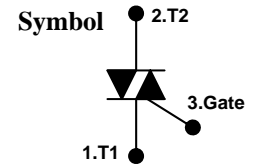


HTx4-600

$$V_{\text{DRM}} = 600 \text{ V}$$

$$I_{\text{T(RMS)}} = 4.0 \text{ A}$$

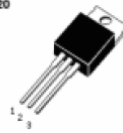


FEATURES

- Repetitive Peak Off-State Voltage: 600V
- R.M.S On-state Current ($I_{\text{T(RMS)}}=4\text{A}$)
- High Commutation dv/dt

1.T1 2. T2 3. Gate

TO-220



HTP4-600

TO-126



HTC4-600

TO-126ML



HTM4-600

General Description

The Triac HTx4-600 is suitable for AC switching application, phase control application such as heater control, motor control, lighting control, and static switching relay.

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

Symbol	Parameter	Value	Units	
V_{DRM}	Repetitive Peak Off-State Voltage	600	V	
$I_{\text{T(RMS)}}$	R.M.S On-State Current ($T_a = 66^\circ\text{C}$)	4	A	
I_{TSM}	Surge On-State Current (One Cycle, 50/60Hz, Peak, Non Repetitive)	50Hz	30	A
		60Hz	33	A
V_{GM}	Peak Gate Voltage	7	V	
I_{GM}	Peak Gate Current	0.5	A	
P_{GM}	Peak Gate Power Dissipation	TO-220	3	W
		TO126/ML	1.5	W
T_{STG}	Storage Temperature Range	-40 to +125	$^\circ\text{C}$	
T_j	Operating Temperature	-40 to +125	$^\circ\text{C}$	

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-			20	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	$T_j=125^\circ\text{C}, V_D=2/3V_{DRM}$ $(di/dt)_c=-3A/ms$		5			V/ μs
I_H	Holding Current				5		mA
I_{DRM}	Repetitive Peak Off-State Current	$V_D=V_{DRM}$, Single Phase, Half Wave, $T_j=125^\circ\text{C}$				1.0	mA
V_{TM}	Peak On-State Voltage	$I_T=6A$, Inst, Measurement				1.6	V

Thermal Characteristics

Symbol	Parameter	Test Conditions	Case	Min	Typ	Max	Units
$R_{TH(J-C)}$	Thermal Resistance	Junction to Case	TO-220			2.8	$^\circ\text{C}/\text{W}$
			TO-126/ML			3.5	$^\circ\text{C}/\text{W}$

Performance Curves

Fig 1. Gate Characteristics

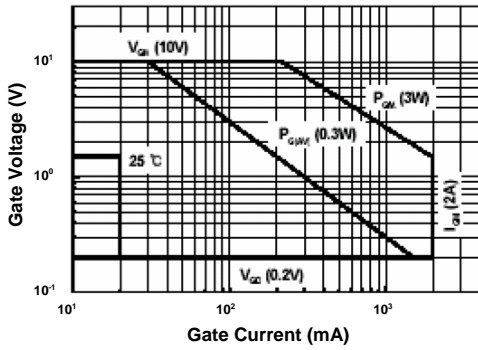


Fig 2. On-State Voltage

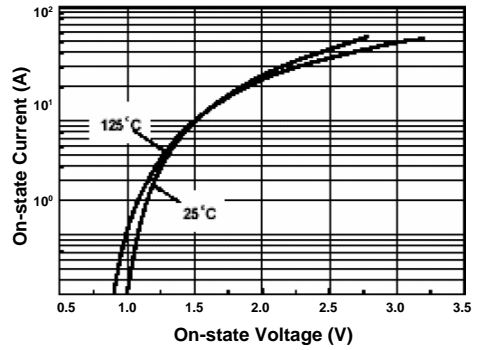


Fig 3. Gate Trigger Voltage vs. Junction Temperature

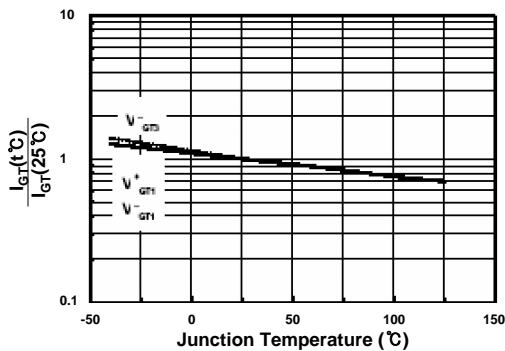


Fig 4. On State Current vs. Maximum Power Dissipation

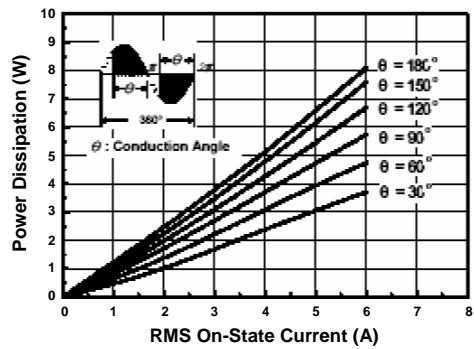


Fig 5. On State Current vs. Allowable Case Temperature

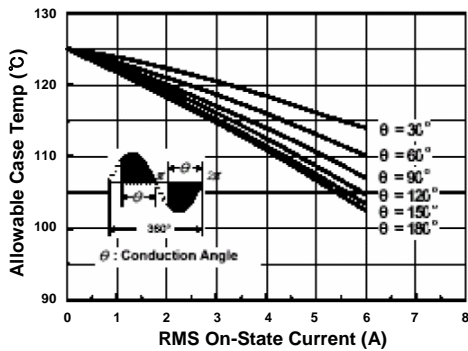


Fig 6. Surge On-State Current Rating (Non-Repetitive)

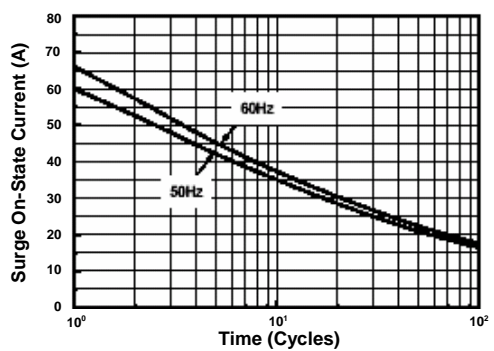


Fig 7. Gate Trigger Current vs. Junction Temperature

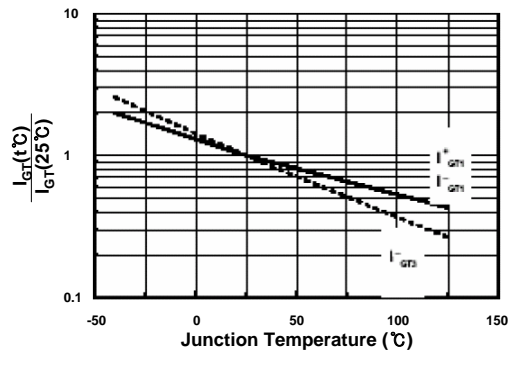


Fig8. Transient Thermal Impedance

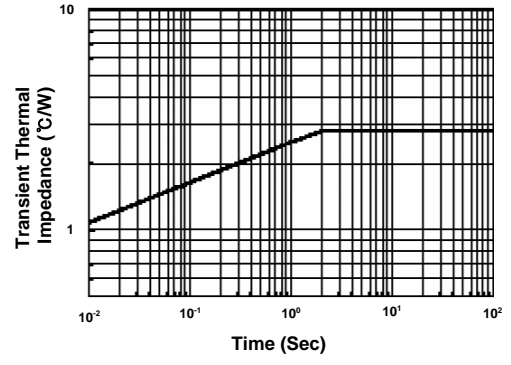
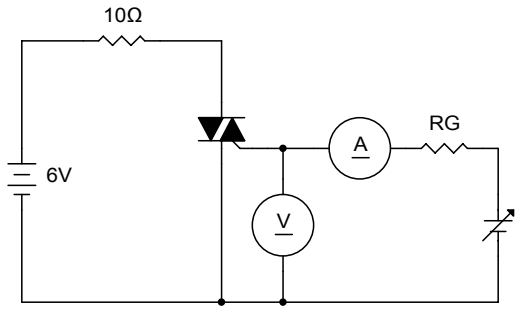
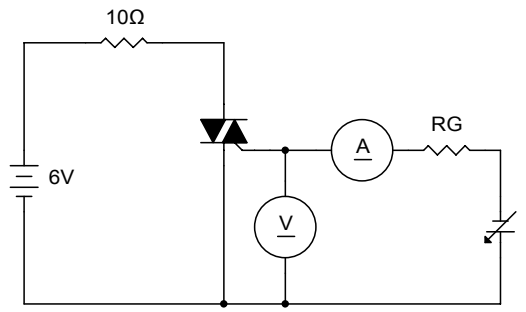


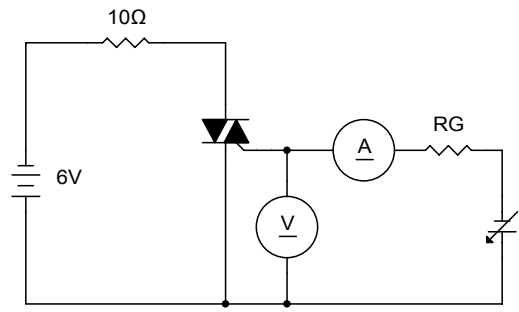
Fig 7. Gate Trigger Characteristics Test Circuit



Test Procedure I



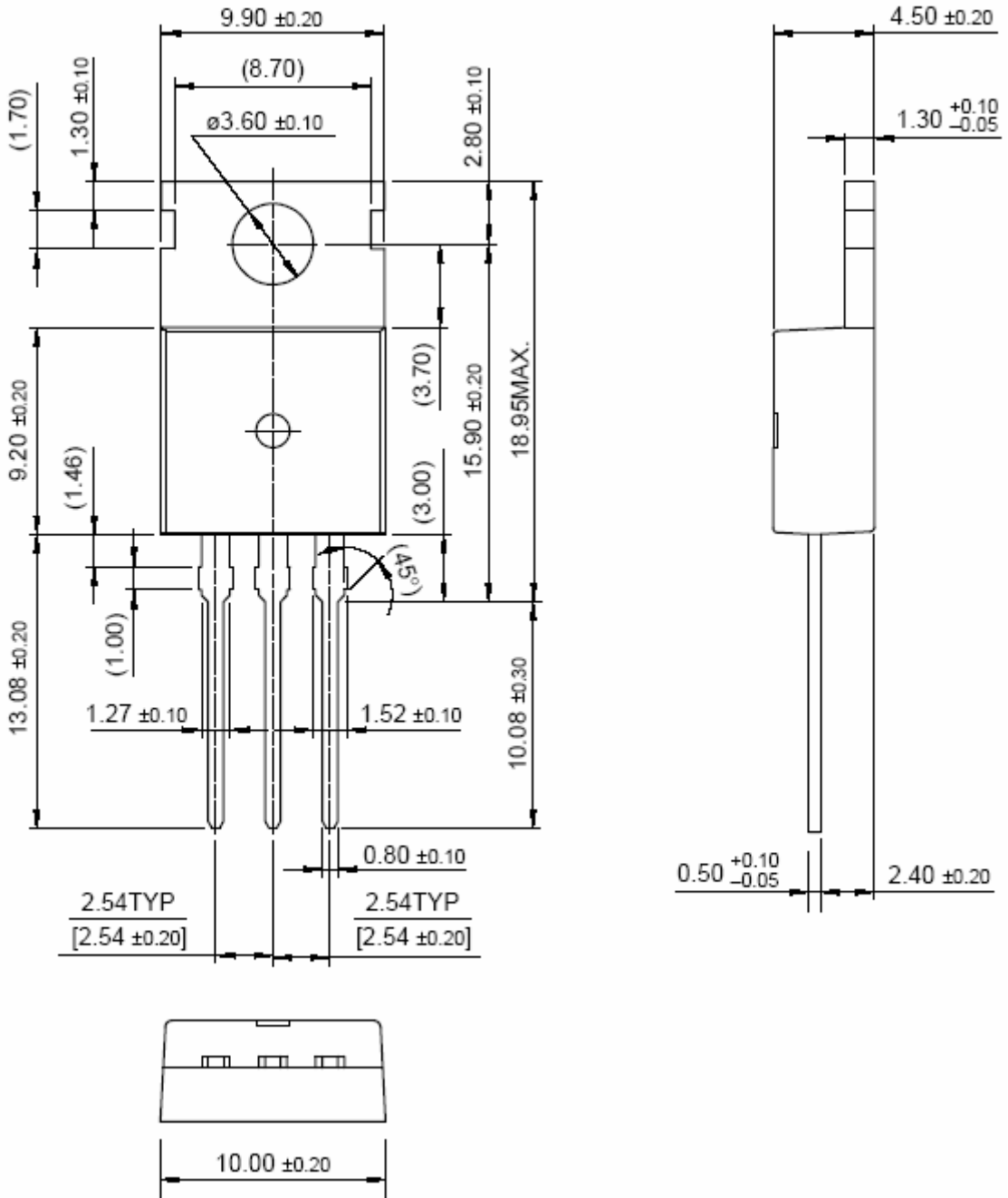
Test Procedure II



Test Procedure III

Package Dimension

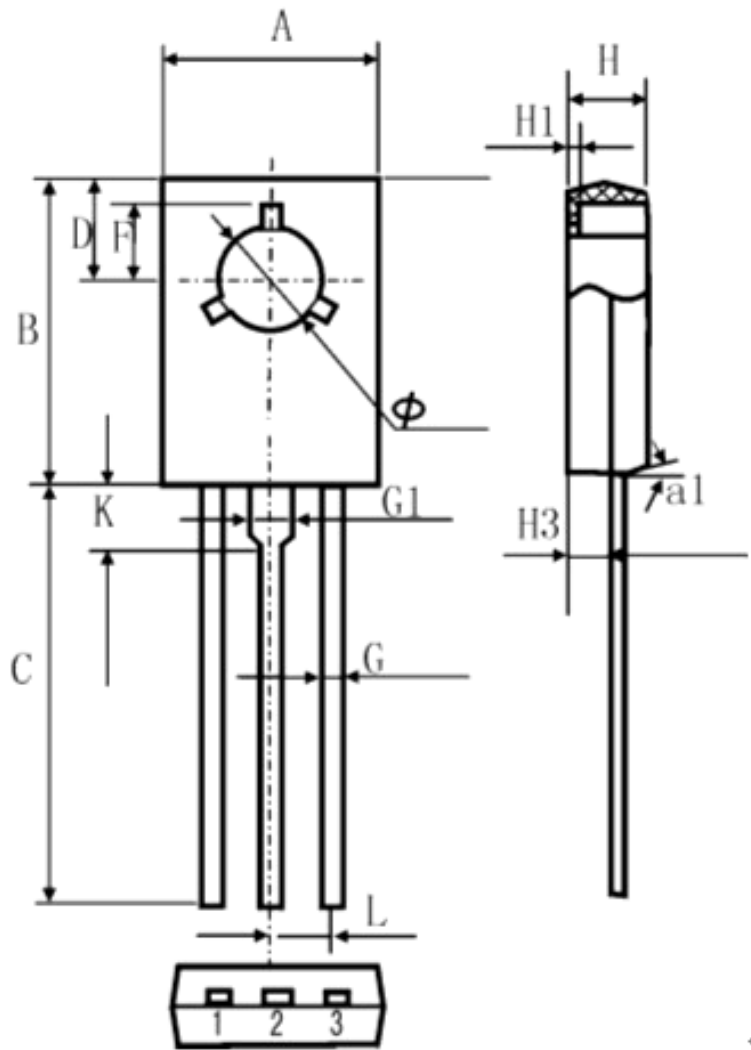
HTP4-600
(TO-220)



Package Dimension

HTC4-600
(TO-126)

DIM	Millimeters
A	8.5max
B	12.0max
C	13.0min
D	3.8±0.2
G	0.78±0.08
G1	1.2
H	2.8max
H3	1.27
K	2.5±0.2
L	2.3max
φ	3.20±0.2



Dimensions in Millimeters

Package Dimension

HTM4-600
(TO-126ML)

corresponding symbol	measurement
A(mm)	7.99±0.25
B(mm)	11.12±0.25
C(mm)	14.5±0.5
E(mm)	3.625±0.125
F(mm)	1.4±0.12
G(mm)	0.76±0.08
G1(mm)	1.3±0.12
H(mm)	3.57±0.13
H3(mm)	2.01±0.13
I(mm)	2.99±0.38
K(mm)	1.0±0.12
L(mm)	2.3MAX
φ1(mm)	3.0±0.12

