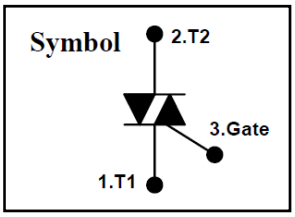
SemiHow
Know-How for Semiconductor

HTD4-600 / HTU4-600
600V 4A TRIAC

V_{DRM} = 600 V
$I_{T(RMS)}$ = 4.0 A



1.T1 2. T2 3. Gate

TO-251



HTU4-600

TO-252



HTD4-600

FEATURES

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

General Description

The devices is sensitive gate TRIAC suitable for direct coupling to TTL,HTL,CMOS and application such as various logic functions, low power AC switching applications, such as fan speed, small light controllers and home appliance equipment.

Absolute Maximum Ratings (T_a=25℃)

Symbol	Parameter		Value	Units
V_{DRM}	Repetitive Peak Off-State Voltage		600	V
$I_{T(RMS)}$	R.M.S On-State Current (Ta = 107℃)		4	A
I_{TSM}	Surge On-State Current	50Hz	30	A
	(One Cycle, 50/60Hz, Peak, Non Repetitive)	60Hz	33	A
V_{GM}	Peak Gate Voltage		7	V
I_{GM}	Peak Gate Current		1	A
P_{GM}	Peak Gate Power Dissipation		1.5	W
T_{STG}	Storage Temperature Range		-40 to +125	℃
T_J	Operating Temperature		-40 to +125	℃

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Electrical Characteristics (T_a=25℃)

Symbol	Parameter	Test Conditions		Min	Typ	Max	Units
I_{GT}	Gate Trigger Current	V_D=6V, R_L=10Ω	1+, 1-, 3-			5	mA
			3+			10	mA
V_{GT}	Gate Trigger Voltage	V_D=6V, R_L=10Ω	1+, 1-, 3-			1.4	V
			3+			1.8	V
V_{GD}	Non Trigger Gate Voltage	T_J=125℃, V_D=1/2V_{DRM}		0.2			V
(dv/dt)c	Critical Rate of Rise of Off-State Voltage at Communication	T_J=125℃, V_D=2/3V_{DRM} (di/dt)c=-0.5A/ms		5.0			V/uS
I_H	Holding Current					10	mA
I_{DRM}	Repetitive Peak Off-State Current	V_D=$V_{DRM,}$ Single Phase, Half Wave, T_J=125℃				1.0	mA
V_{TM}	Peak On-State Voltage	IT=6A, Inst, Measurement				1.7	V

Thermal Characteristics

Symbol	Parameter	Test Conditions	Min	Typ	Max	Units
$R_{\theta JC}$	Thermal Resistance	Junction to Case			3.0	℃/W

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Typical Characteristics

Fig 1. Gate Characteristics

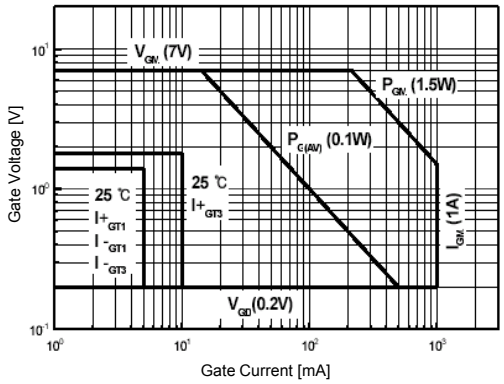


Fig 2. On-State Voltage

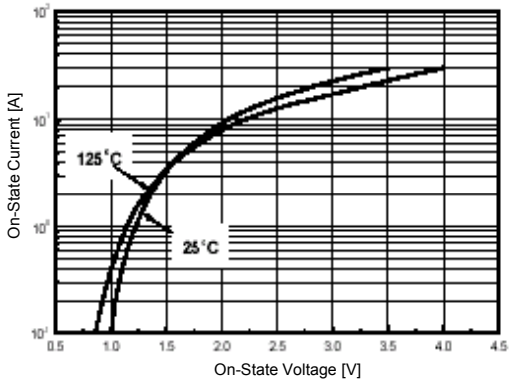


Fig 3. Gate Trigger Voltage vs. Junction Temperature

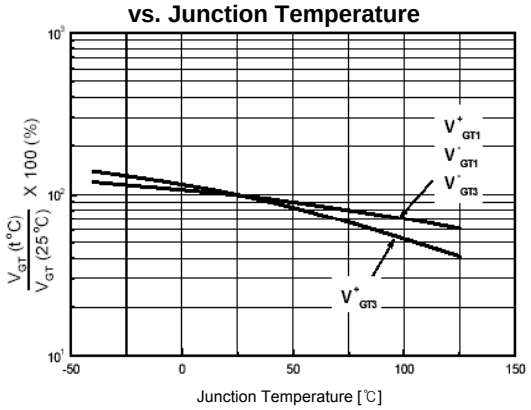


Fig 4. On-State Current vs. Maximum power Dissipation

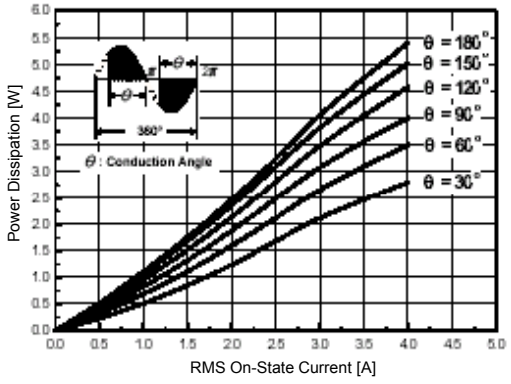


Fig 5. On-State Current vs. Allowable Case Temperature

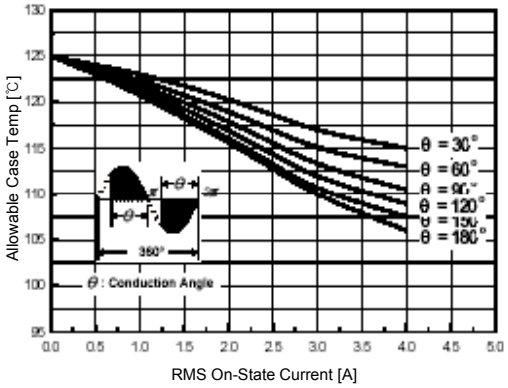
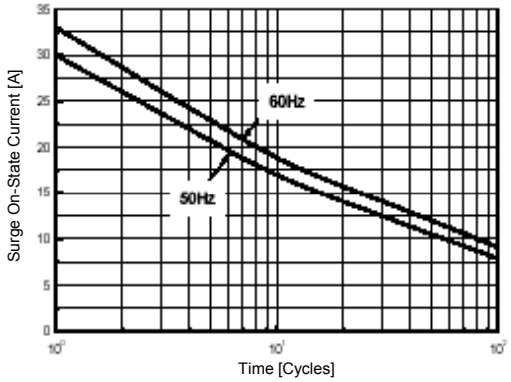


Fig 6. Surge On-State Current Rating (Non-Repetitive)



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Typical Characteristics

Fig 7. Gate Trigger Current vs. Junction Temperature

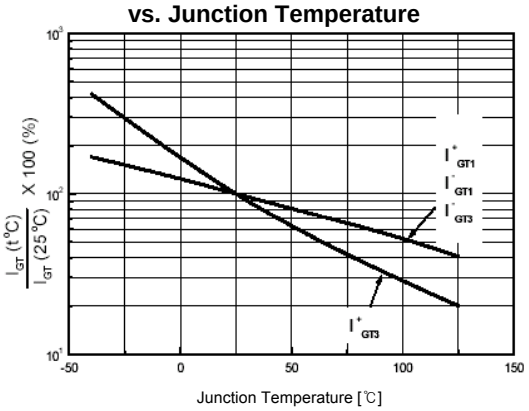


Fig 8. Transient Thermal Impedance

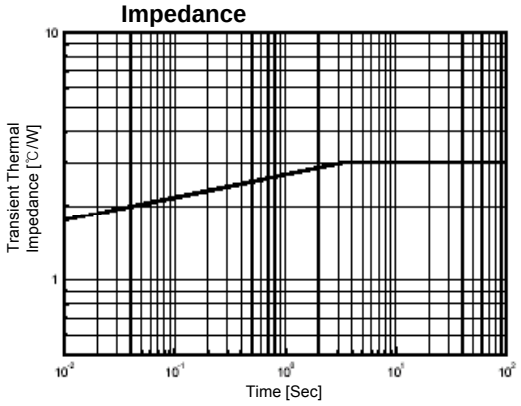
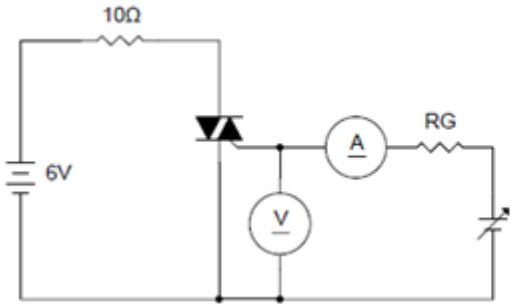
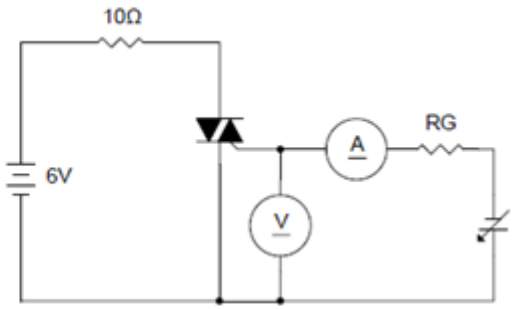


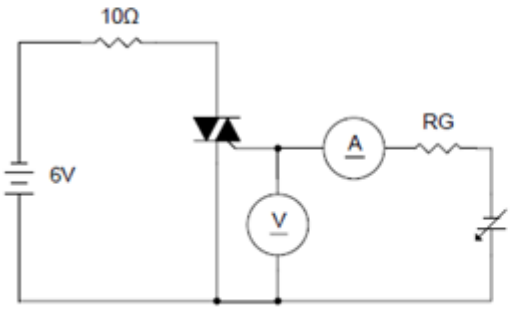
Fig 7. Gate Trigger Characteristics Test Circuit



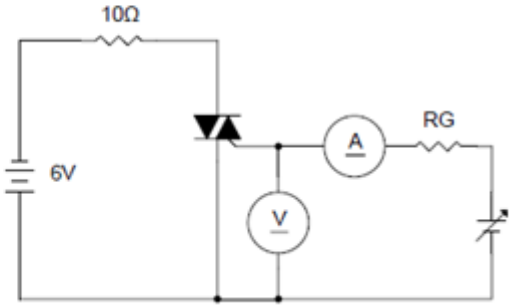
Test Procedure Ⅰ



Test Procedure Ⅱ



Test Procedure Ⅲ

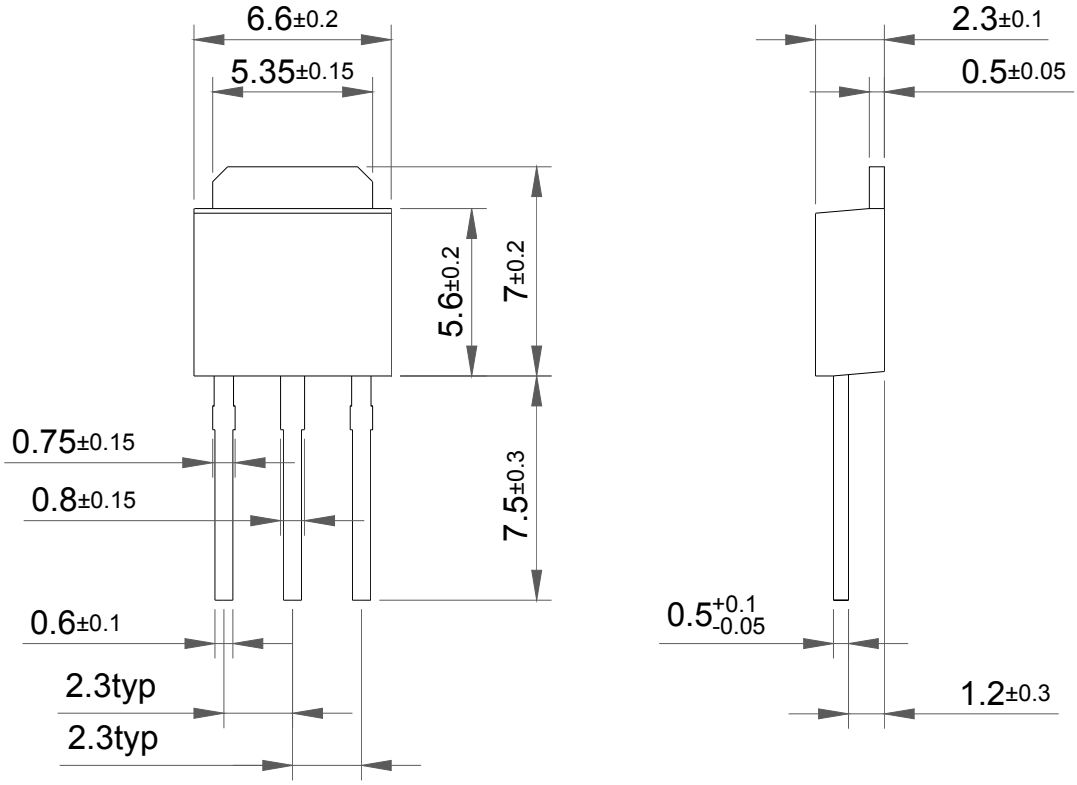


Test Procedure Ⅳ

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Package Dimension

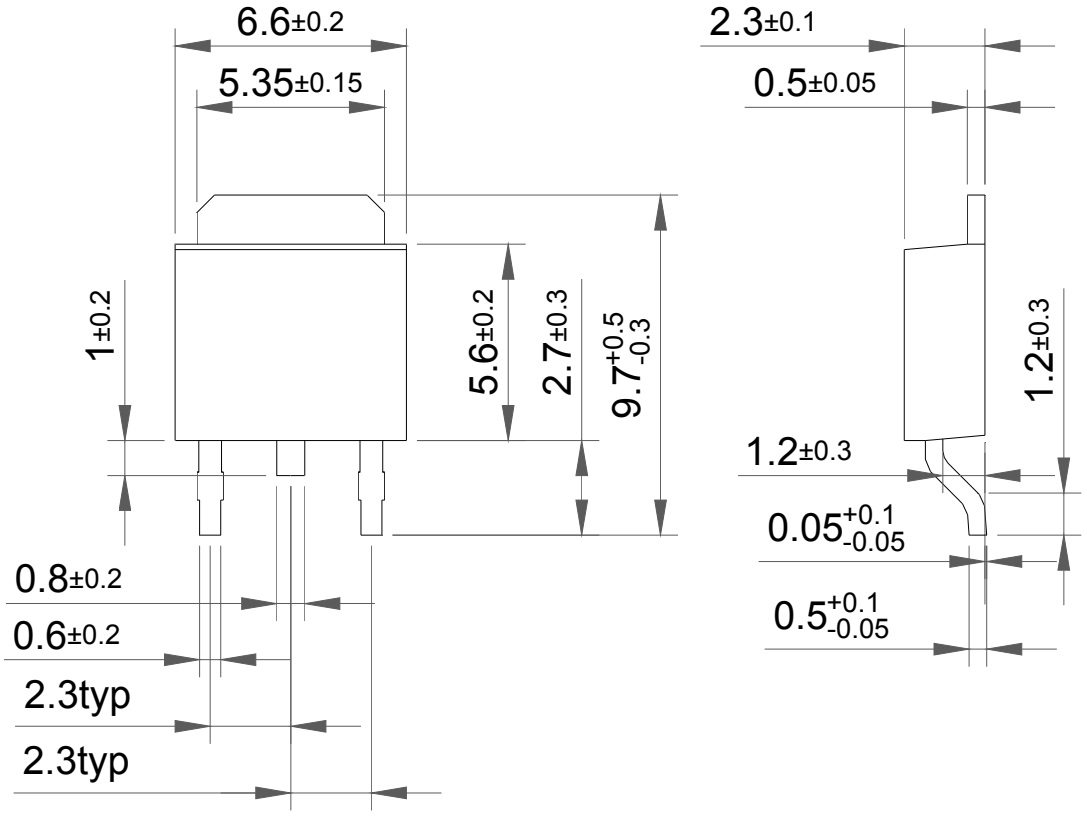
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Package Dimension

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