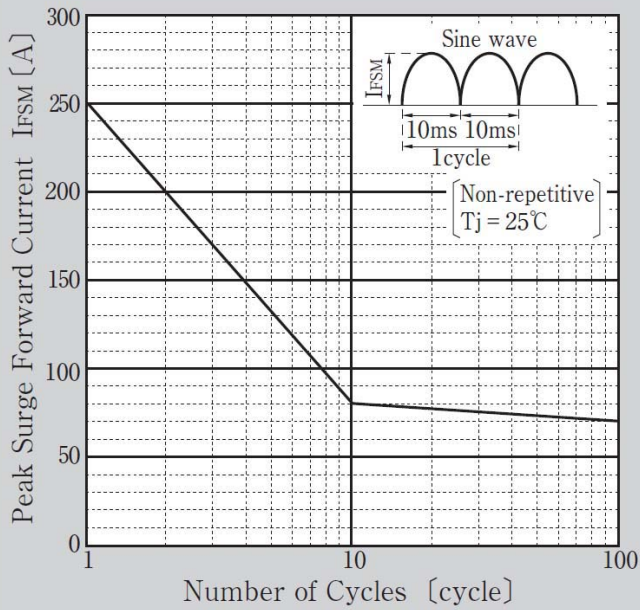
### Forward Power Dissipation



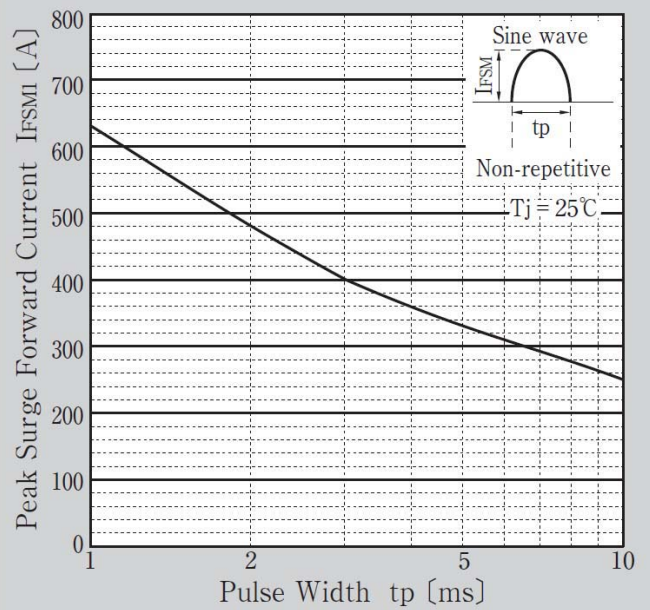
### Derating Curve



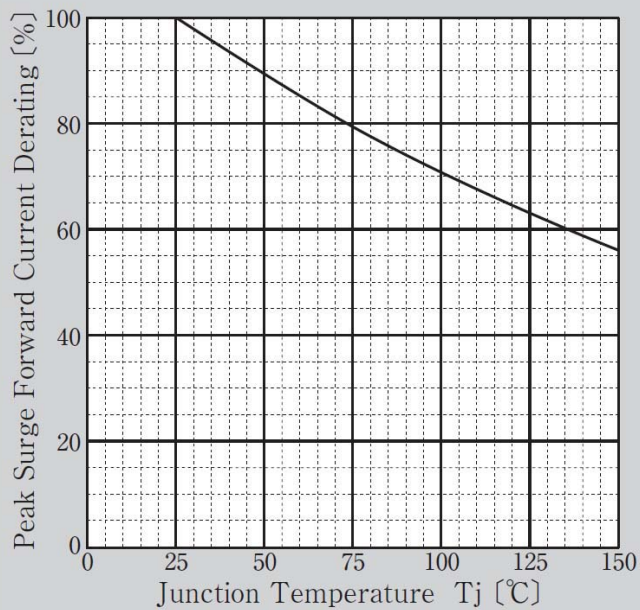
Peak Surge Forward Current Capability



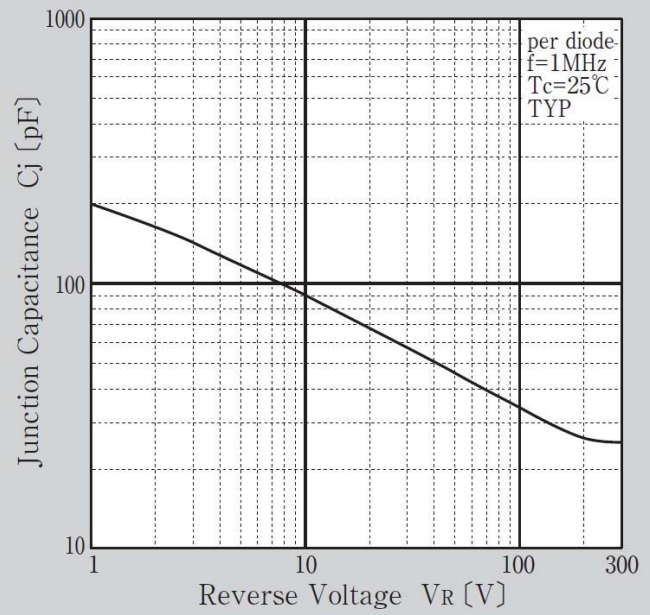
Peak Surge Forward Current Capability



Peak Surge Forward Current Derating vs Junction Temperature

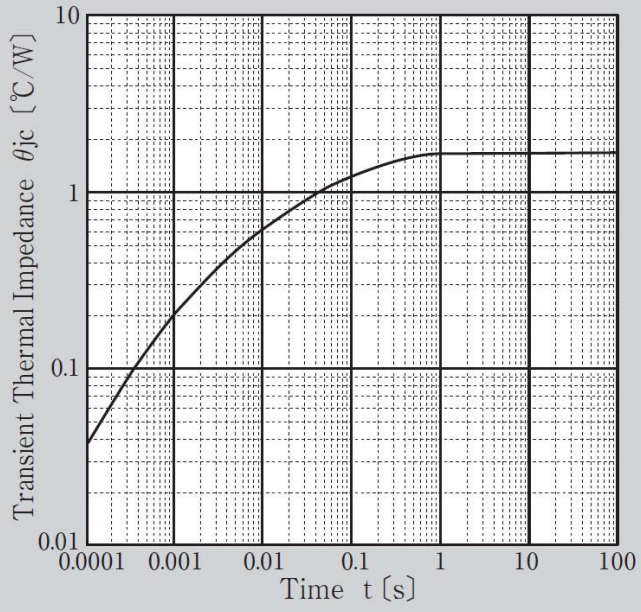


Junction Capacitance



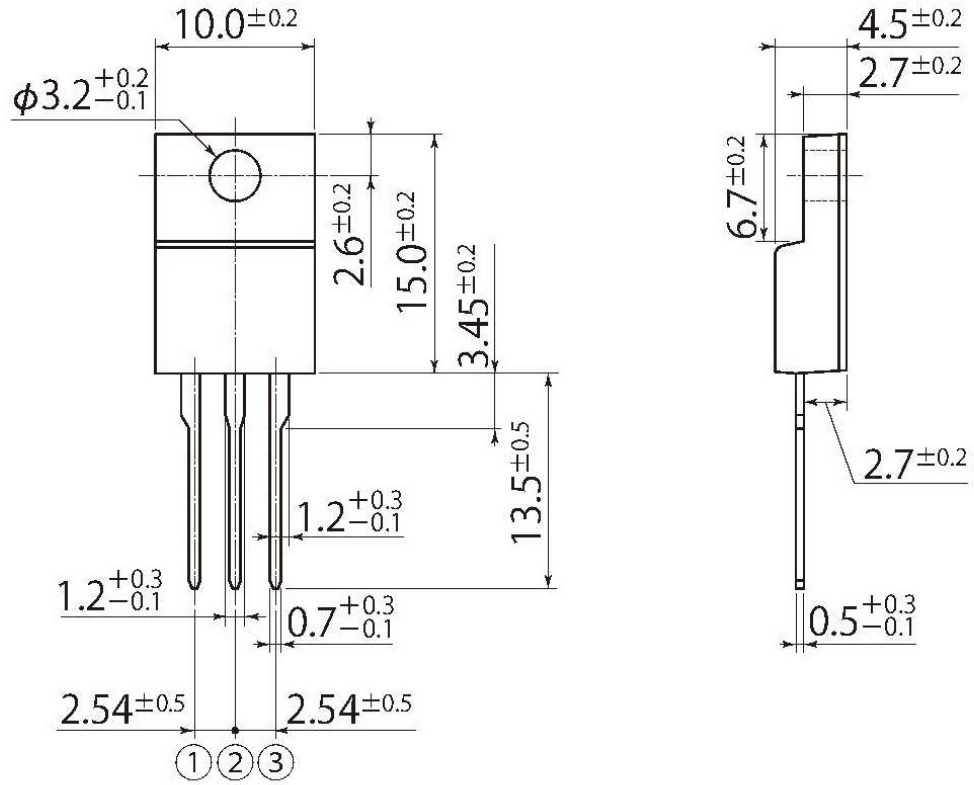


Transient Thermal Impedance



J8

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



## Notes

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