

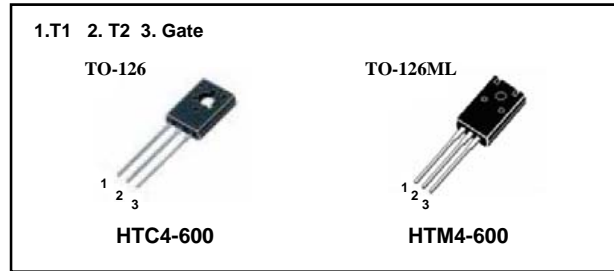
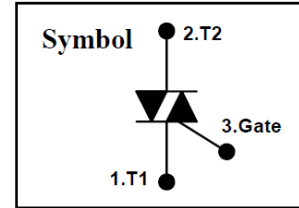
## HTx4-600 600V 4A TRIAC

### FEATURES

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

$$V_{DRM} = 600 V$$

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



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

Symbol	Parameter	Value	Units	
$V_{DRM}$	Repetitive Peak Off-State Voltage	600	V	
$I_{T(RMS)}$	R.M.S On-State Current ( $T_a = 66^{\circ}C$ )	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	1.5	W	
$T_{STG}$	Storage Temperature Range	-40 to +125	$^{\circ}C$	
$T_J$	Operating Temperature	-40 to +125	$^{\circ}C$	

### Electrical Characteristics (T<sub>a</sub>=25°C)

Symbol	Parameter	Test Conditions		Min	Typ	Max	Units
I <sub>GT</sub>	Gate Trigger Current	V <sub>D</sub> =6V, R <sub>L</sub> =10Ω	1+, 1-, 3-			20	mA
V <sub>GT</sub>	Gate Trigger Voltage	V <sub>D</sub> =6V, R <sub>L</sub> =10Ω	1+, 1-, 3-			1.5	V
V <sub>GD</sub>	Non Trigger Gate Voltage	T <sub>J</sub> =125°C, V <sub>D</sub> =1/2V <sub>DRM</sub>		0.2			V
(dv/dt) <sub>c</sub>	Critical Rate of Rise of Off-State Voltage at Communication	T <sub>J</sub> =125°C, V <sub>D</sub> =2/3V <sub>DRM</sub> (di/dt) <sub>c</sub> =-3A/ms		5.0			V/μS
I <sub>H</sub>	Holding Current				5.0		mA
I <sub>DRM</sub>	Repetitive Peak Off-State Current	V <sub>D</sub> =V <sub>DRM</sub> , Single Phase Half Wave, T <sub>J</sub> =125°C				1.0	mA
V <sub>TM</sub>	Peak On-State Voltage	IT=6A, Inst, Measurement				1.6	V

### Thermal Characteristics

Symbol	Parameter	Test Conditions	Case	Min	Typ	Max	Units
R <sub>θJC</sub>	Thermal Resistance	Junction to Case	TO-126/ML			3.5	°C/W

Typical Characteristics

Fig 1. Gate Characteristics

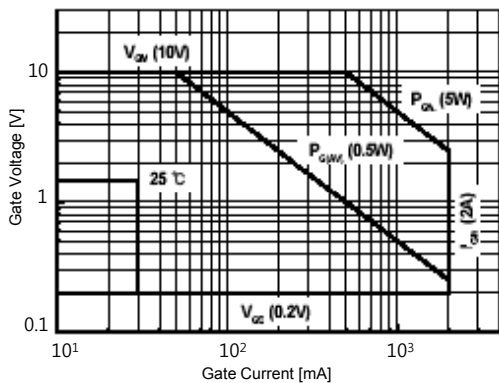


Fig 2. On-State Voltage

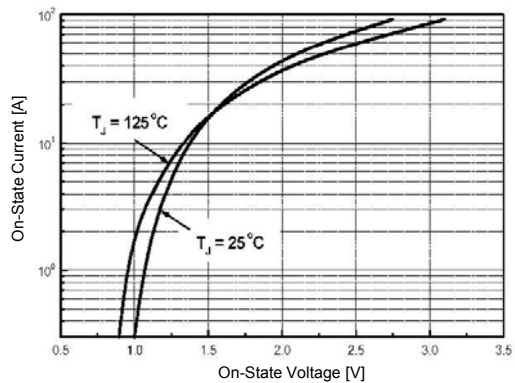


Fig 3. Gate Trigger Voltage vs. Junction Temperature

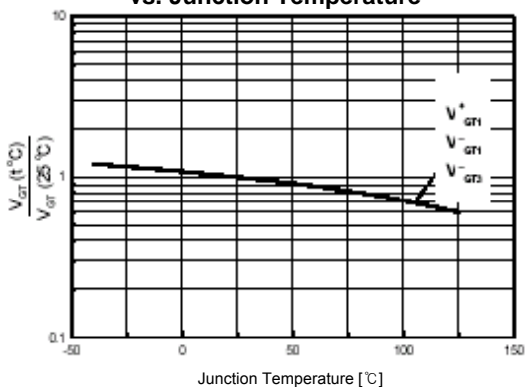


Fig 4. On-State Current vs. Maximum power Dissipation

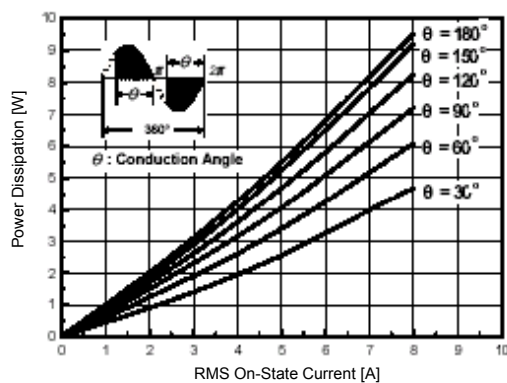


Fig 5. On-State Current vs. Allowable Case Temperature

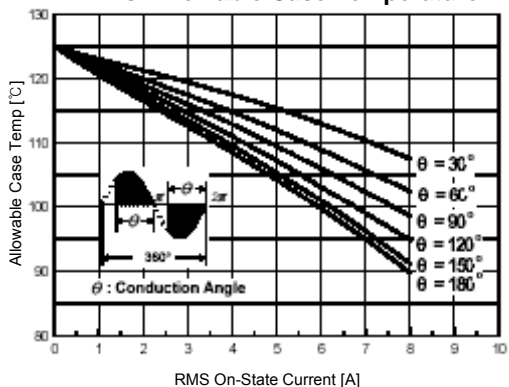
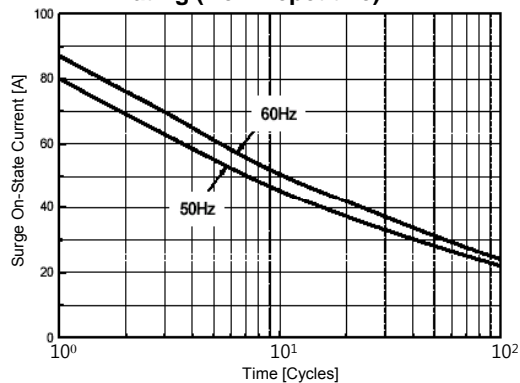
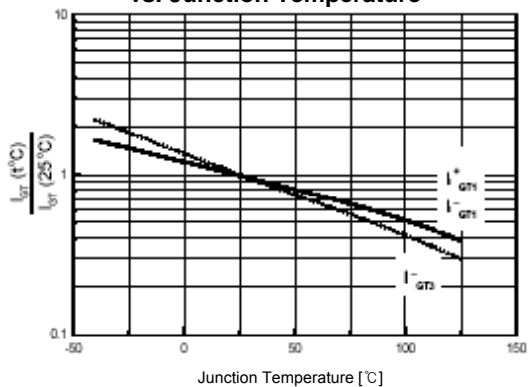


Fig 6. Surge On-State Current Rating (Non-Repetitive)

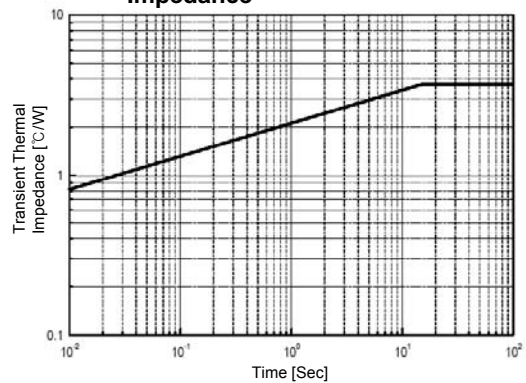


## Typical Characteristics

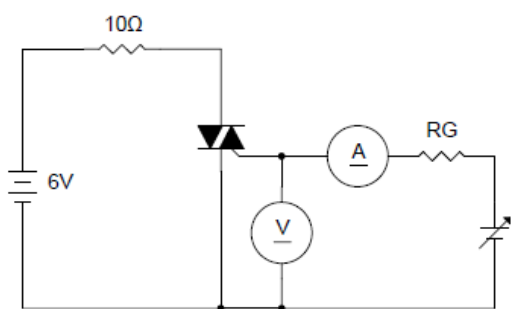
**Fig 7. Gate Trigger Current vs. Junction Temperature**



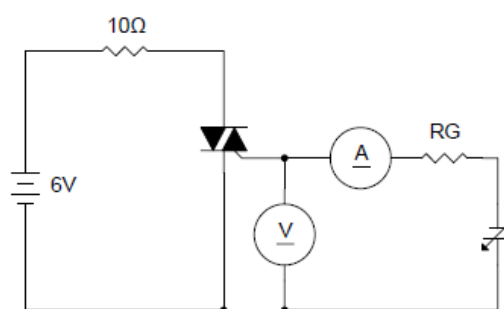
**Fig 8. Transient Thermal Impedance**



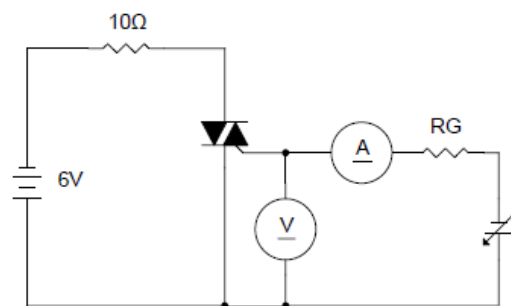
**Fig 9. Gate Trigger Characteristics Test Circuit**



Test Procedure I



Test Procedure II

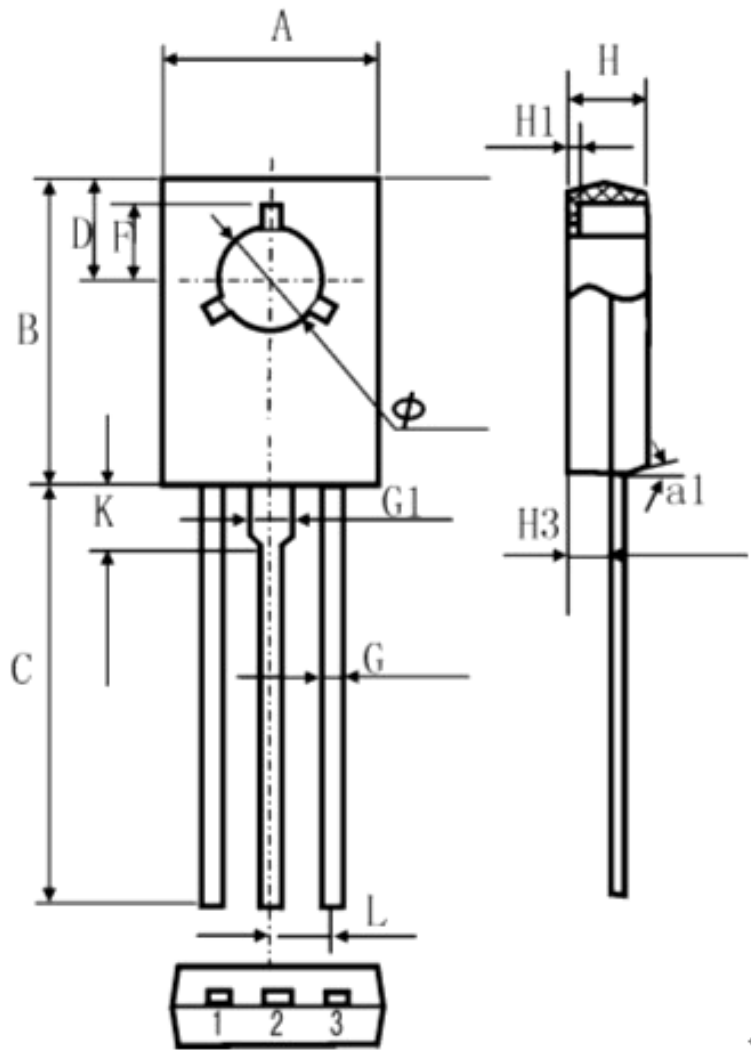


Test Procedure III

Package Dimension

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

