TRIAC(Through Hole)

TMG1D60 5

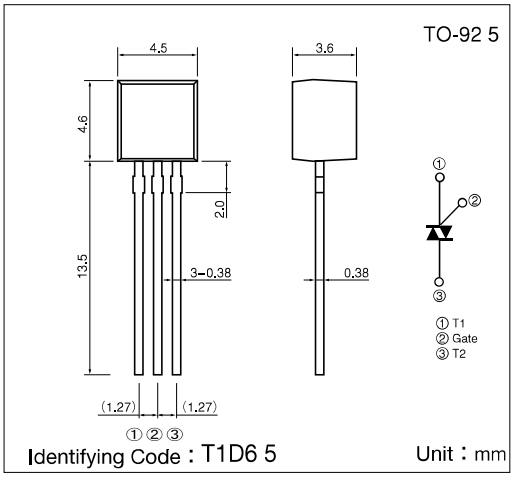
SanRex Triac **TMG1D60 5** is designed for full wave AC control applications.
It can be used as an ON/OFF function or for phase control operation.

Typical Applications

- 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

Features

- $I_{T(RMS)}$=1A
- High Surge Current



■Maximum Ratings

(Unless otherwise Tj=25℃)

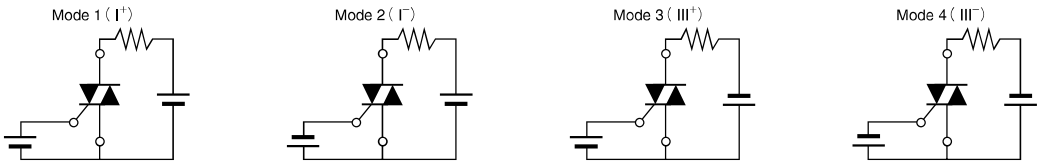
Symbol	Item	Reference	Ratings	Unit
V_{DRM}	Repetitive Peak Off-State Voltage		600	V
$I_{T(RMS)}$	R.M.S. On-State Current	Tc=52℃	1	A
I_{TSM}	Surge On-State Current	50/60Hz, One cycle, Peak value, non-repetitive	8/8.8	A
I^2t	I^2t (for fusing)		0.32	A^2s
P_{GM}	Peak Gate Power Dissipation		1	W
$P_{G(AV)}$	Average Gate Power Dissipation		0.1	W
I_{GM}	Peak Gate Current		0.5	A
V_{GM}	Peak Gate Voltage		6	V
Tj	Operating Junction Temperature		−40～+125	℃
Tstg	Storage Temperature		−40～+150	℃
	Mass		0.2	g

■Electrical Characteristics

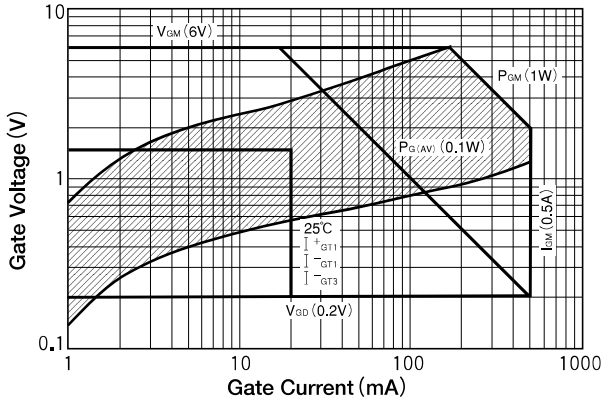
(Unless otherwise Tj=25℃)

Symbol		Item	Reference	Ratings			Unit
				Min.	Typ.	Max.	
I_{DRM}		Repetitive Peak Off-State Current	$V_D=V_{DRM}$, Tj=125℃, Single phase, half wave			0.5	mA
V_{TM}		Peak On-State Voltage	I_T=1.5A, Inst. measurement			1.75	V
I_{GT1}^{+}	1	Gate Trigger Current	V_D=6V, R_L=10Ω			20	mA
I_{GT1}^{-}	2					20	
I_{GT3}^{+}	3					–	
I_{GT3}^{-}	4					20	
V_{GT1}^{+}	1	Gate Trigger Voltage				1.5	V
V_{GT1}^{-}	2					1.5	
V_{GT3}^{+}	3					–	
V_{GT3}^{-}	4					1.5	
V_{GD}		Non-Trigger Gate Voltage	$V_D=\frac{1}{2}V_{DRM}$, Tj=125℃	0.2			V
(dv/dt)c		Critical Rate of Rise of Off-State Voltage at Commutation	(di/dt)c=−0.5A/ms, $V_D=\frac{2}{3}V_{DRM}$, Tj=125℃	4			V/μs
I_H		Holding Current			5		mA
Rth(j-c)		Thermal Resistance	Junction to case			50	℃/W

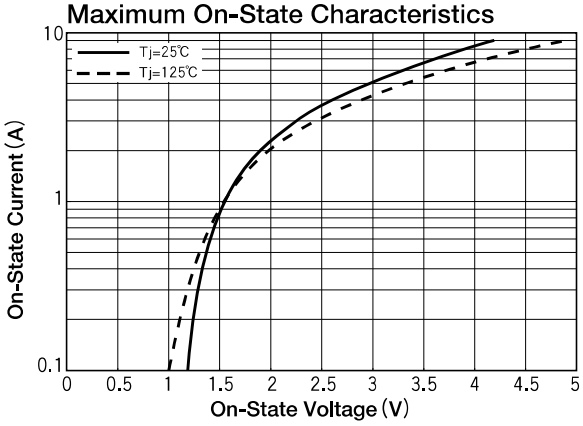
Trigger mode of the triac



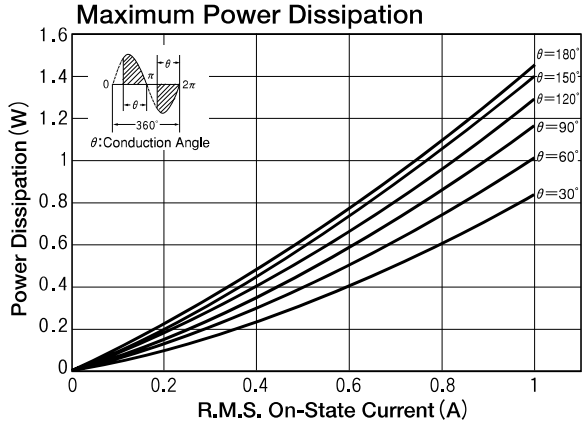
Gate Characteristics



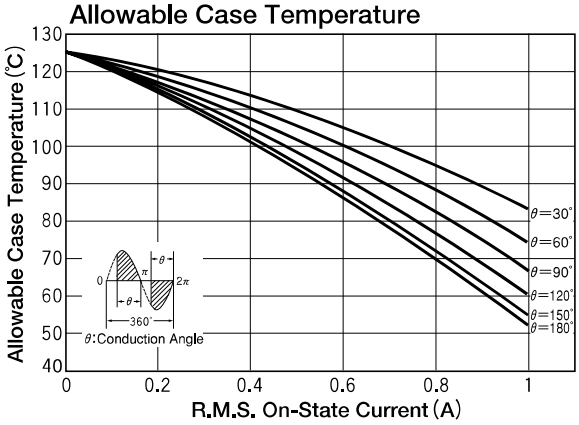
Maximum On-State Characteristics



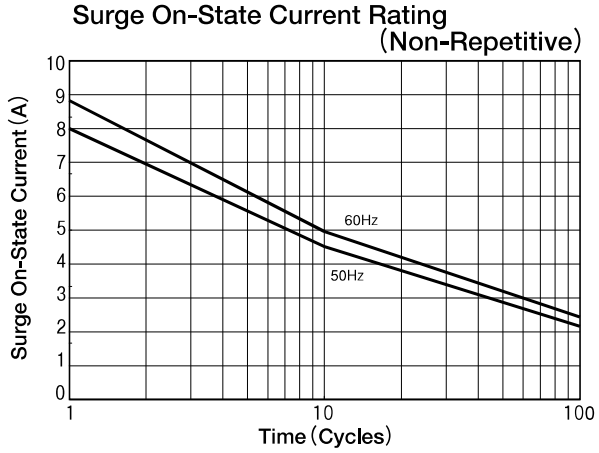
R.M.S. On-State Current vs Maximum Power Dissipation



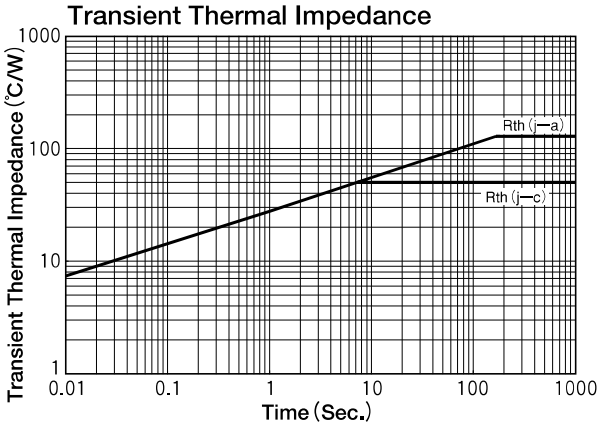
R.M.S. On-State vs Allowable Case Temperature



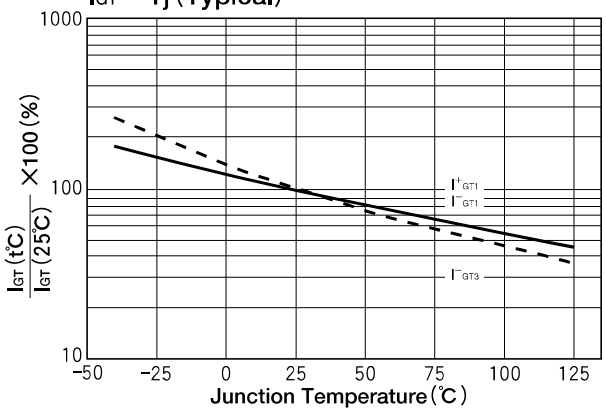
Surge On-State Current Rating (Non-Repetitive)



Transient Thermal Impedance



IGT —Tj (Typical)



VGT —Tj (Typical)