

HTx8-600

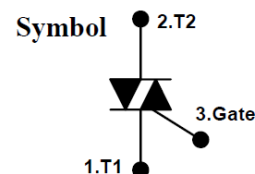
600V 8A TRIAC

FEATURES

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

$$V_{DRM} = 600 V$$

$$I_{T(RMS)} = 8.0 A$$



1.T1 2. T2 3. Gate

TO-220



HTP8-600

TO-220F



HTS8-600

General Description

The TRIAC HTP8-600 is suitable for AC switching application, phase control application such as heater control, motor control, lighting control, and static switching relay.

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

Symbol	Parameter		Value	Units
V_{DRM}	Repetitive Peak Off-State Voltage		600	V
$I_{T(RMS)}$	R.M.S On-State Current ($T_a = 105^{\circ}C$)	HTP8-600	8	A
	R.M.S On-State Current ($T_c = 89^{\circ}C$)	HTS8-600		
I_{TSM}	Surge On-State Current (One Cycle, 50/60Hz, Peak, Non Repetitive)	50Hz	80	A
		60Hz	88	A
V_{GM}	Peak Gate Voltage		10	V
I_{GM}	Peak Gate Current		2	A
P_{GM}	Peak Gate Power Dissipation		5	W
V_{ISO}	Isolation Breakdown Boltate, AC RMS 1Min (HTS8-600 only)		1500	V
T_{STG}	Storage Temperature Range		-40 to +125	$^{\circ}C$
T_J	Operating Temperature		-40 to +125	$^{\circ}C$

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

Symbol	Parameter	Test Conditions		Min	Typ	Max	Units
I_{GT}	Gate Trigger Current	$V_D=6V$, $R_L=10\Omega$	1+, 1-, 3-			30	mA
V_{GT}	Gate Trigger Voltage	$V_D=6V$, $R_L=10\Omega$	1+, 1-, 3-			1.5	V
V_{GD}	Non Trigger Gate Voltage	$T_J=125^\circ\text{C}$, $V_D=1/2V_{DRM}$		0.2			V
(dv/dt)c	Critical Rate of Rise of Off-State Voltage at Communication	$T_J=125^\circ\text{C}$, $V_D=2/3V_{DRM}$ (di/dt)c=4A/ms		5.0			V/ μS
I_H	Holding Current				15		mA
I_{DRM}	Repetitive Peak Off-State Current	$V_D=V_{DRM}$, Single Phase Half Wave, $T_J=125^\circ\text{C}$				2.0	mA
V_{TM}	Peak On-State Voltage	$I_T=12A$, Inst, Measurement				1.4	V

Thermal Characteristics

Symbol	Parameter	Test Conditions	Case	Min	Typ	Max	Units
$R_{\theta JC}$	Thermal Resistance	Junction to Case	HTP8-600			2	$^\circ\text{C}/W$
			HTS8-600			3.7	$^\circ\text{C}/W$

Typical Characteristics

Fig 1. Gate Characteristics

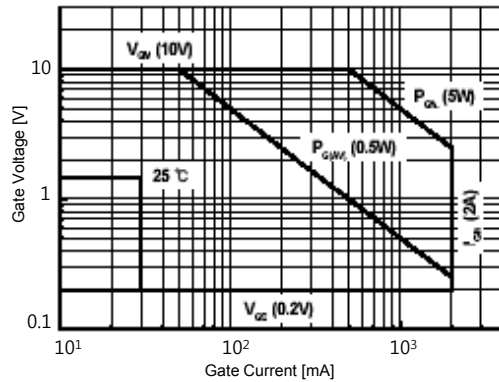


Fig 2. On-State Voltage

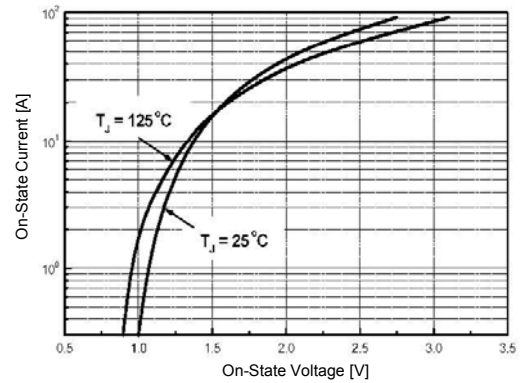


Fig 3. Gate Trigger Voltage vs. Junction Temperature

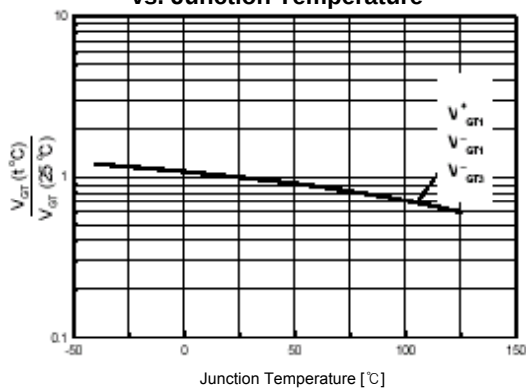


Fig 4. On-State Current vs. Maximum power Dissipation

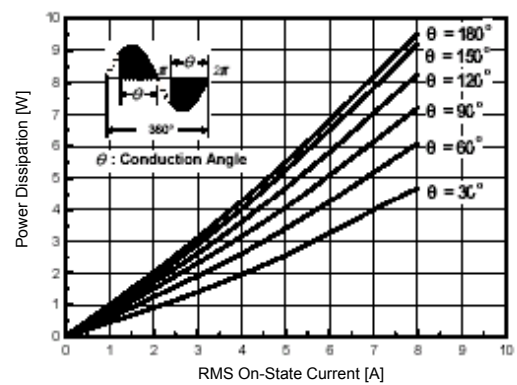


Fig 5. On-State Current vs. Allowable Case Temperature

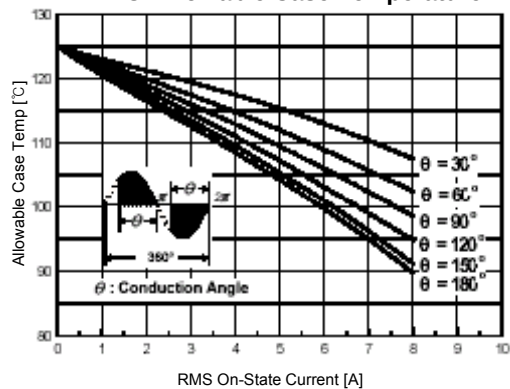
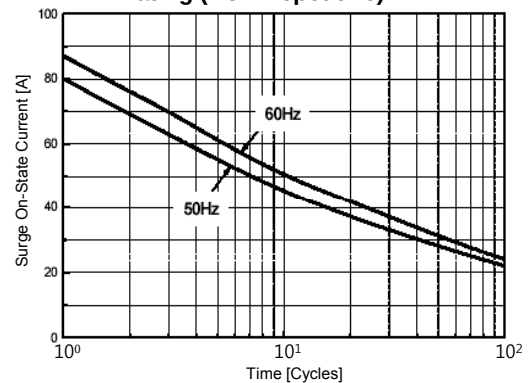


Fig 6. Surge On-State Current Rating (Non-Repetitive)



Typical Characteristics

Fig 7. Gate Trigger Current vs. Junction Temperature

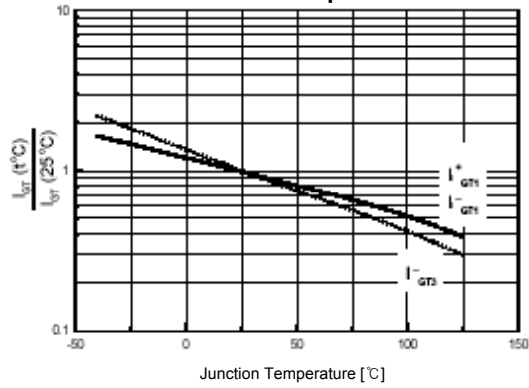


Fig 8. Transient Thermal Impedance

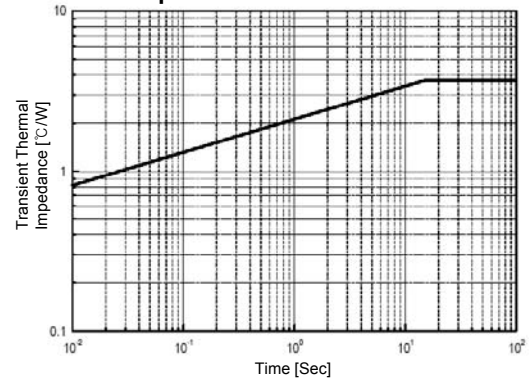
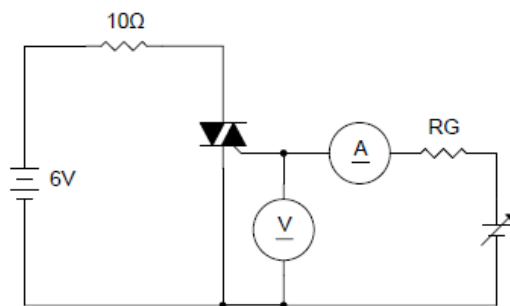
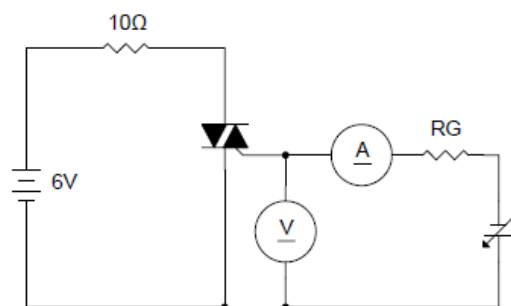


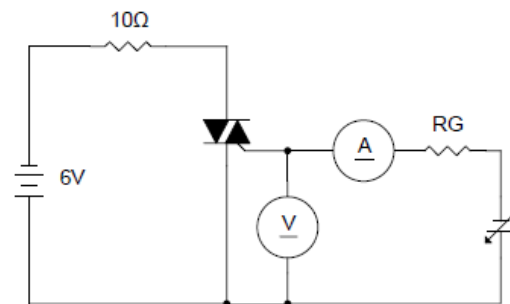
Fig 9. Gate Trigger Characteristics Test Circuit



Test Procedure I



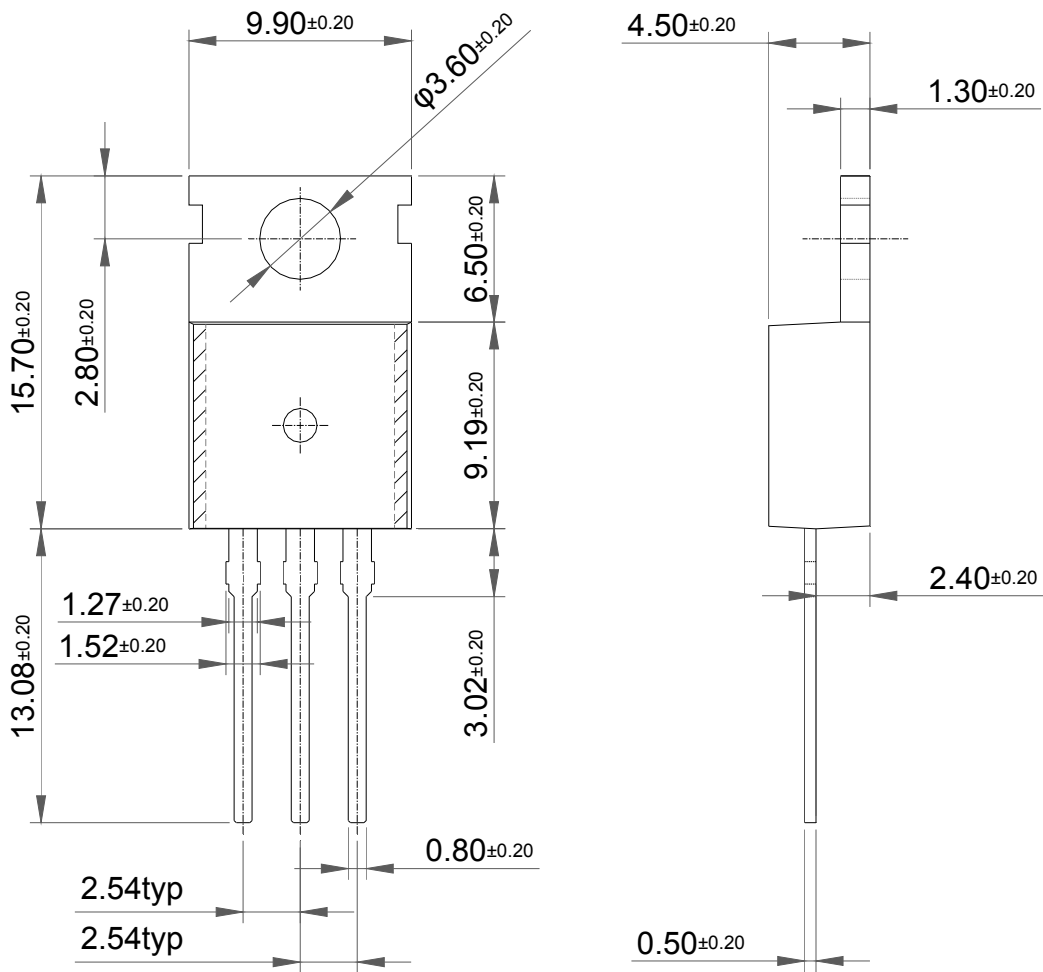
Test Procedure II



Test Procedure III

Package Dimension

HTP8-600
(TO-220)



HTX8-600

Package Dimension

HTS8-600
(TO-220F)

HTS8-600

