

TRIAC(Through Hole / Isolated)

TMG25C60F

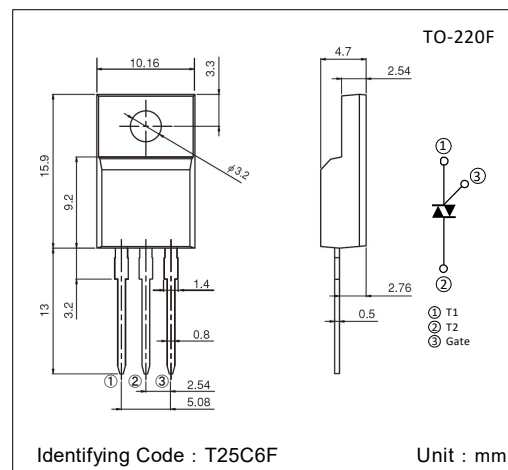
SanRex Triac TMG25C60F is designed for full wave AC control applications. It can be used as an ON/OFF function or for phase control operation.

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

- $I_{T(RMS)}=25A$
- High Surge Current
- Low Voltage Drop
- Lead-Free Package



Maximum Ratings

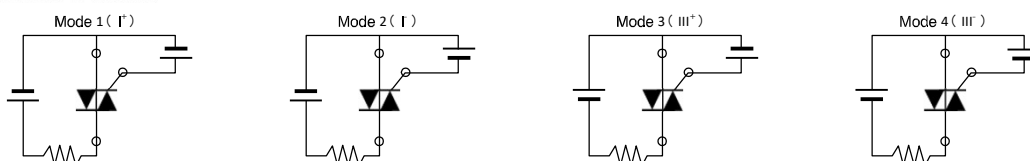
($T_j=25^{\circ}C$ unless otherwise specified)

Symbol	Item	Reference	Ratings	Unit
V_{DRM}	Repetitive Peak Off-State Voltage		600	V
$I_{T(RMS)}$	R.M.S. On-State Current	$T_c=68^{\circ}C$	25	A
I_{TSM}	Surge On-State Current	One cycle, 50Hz/60Hz, Peak value non-repetitive	225/250	A
I^2t	I^2t (for fusing)		260	A^2s
P_{GM}	Peak Gate Power Dissipation		5	W
$P_{G(AV)}$	Average Gate Power Dissipation		0.5	W
I_{GM}	Peak Gate Current		2	A
V_{GM}	Peak Gate Voltage		10	V
V_{ISO}	Isolation Breakdown Voltage (RMS)	A.C. 1minute	1500	V
T_j	Operating Junction Temperature		$-40 \sim +125$	$^{\circ}C$
T_{stg}	Storage Temperature		$-40 \sim +150$	$^{\circ}C$
	Mass		2.2	g

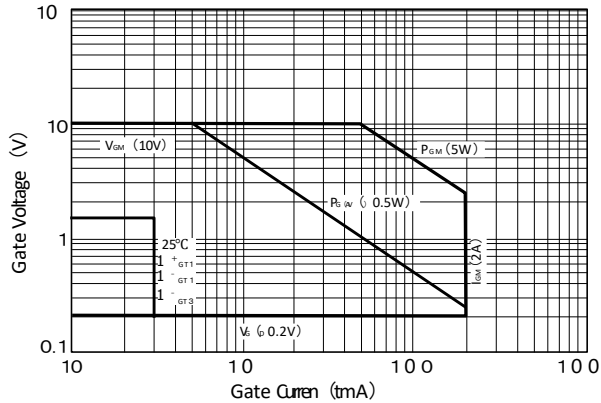
Electrical Characteristics

Symbol	Item		Reference	Ratings			Unit
				Min.	Typ.	Max.	
I _{DRM}	Repetitive Peak Off-State Current		V _D =V _{DRM} , Single phase, half wave, T _j =125°C			5	mA
V _{TM}	Peak On-State Voltage		I _T =35A, Inst. measurement			1.4	V
I _{GT1} ⁺	1	Gate Trigger Current	V _D =6V, R _L =10Ω			30	mA
I _{GT1} ⁻	2					30	
I _{GT3} ⁺	3					—	
I _{GT3} ⁻	4					30	
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		T _j =125°C, V _D = ¹ / ₂ V _{DRM}	0.2			V
(dv/dt) _C	Critical Rate of Rise of Off-State Voltage at Commutation		T _j =125°C, [di/dt] _C =-12.5A/ms, V _D = ² / ₃ V _{DRM}	10			V/μs
I _H	Holding Current				35		mA
R _{th}	Thermal Resistance		Junction to case			1.9	°C/W

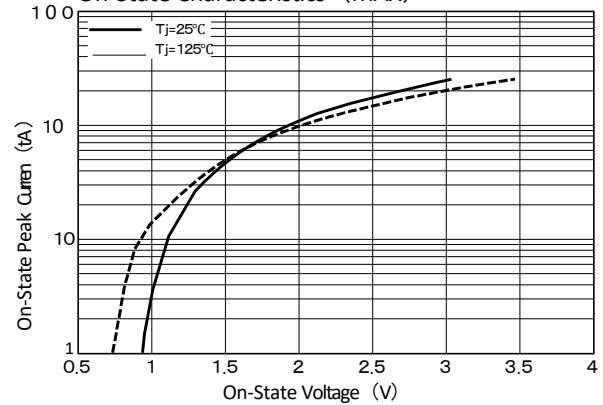
Trigger mode of the triac



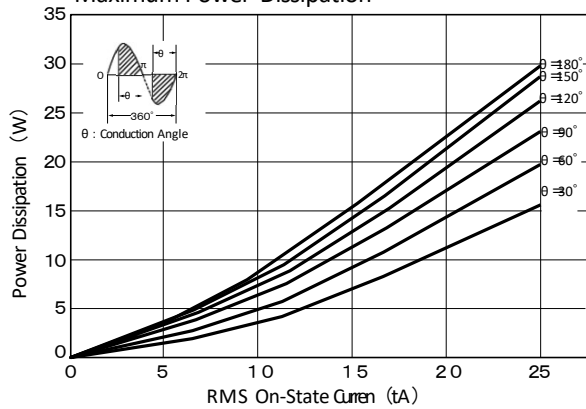
Gate Characteristics



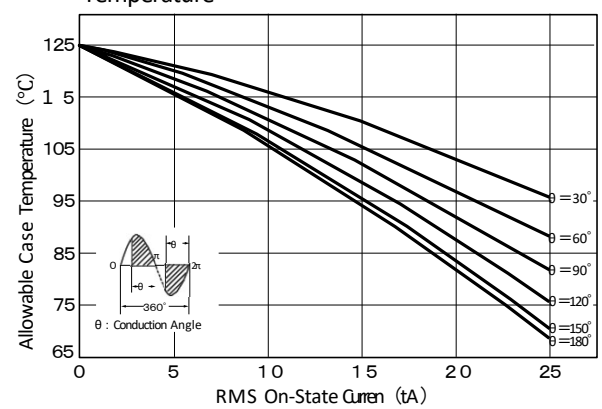
On-State Characteristics (MAX)



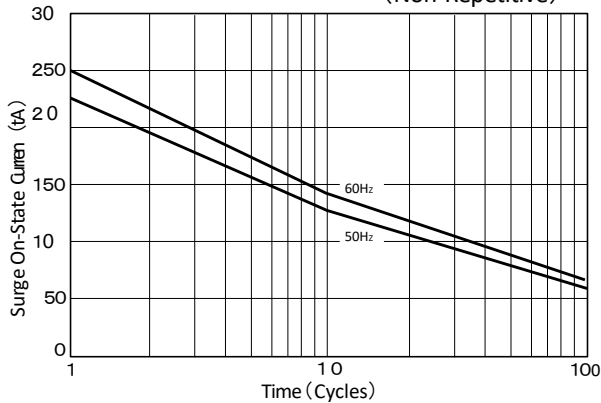
RMS On-State Current vs Maximum Power Dissipation



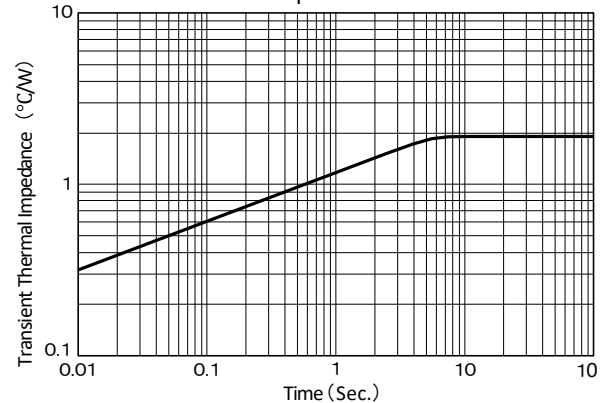
RMS On-State vs Allowable Case Temperature



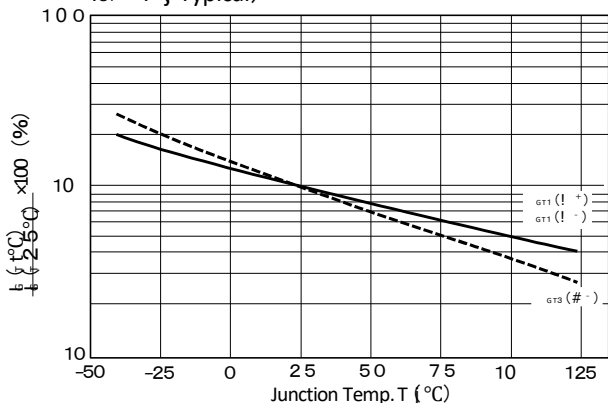
Surge On-State Current Rating (Non-Repetitive)



Transient Thermal Impedance



$I_{GT} - T$ (Typical)



$V_{GT} - T$ (Typical)

