

**INNER INSULATED TYPE TRIAC (II TO-220 PACKAGE)****Features**

- * Repetitive Peak Off-State Voltage: 600V
- * R.M.S On-state Current($I_{T(RMS)}=16A$)
- * High Commutation dv/dt
- * Isolation Voltage ($V_{ISO}=2500V$ AC)

General Description

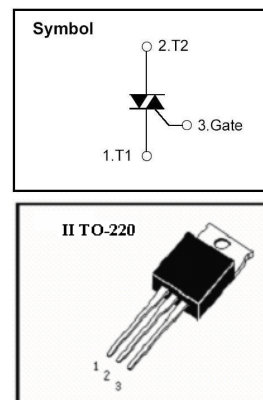
The Triac HBTA16A60 is suitable for AC switching application, phase control application such as heater control, motor control, lighting control, and static switching relay.

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

T_{stg}	—Storage Temperature	-40~125°C
T_j	—Operating Junction Temperature	-40~125°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 ($T_a=68^{\circ}C$)	16A
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)	155/170A
V_{ISO}	—RMS Isolation Breakdown Voltage	2500V

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

Symbol	Items	Min.	Max.	Unit	Conditions
I_{DRM}	Repetitive Peak Off-State Current		2.0	mA	$V_D=V_{DRM}$, Single Phase, Half Wave, $T_J=125^{\circ}C$
V_{TM}	Peak On-State Voltage		1.4	V	$I_T=25A$, 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/ μS	$T_J=125^{\circ}C$, $V_D=2/3V_{DRM}$ $(di/dt)_c=-8.0A/ms$
$R_{th(j-c)}$	Thermal Resistance		3.0	$^{\circ}C/W$	Junction to case
I_H	Holding Current		25	mA	





Performance Curves

Fig 1. Gate Characteristics

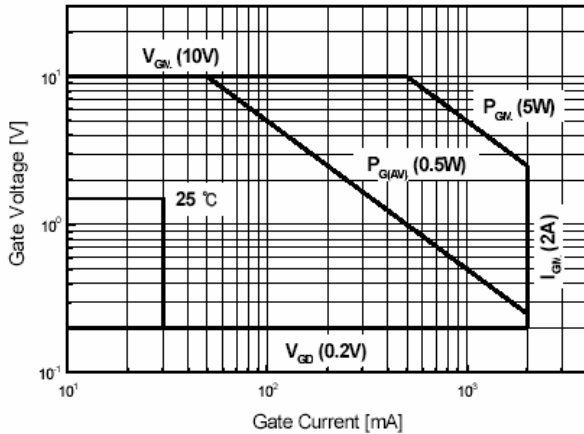


Fig 2. On-State Voltage

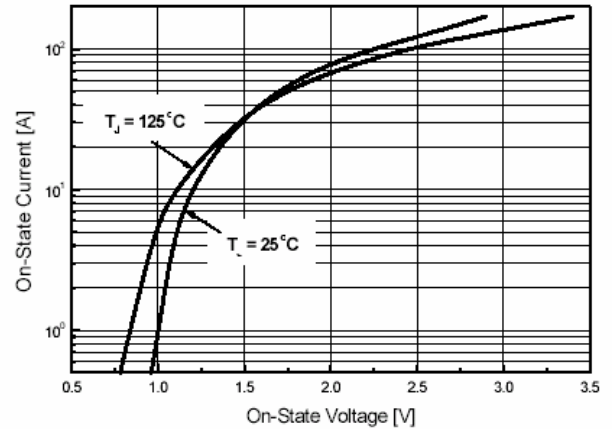


Fig 3. On State Current vs. Maximum Power Dissipation

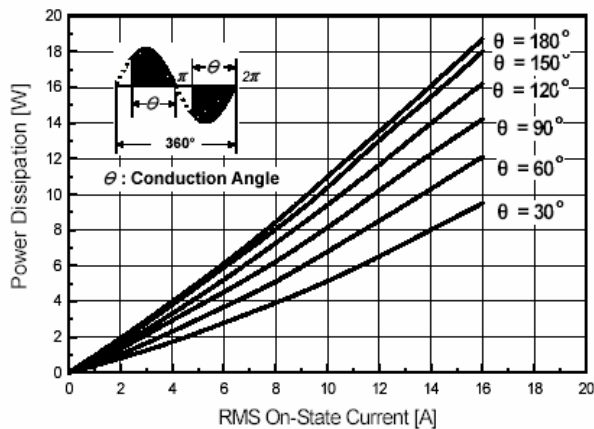


Fig 4. On State Current vs. Allowable Case Temperature

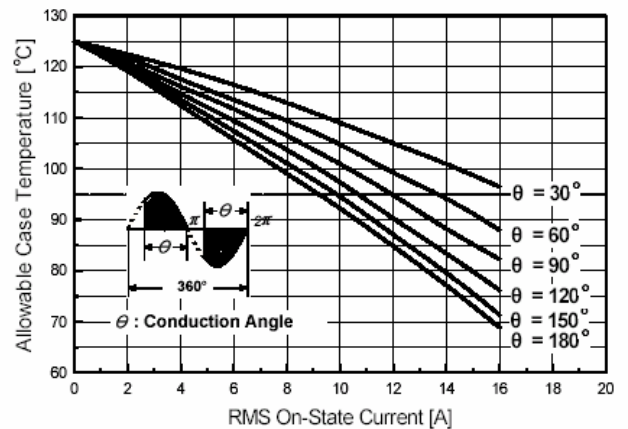


Fig 5. Surge On-State Current Rating (Non-Repetitive)

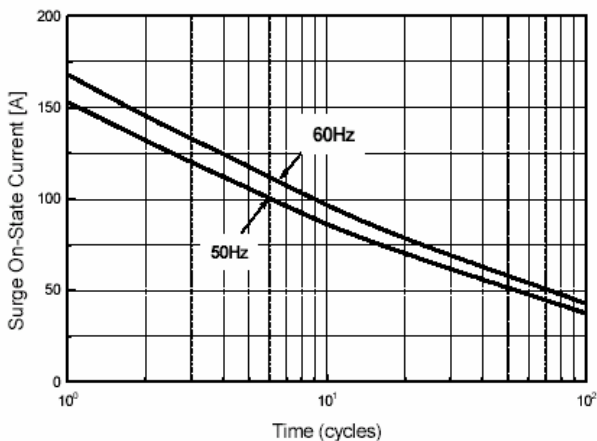


Fig 6. Gate Trigger Voltage vs. Junction Temperature

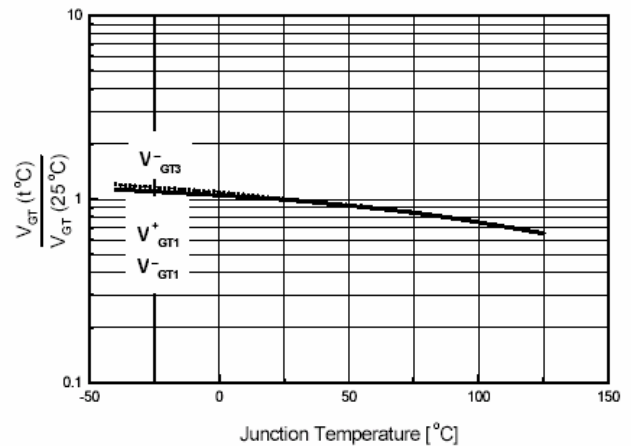




Fig 7. Gate Trigger Current vs. Junction Temperature

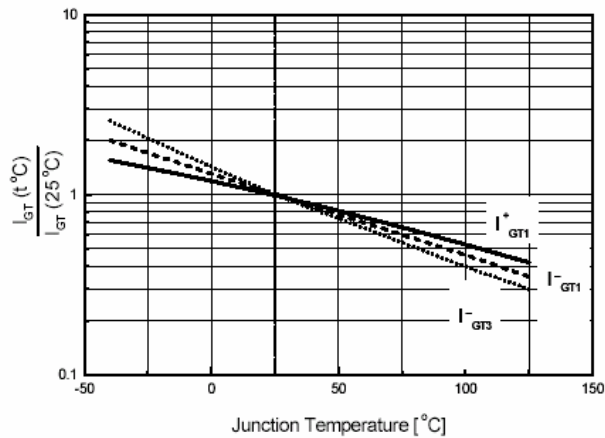


Fig 8. Transient Thermal Impedance

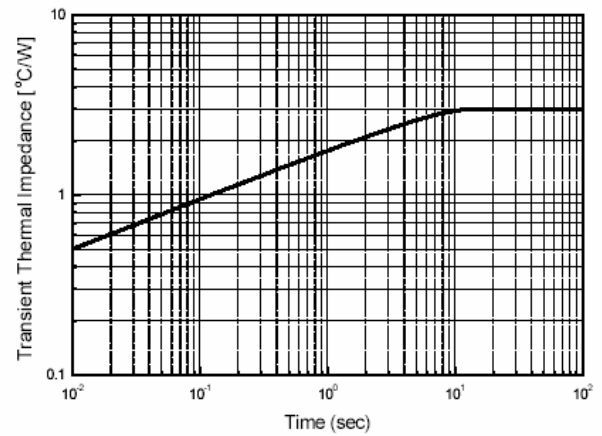
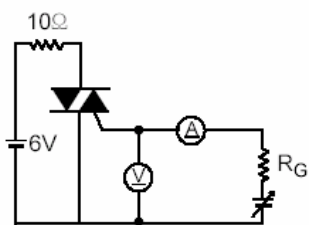
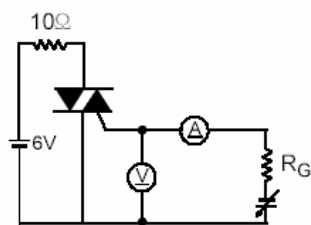


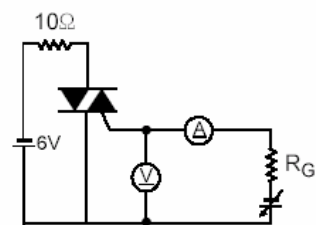
Fig 9. Gate Trigger Characteristics Test Circuit



Test Procedure I



Test Procedure II



Test Procedure III