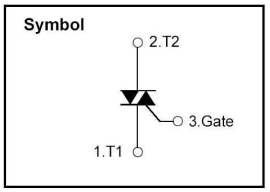
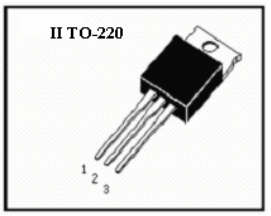
Shantou Huashan Electronic Devices Co.,Ltd.

HBTA12A60

INNER INSULATED TYPE TRIAC (II TO-220 PACKAGE)





Features

*** Repetitive Peak Off-State Voltage: 600V**

*** R.M.S On-state Current($I_{T(RMS)}$=12A)**

*** 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（Ta=79℃）…… 12A

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)…… 119/130A

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	VD=VDRM, Single Phase,Half Wave, TJ=125℃
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℃, V_D=1/2V_{DRM}
(dv/dt)c	Critical Rate of Rise of Off-State Voltage at Commutation	10			V/μS	TJ=125℃,VD=2/3VDRM (di/dt)c=-4.0A/ms
Rth(j-c)	Thermal Resistance			3.3	℃/W	Junction to case
I_H	Holding Current		20		mA	

Performance Curves

Fig 1. Gate Characteristics

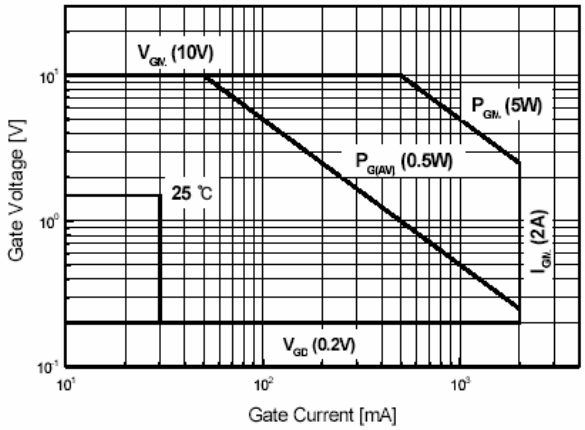


Fig 2. On-State Voltage

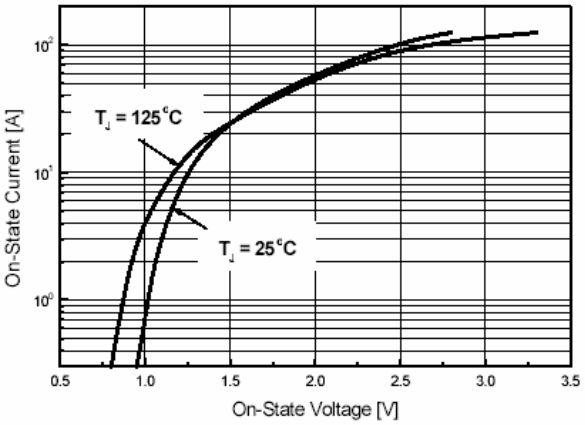


Fig 3. On State Current vs. Maximum Power Dissipation

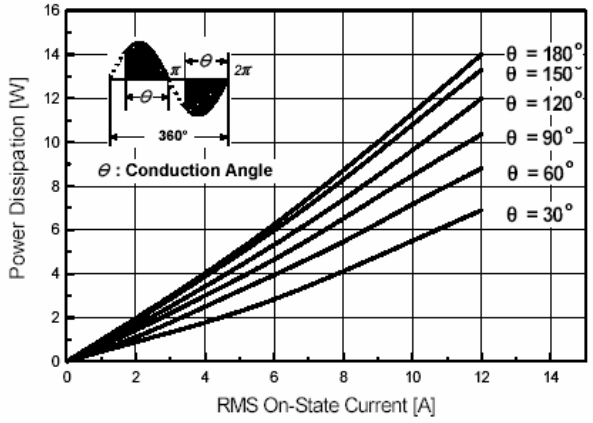


Fig 4. On State Current vs. Allowable Case Temperature

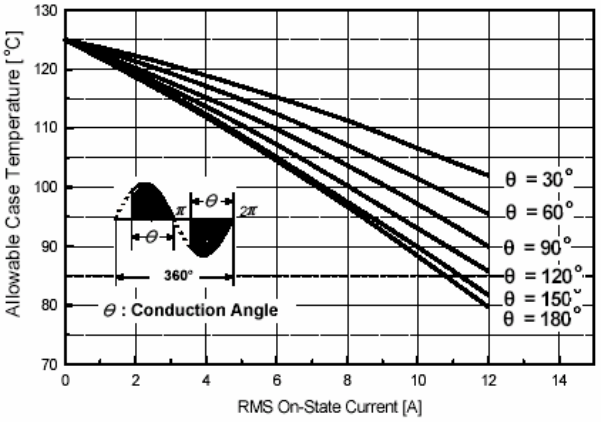


Fig 5. Surge On-State Current Rating (Non-Repetitive)

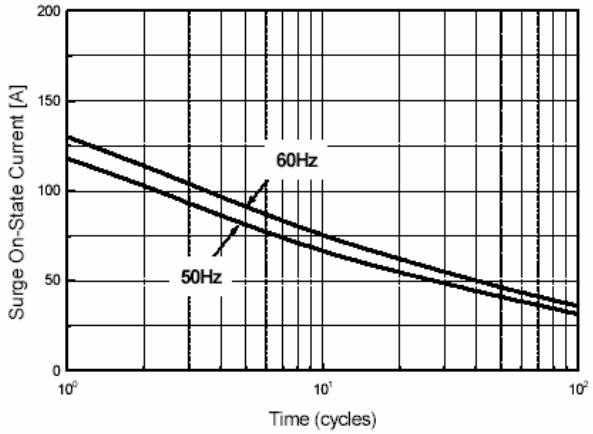


Fig 6. Gate Trigger Voltage vs. Junction Temperature

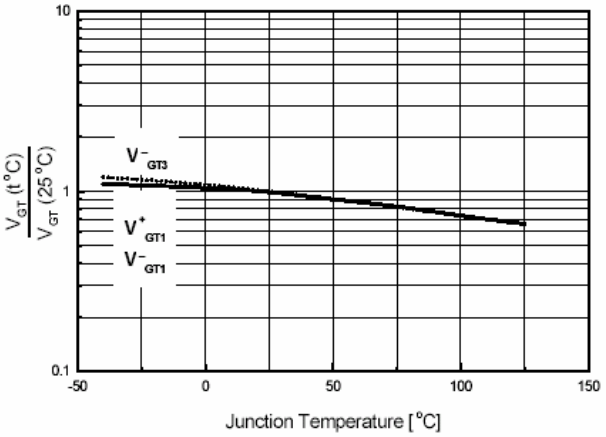


Fig 7. Gate Trigger Current vs. Junction Temperature

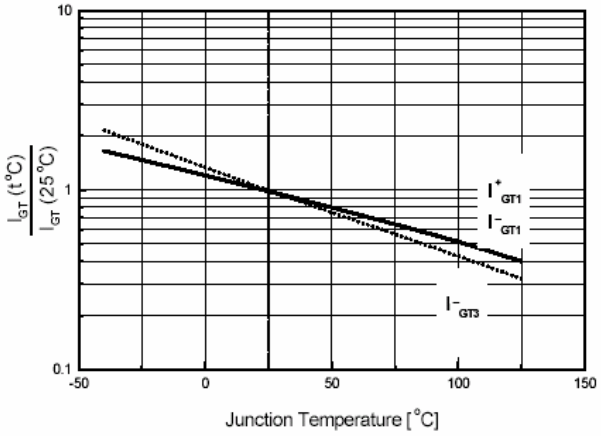


Fig 8. Transient Thermal Impedance

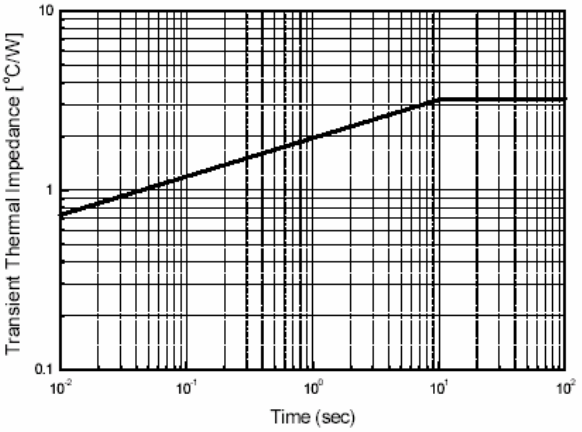


Fig 9. Gate Trigger Characteristics Test Circuit