



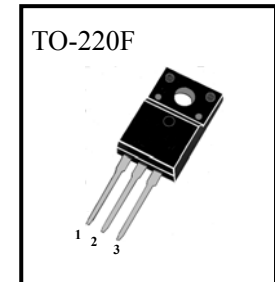
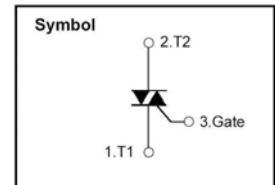
**INSULATED TYPE TRIAC (TO-220F PACKAGE)**

**Features**

- \* Repetitive Peak Off-State Voltage: 600V
- \* R.M.S On-state Current( $I_{T(RMS)}=8A$ )
- \* High Commutation  $dv/dt$

**General Description**

The Triac HTF8A60 is suitable for AC switching application, phase control application such as heater control, motor control, lighting control, and static switching relay.



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

$T_{stg}$	—Storage Temperature	.....	-40~125 $^{\circ}C$
$T_j$	—Operating Junction Temperature	.....	-40~125 $^{\circ}C$
$P_{GM}$	—Peak Gate Power Dissipation	.....	5W
$V_{DRM}$	—Repetitive Peak Off-State Voltage	.....	600V
$I_T$ (RMS)	—R.M.S On-State Current ( $T_a=89^{\circ}C$ )	.....	8A
$V_{GM}$	—Peak Gate Voltage	.....	10V
$I_{GM}$	—Peak Gate Current	.....	2.0A
$I_{TSM}$	—Surge On-State Current (One Cycle, 50/60Hz,Peak,Non-Repetitive)	.....	80/88A
$V_{ISO}$	—Isolation Breakdown Voltage (RMS.A.C.1 minute)	.....	1500V

**Electrical Characteristics ( $T_a=25^{\circ}C$ )**

Symbol	Items	Min.	Typ.	Max.	Unit	Conditions
$I_{DRM}$	Repetitive Peak Off-State Current			2.0	mA	$V_D=V_{DRM}$ , Single Phase,Half Wave, $T_J=125^{\circ}C$
$V_{TM}$	Peak On-State Voltage			1.4	V	$I_T=12A$ , Inst. Measurement
$I_{+GT1}$	Gate Trigger Current ( I )			30	mA	$V_D=6V$ , $R_L=10\ ohm$
$I_{-GT1}$	Gate Trigger Current ( II )			30	mA	$V_D=6V$ , $R_L=10\ ohm$
$I_{-GT3}$	Gate Trigger Current ( III )			30	mA	$V_D=6V$ , $R_L=10\ ohm$
$V_{+GT1}$	Gate Trigger Voltage ( I )			1.5	V	$V_D=6V$ , $R_L=10\ ohm$
$V_{-GT1}$	Gate Trigger Voltage ( II )			1.5	V	$V_D=6V$ , $R_L=10\ ohm$
$V_{-GT3}$	Gate Trigger Voltage ( III )			1.5	V	$V_D=6V$ , $R_L=10\ ohm$
$V_{GD}$	Non-Trigger Gate Voltage	0.2			V	$T_J=125^{\circ}C$ , $V_D=1/2V_{DRM}$
$(dv/dt)_c$	Critical Rate of Rise of Off-State Voltage at Commutation	10			V/ $\mu S$	$T_J=125^{\circ}C$ , $V_D=2/3V_{DRM}$ $(di/dt)_c=-4A/ms$
$I_H$	Holding Current		15		mA	
$R_{th(j-c)}$	Thermal Resistance			3.7	$^{\circ}C/W$	Junction to case



## Performance Curves

Fig 1. Gate Characteristics

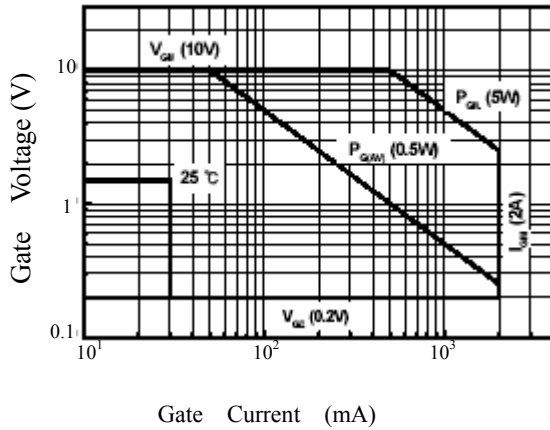


Fig 2. On-State Voltage

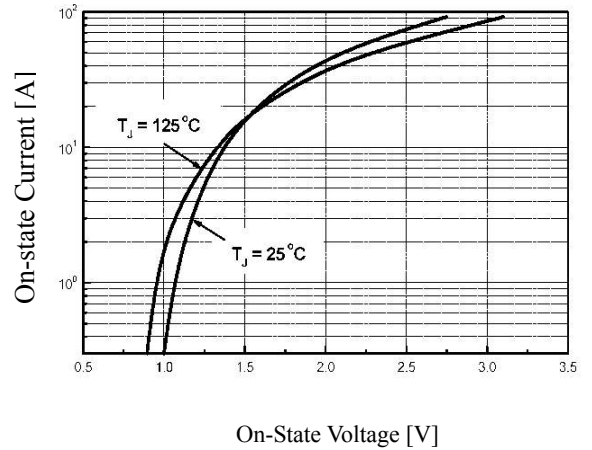


Fig 3. Gate Trigger Voltage vs. Junction Temperature

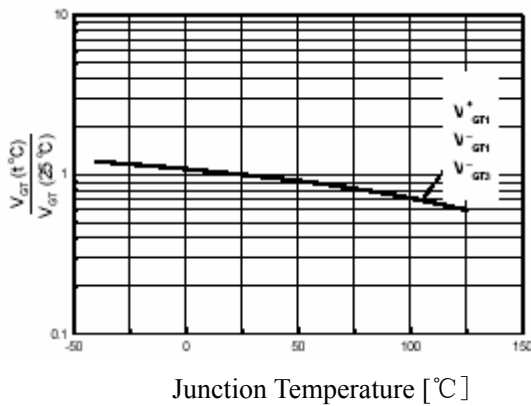


Fig 4. On State Current vs. Maximum Power Dissipation

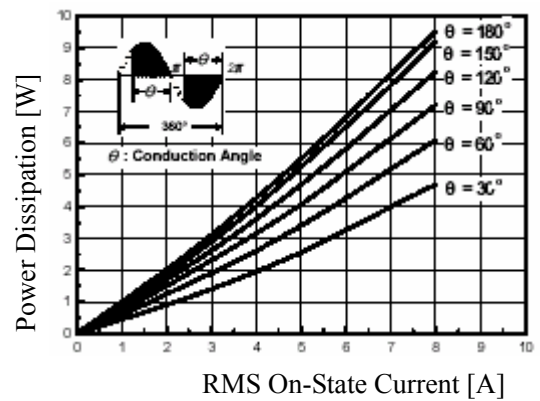


Fig 5. On State Current vs. Allowable Case Temperature

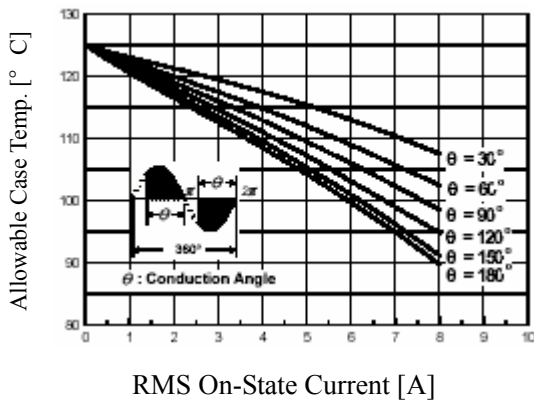


Fig 6. Surge On-State Current Rating (Non-Repetitive)

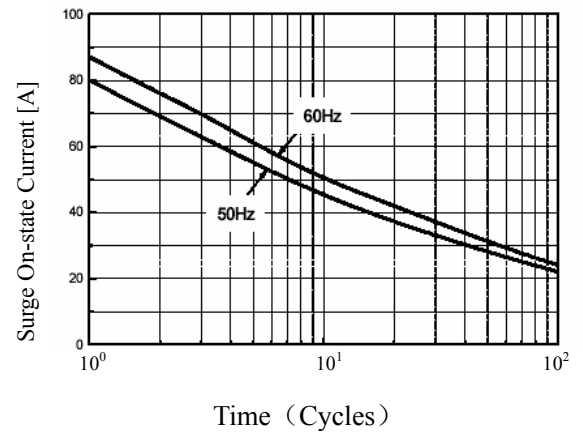




Fig 7. Gate Trigger Current vs. Junction Temperature

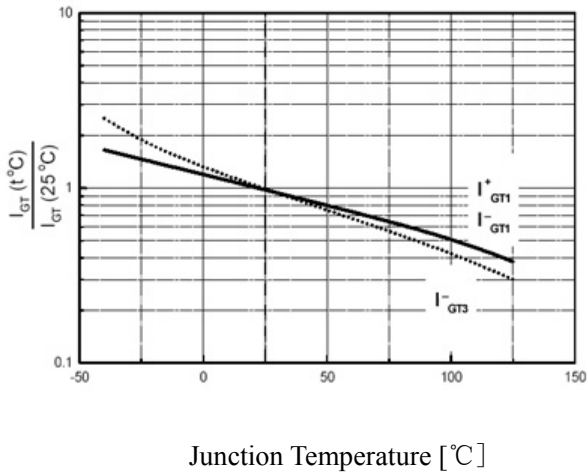


Fig 8. Transient Thermal Impedance

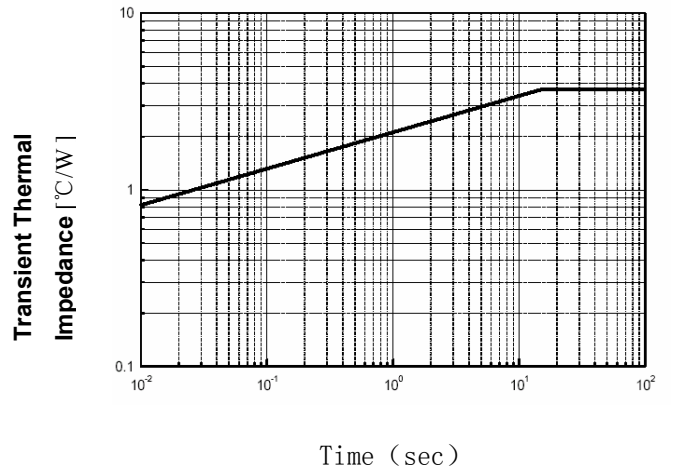
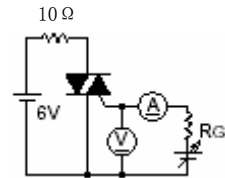
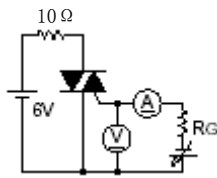


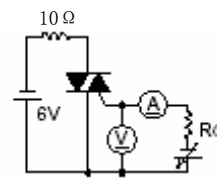
Fig 9. Gate Trigger Characteristics Test Circuit



Test Procedure I



Test Procedure II



Test Procedure III