

TRIAC(Through Hole / Isolated)

TMG25D80F

(Sensitive Gate)

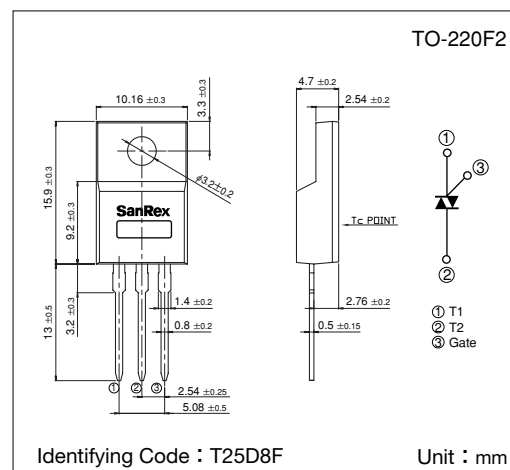
SanRex Triac TMG25D80F is designed for full wave AC control applications. It can be used as an ON/OFF function or for phase control operation.

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

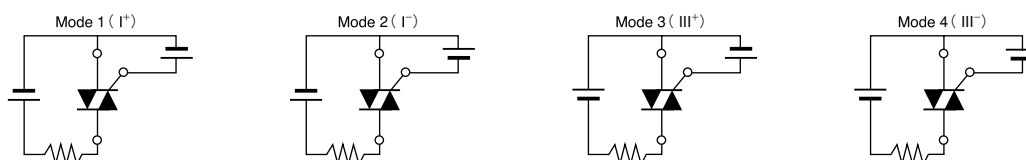
($T_j=25^{\circ}C$ unless otherwise specified)

Symbol	Item	Reference	Ratings	Unit
V_{DRM}	Repetitive Peak Off-State Voltage		800	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
PGM	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 (R.M.S.)	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

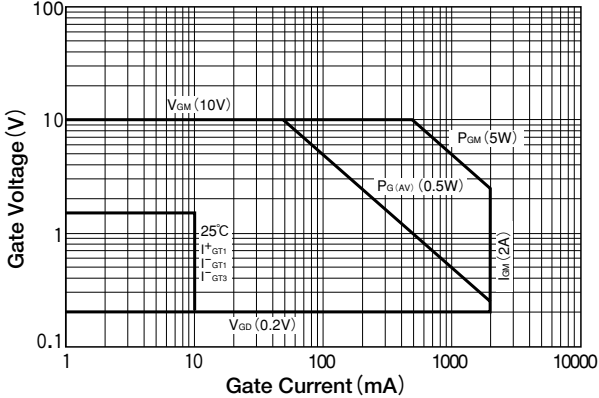
Electrical Characteristics

Symbol	Item	Reference	Ratings			Unit
			Min.	Typ.	Max.	
I_{DRM}	Repetitive Peak Off-State Current	$V_D=V_{DRM}$, Single phase, half wave, $T_J=125^{\circ}C$			5	mA
V_{TM}	Peak On-State Voltage	$I_T=35A$, Inst. measurement			1.4	V
I_{GT1}^{+}	1 2 3 4 Gate Trigger Current	$V_D=6V$, $R_L=10\Omega$			10	mA
I_{GT1}^{-}					10	
I_{GT3}^{+}					—	
I_{GT3}^{-}					10	
V_{GT1}^{+}	1 2 3 4 Gate Trigger Voltage				1.5	V
V_{GT1}^{-}					1.5	
V_{GT3}^{+}					—	
V_{GT3}^{-}					1.5	
V_{GD}	Non-Trigger Gate Voltage	$T_J=125^{\circ}C$, $V_D=\frac{1}{2}V_{DRM}$	0.2			V
$[dv/dt]_c$	Critical Rate of Rise of Off-State Voltage at Commutation	$T_J=125^{\circ}C$, $[di/dt]_c=-12.5A/ms$, $V_D=400V$	10			$V/\mu s$
I_H	Holding Current			35		mA
R_{th}	Thermal Resistance	Junction to case			1.9	$^{\circ}C/W$

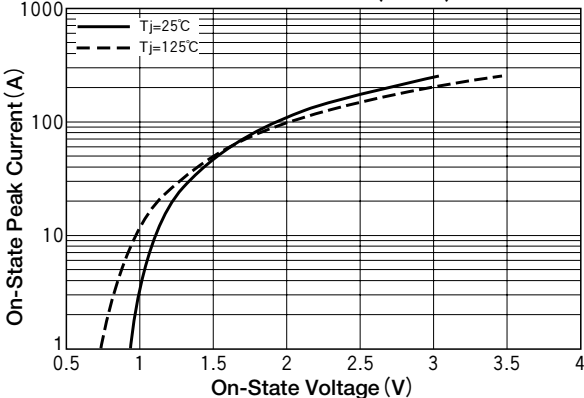
Trigger mode of the triac



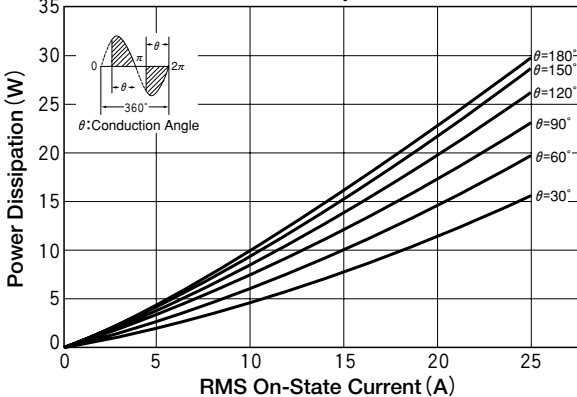
Gate Characteristics



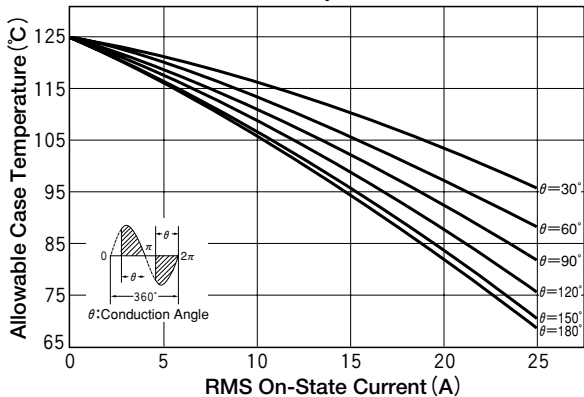
On-State Characteristics (MAX)



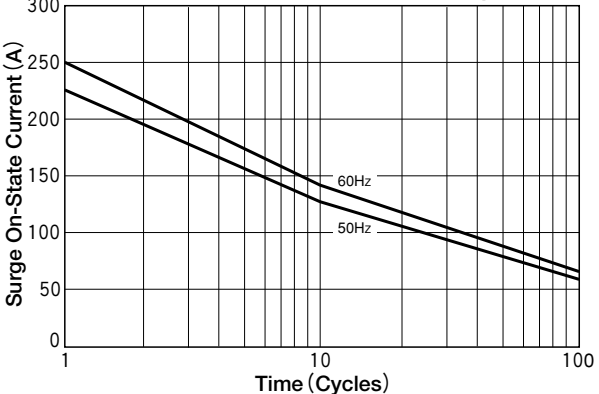
RMS On-State Current vs Maximum Power Dissipation



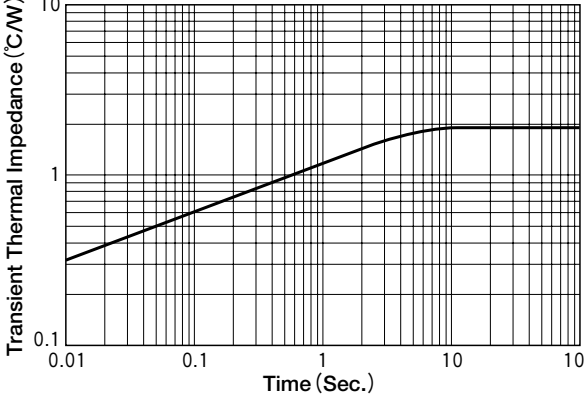
RMS On-State vs Allowable Case Temperature



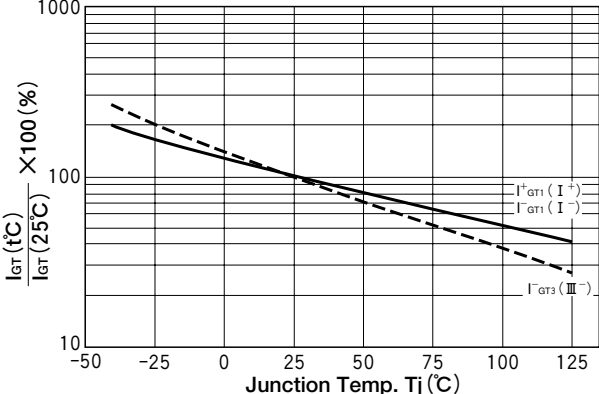
Surge On-State Current Rating (Non-Repetitive)



Transient Thermal Impedance



I_{GT} - T_J (Typical)



V_{GT} - T_J (Typical)

