

Bi-Directional Triode Thyristor

Features

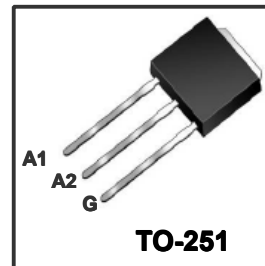
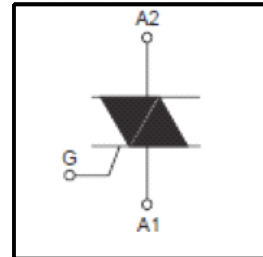
- ◆ Repetitive Peak Off-State Voltage : 600V
- ◆ R.M.S On-State Current ($I_T(\text{RMS})$)= 4 A)
- ◆ Low On-State Voltage (1.6V(Typ.) @ I_{TM})
- ◆ High Commutation dv/dt
- ◆ High Junction temperature($T_J=150^{\circ}\text{C}$)

General Description

Winsemi Triac **STF4A60H** is designed for full wave AC control applications. It can be used as an ON/OFF function or for phase control operation.

Typical Application

- Home Appliances : Washing Machines, Vacuum Cleaners, Rice Cookers, Micro Wave Ovens, Hair Dryers, other control applications
- Industrial Use : SMPS, Copier Machines, Motor Controls, Dimmer, SSR, Heater Controls, Vending Machines, other control applications



Absolute Maximum Ratings ($T_J = 25^{\circ}\text{C}$ unless otherwise specified)

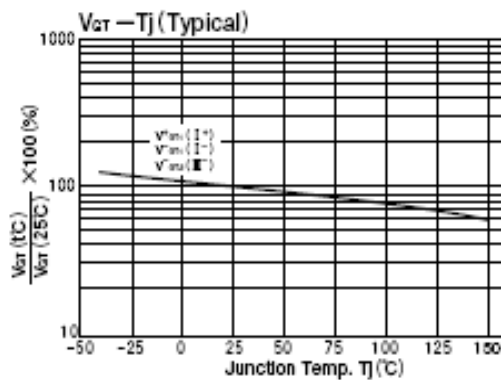
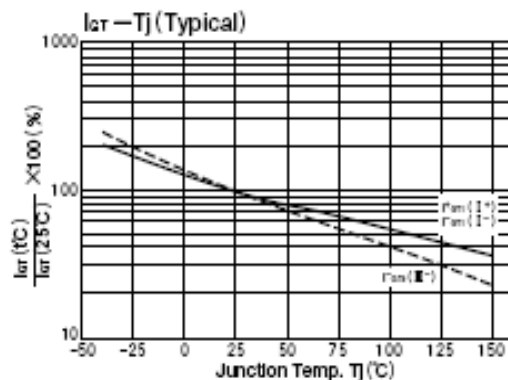
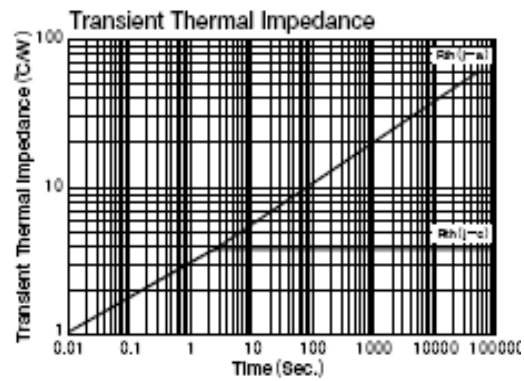
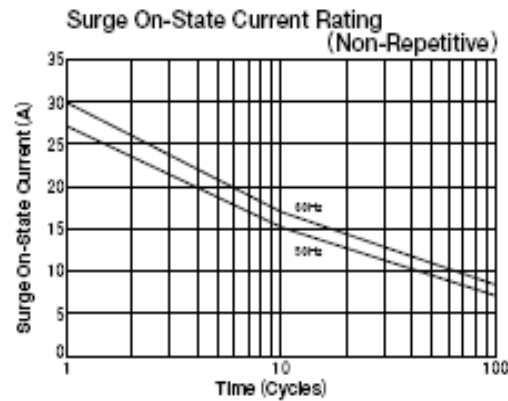
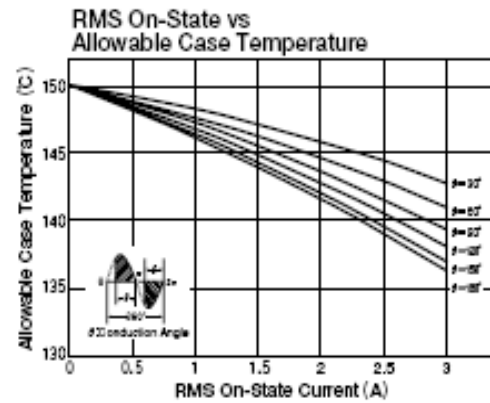
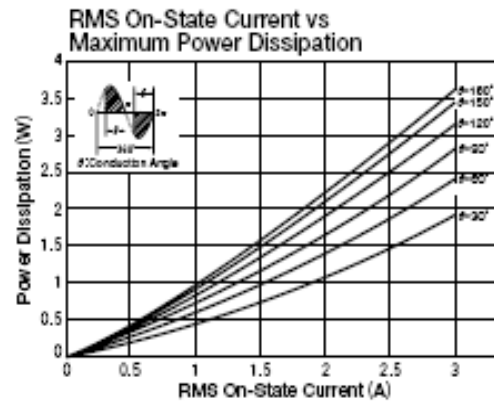
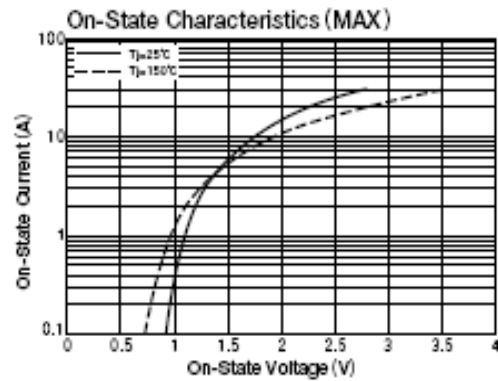
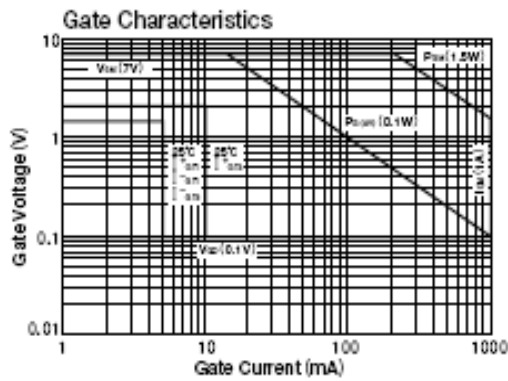
Symbol	Para	Condition	Ratings	Units
$V_{\text{DRM}}/V_{\text{RRM}}$	Repetitive Peak Off-State Voltage		600	V
$I_{\text{T(RMS)}}$	R.M.S On-State Current	$T_J = 1118^{\circ}\text{C}$	4.0	A
I_{TSM}	Surge On-State Current	50/60Hz, One cycle, Peak value, non-repetitive	27/30	A
I^2_t	I^2_t		3.7	A^2s
P_{GM}	Peak Gate Power Dissipation		1.5	W
$P_{\text{G(AV)}}$	Average Gate Power Dissipation		0.1	W
I_{GM}	Peak Gate Current		1.0	A
V_{GM}	Peak Gate Voltage		7.0	V
T_J	Operating Junction Temperature		-40~+150	$^{\circ}\text{C}$
T_{STG}	Storage Temperature		-40~+150	$^{\circ}\text{C}$

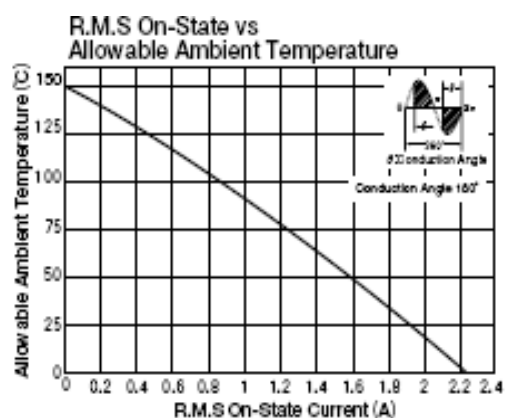
Thermal Characteristics

Symbol	Parameter	Value	Units
$R_{\theta\text{Jc}}$	Thermal Resistance Junction to Case(DC)	3	$^{\circ}\text{C/W}$
$R_{\theta\text{JA}}$	Thermal Resistance Junction to Ambient(DC)	75	$^{\circ}\text{C/W}$

Electrical Characteristics (T_C=25°C unless otherwise noted)

Symbol	Characteristics		Min	Typ.	Max	Unit
I _{DRM} /I _{RRM}	off-state leakage current (V _{AK} = V _{DRM} /V _{RRM} Single phase, half wave)	T _J =50°C	-	-	1	mA
V _{TM}	Forward "On" voltage (I _T =4.5A, Inst. Measurement)		-	1.2	1.7	V
I _{GT}	Gate trigger current (continuous dc) (V _{AK} = 6 Vdc, RL = 10 Ω)	T2+,G+	-	-	5	mA
		T2+,G-	-	-	5	
		T2-,G-	-	-	5	
V _{GT}	Gate Trigger Voltage (Continuous dc)) (V _{AK} = 6 Vdc, RL = 10 Ω)	T2+,G+	-	-	1.5	V
		T2+,G-	-	-	1.5	
		T2-,G-	-	-	1.5	
V _{GD}	Gate threshold Voltage V _D =1/2V _{DRM} ,	T _J =150°C	0.2	-	-	V
(dv/dt) _C	Critical Rate of Rise of Off-State Voltage at Commutation (V _D =0.67V _{DRM} ; (di/dt) _C = -1.5A/ms)	T _J =150°C	3	-	-	V/μs
I _H	Holding Current		-	2	-	mA
I _L	latching current		-	2	6	mA





TO-251 Package Dimension

Unit: mm

