



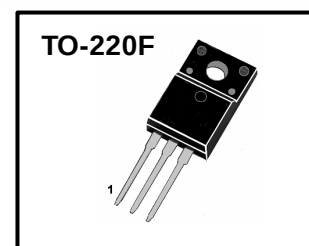
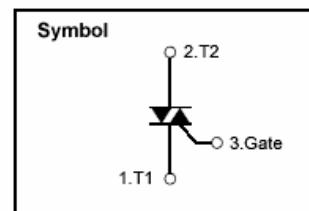
NON INSULATED TYPE SENSITIVE GATE TRIAC (TO-220F PACKAGE)

Features

- * Repetitive Peak Off-State Voltage: 600V
- * R.M.S On-state Current($I_{T(RMS)}=4A$)
- * High Commutation dv/dt
- * Sensitive Gate Triggering 4 Mode

General Description

The devices is sensitive gate triac suitable for direct coupling to TTL,HTL,CMOS and application such as various logic functions, low power AC switching applications, such as fan speed, small light controllers and home appliance equipment.



Absolute Maximum Ratings ($T_a=25^\circ C$)

T_{stg} ——Storage Temperature	-40~125
T_j ——Operating Junction Temperature	-40~125
P_{GM} ——Peak Gate Power Dissipation	1.5W
$P_{G(AV)}$ ——Average Gate Power Dissipation	0.1W
V_{DRM} ——Repetitive Peak Off-State Voltage	600V
$I_T(RMS)$ ——R.M.S On-State Current($T_a=95^\circ C$).....	4.0A
V_{GM} ——Peak Gate Voltage	7.0V
I_{GM} ——Peak Gate Current	1.0A
I_{TSM} ——Surge On-State Current (One Cycle, 50/60Hz,Peak,Non-Repetitive)	30/33A

**Electrical Characteristics** ($T_a=25$)

Symbol	Items	Min.	Typ.	Max.	Unit	Conditions
I_{DRM}	Repetitive Peak Off-State Current			1.0	mA	$V_D=V_{\text{DRM}}$, Single Phase, Half Wave, $T_J=125$
V_{TM}	Peak On-State Voltage			1.6	V	$I_T=6\text{A}$, Inst. Measurement
$I_{+\text{GT1}}$	Gate Trigger Current ()			5.0	mA	$V_D=6\text{V}$, $R_L=10\text{ ohm}$
$I_{-\text{GT1}}$	Gate Trigger Current ()			5.0	mA	$V_D=6\text{V}$, $R_L=10\text{ ohm}$
$I_{-\text{GT3}}$	Gate Trigger Current ()			5.0	mA	$V_D=6\text{V}$, $R_L=10\text{ ohm}$
$I_{+\text{GT3}}$	Gate Trigger Current ()			10.0	mA	$V_D=6\text{V}$, $R_L=10\text{ ohm}$
$V_{+\text{GT1}}$	Gate Trigger Voltage ()			1.4	V	$V_D=6\text{V}$, $R_L=10\text{ ohm}$
$V_{-\text{GT1}}$	Gate Trigger Voltage ()			1.4	V	$V_D=6\text{V}$, $R_L=10\text{ ohm}$
$V_{-\text{GT3}}$	Gate Trigger Voltage ()			1.4	V	$V_D=6\text{V}$, $R_L=10\text{ ohm}$
$V_{+\text{GT3}}$	Gate Trigger Voltage ()			1.8	V	$V_D=6\text{V}$, $R_L=10\text{ ohm}$
V_{GD}	Non-Trigger Gate Voltage	0.2			V	$T_J=125$, $V_D=1/2V_{\text{DRM}}$
(dv/dt) _c	Critical Rate of Rise of Off-State Voltage at Commutation	5			V/ μS	$T_J=125$, $V_D=2/3V_{\text{DRM}}$ (di/dt) _c = -0.5A/ms
I_{H}	Holding Current			10	mA	
R _{th(j-c)}	Thermal Resistance			3	/W	Junction to case



Performance Curves

Fig 1. Gate Characteristics

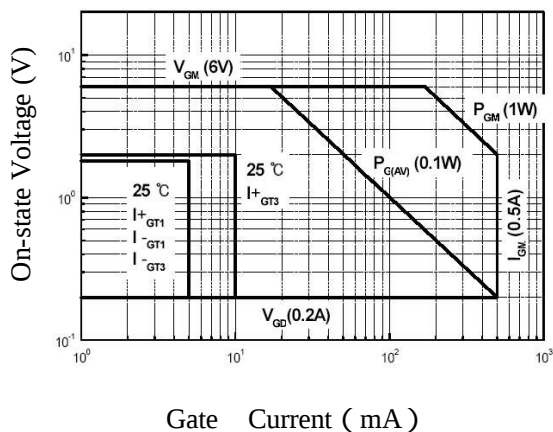


Fig 2. On-State Voltage

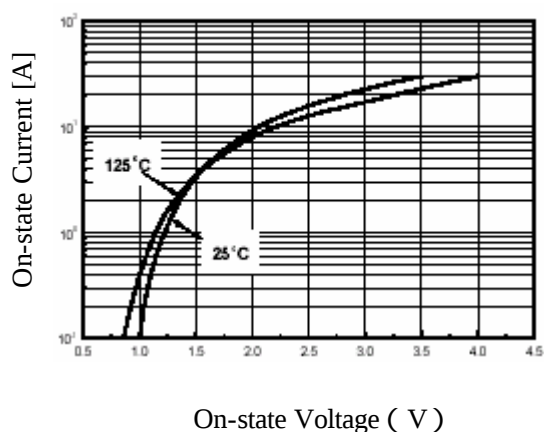


Fig 3. Gate Trigger Voltage vs. Junction Temperature

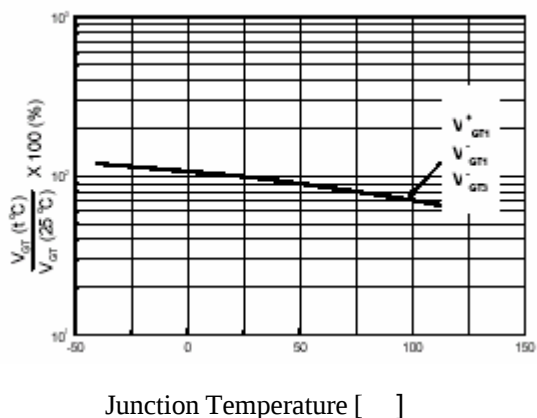


Fig 4. On State Current vs. Maximum Power Dissipation

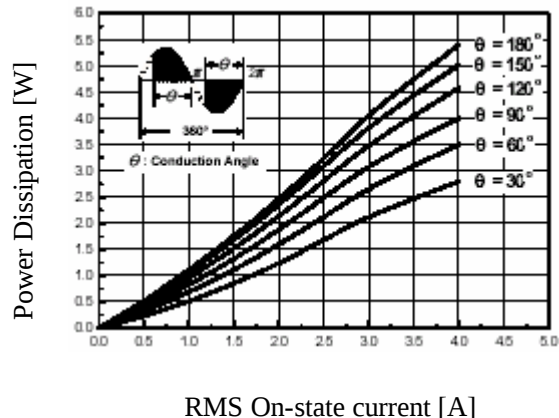


Fig 5. On State Current vs. Allowable Case Temperature

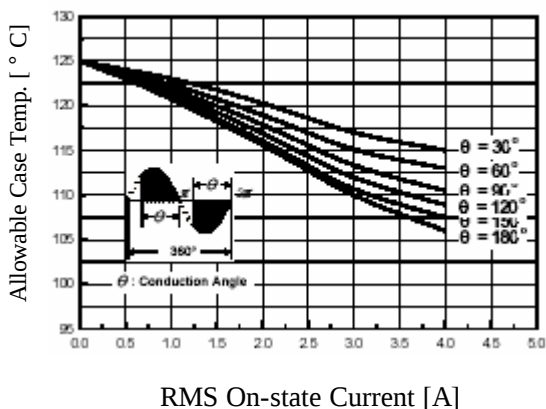


Fig 6. Surge On-State Current Rating (Non-Repetitive)

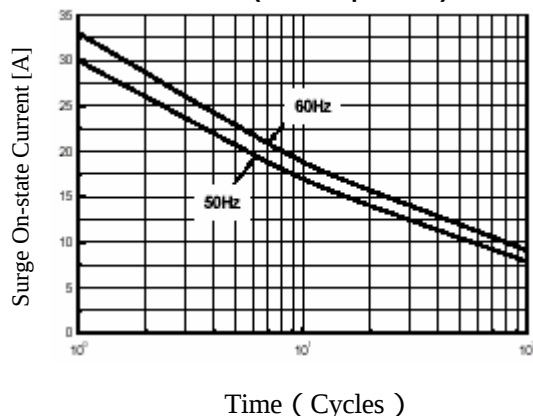
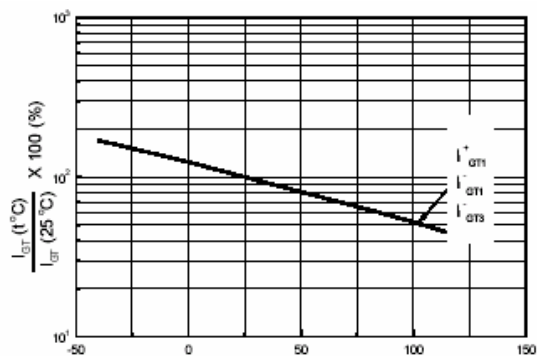


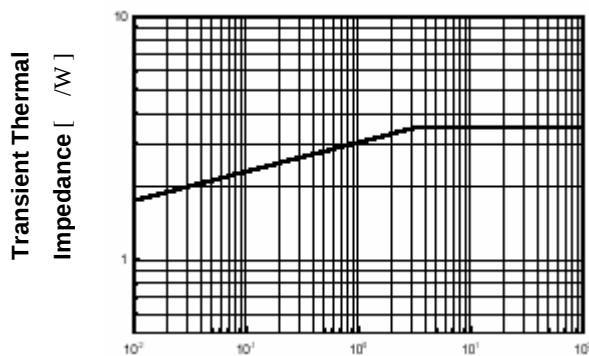


Fig 7. Gate Trigger Current vs.
Junction Temperature



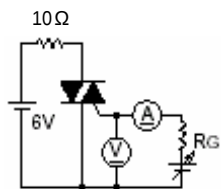
Junction Temperature [$^{\circ}C$]

Fig 8. Transient Thermal Impedance

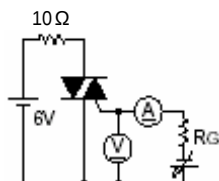


Time (sec)

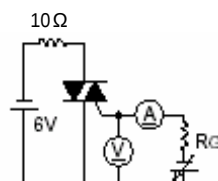
Fig 9. Gate Trigger Characteristics Test Circuit



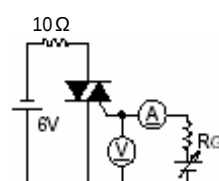
Test Procedure



Test Procedure



Test Procedure



Test Procedure