



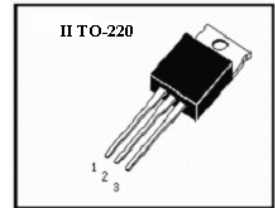
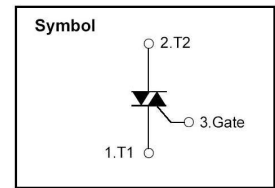
## INNER INSULATED TYPE TRIAC (II TO-220 PACKAGE)

### Features

- \* Repetitive Peak Off-State Voltage: 600V
- \* R.M.S On-state Current( $I_{T(RMS)}=20A$ )
- \* High Commutation  $dv/dt$

### General Description

The Triac HBTA8A60 is suitable for AC switching application, phase control application such as heater control, motor control, lighting control, and static switching relay.



### Absolute Maximum Ratings ( $T_a=25$ )

$T_{stg}$ —Storage Temperature.....	-40~125
$T_j$ —Operating Junction Temperature .....	-40~125
$P_{GM}$ —Peak Gate Power Dissipation.....	5W
$V_{DRM}$ —Repetitive Peak Off-State Voltage.....	600V
$I_T$ (RMS) —R.M.S On-State Current ( $T_c=66$ ) .....	20A
$V_{GM}$ —Peak Gate Voltage.....	10V
$I_{GM}$ —Peak Gate Current.....	2.0A
$I_{TSM}$ —Surge On-State Current (One Cycle, 50/60Hz,Peak,Non-Repetitive).....	170/190A
$V_{ISO}$ —RMS Isolation Breakdown Voltage.....	2500V

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

Symbol	Items	Min.	Max.	Unit	Conditions
$I_{DRM}$	Repetitive Peak Off-State Current		2.0	mA	$V_D=V_{DRM}$ , Single Phase,Half Wave, $T_J=125$
$V_{TM}$	Peak On-State Voltage		1.6	V	$I_T=12A$ , Inst. Measurement
$I_{+GT1}$	Gate Trigger Current ( )		30	mA	$V_D=6V$ , $R_L=10$ ohm
$I_{-GT1}$	Gate Trigger Current ( )		30	mA	$V_D=6V$ , $R_L=10$ ohm
$I_{-GT3}$	Gate Trigger Current ( )		30	mA	$V_D=6V$ , $R_L=10$ ohm
$V_{+GT1}$	Gate Trigger Voltage ( )		1.5	V	$V_D=6V$ , $R_L=10$ ohm
$V_{-GT1}$	Gate Trigger Voltage ( )		1.5	V	$V_D=6V$ , $R_L=10$ ohm
$V_{-GT3}$	Gate Trigger Voltage ( )		1.5	V	$V_D=6V$ , $R_L=10$ ohm
$V_{GD}$	Non-Trigger Gate Voltage	0.2		V	$T_J=125$ , $V_D=1/2V_{DRM}$
$(dv/dt)_c$	Critical Rate of Rise of Off-State Voltage at Commutation	10		$V/\mu S$	$T_J=125$ , $V_D=2/3V_{DRM}$ $(di/dt)_c=-4.0A/ms$
$R_{th(j-c)}$	Thermal Resistance		2.5	$/W$	Junction to case
$I_H$	Holding Current		25	mA	



## Performance Curves

Fig 1. Gate Characteristics

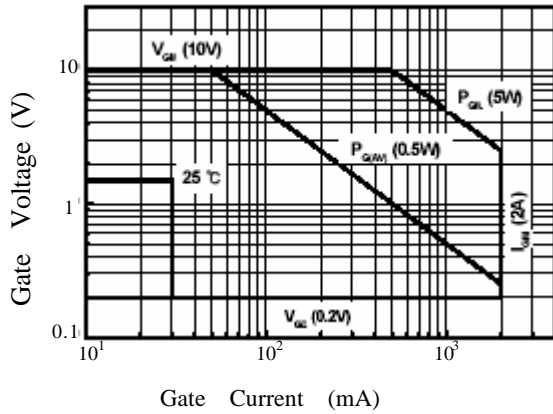


Fig 3. Gate Trigger Voltage vs. Junction Temperature

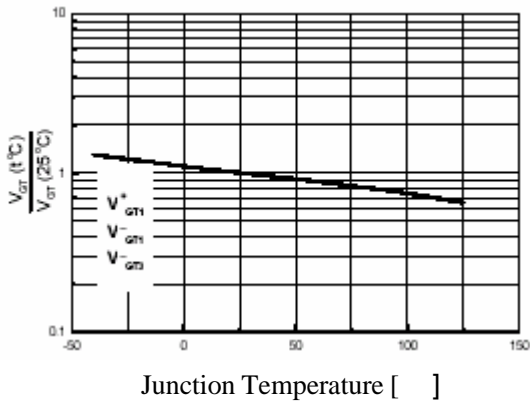


Fig 5. On State Current vs. Allowable Case Temperature

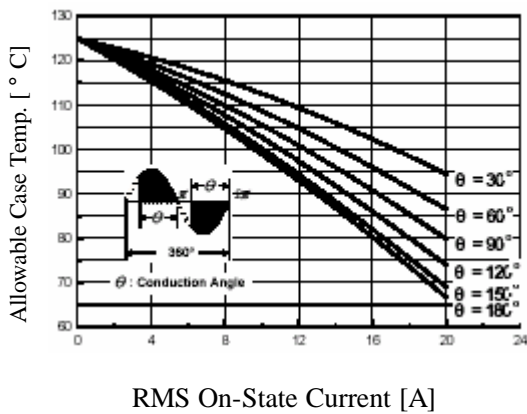


Fig 2. On-State Voltage

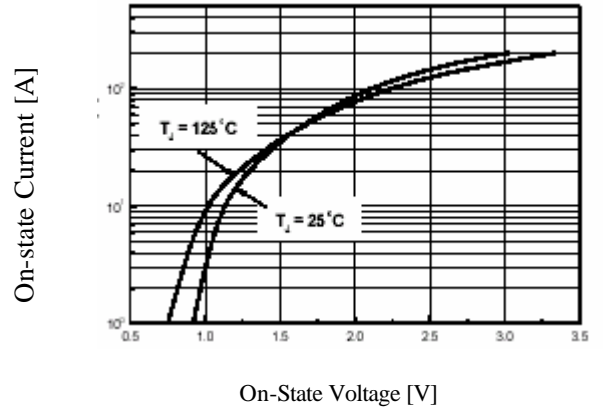


Fig 4. On State Current vs. Maximum Power Dissipation

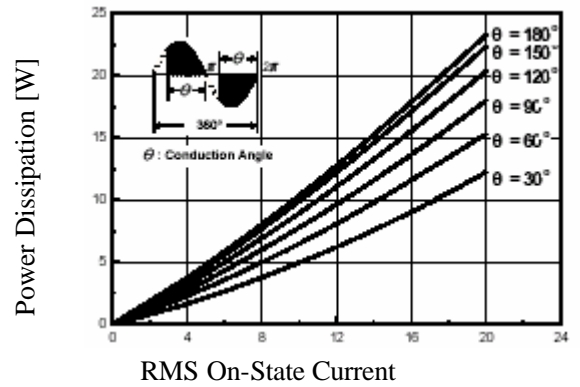
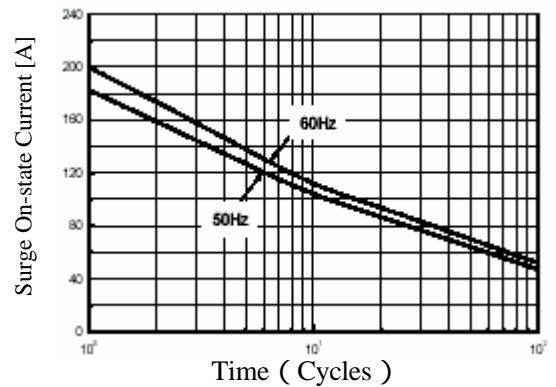
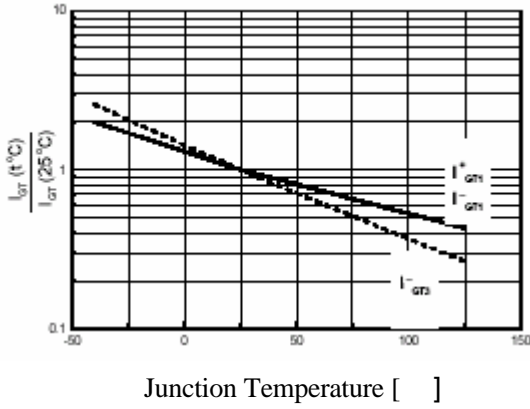


Fig 6. Surge On-State Current Rating (Non-Repetitive)

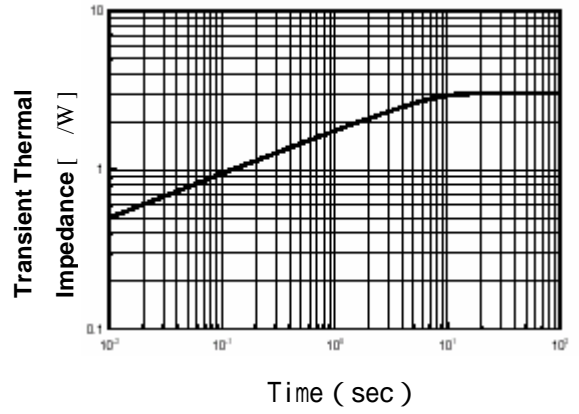




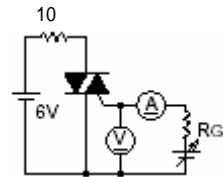
**Fig 7. Gate Trigger Current vs. Junction Temperature**



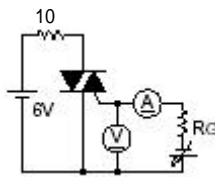
**Fig 8. Transient Thermal Impedance**



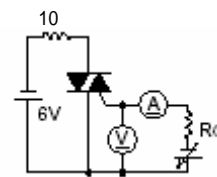
**Fig 9. Gate Trigger Characteristics Test Circuit**



Test Procedure



Test Procedure



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