

TRIAC(Through Hole / Isolated)

TMG25D60J

(Sensitive Gate)

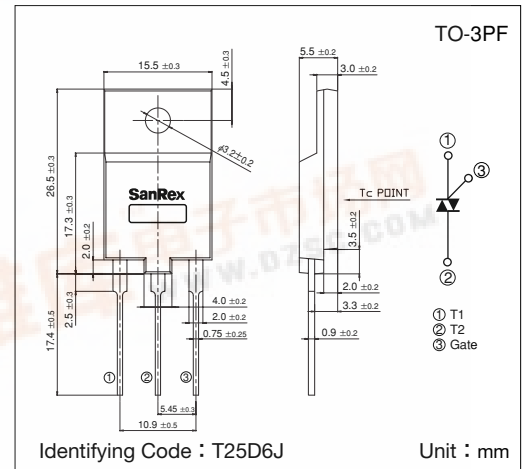
SanRex Triac **TMG25D60J** is designed for full wave AC control applications. It can be used as an ON/OFF function or for phase control operation.

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

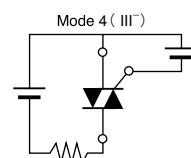
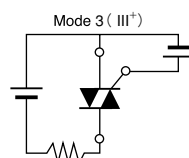
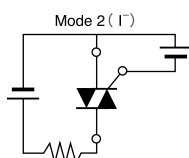
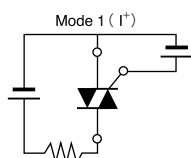
(Tj=25°C unless otherwise specified)

Symbol	Item	Reference	Ratings	Unit
V_{DRM}	Repetitive Peak Off-State Voltage		600	V
$I_{T(RMS)}$	R.M.S. On-State Current	$T_c=83^\circ C$	25	A
I_{TSM}	Surge On-State Current	One cycle, 50Hz/60Hz, Peak value non-repetitive	255/250	A
I^2t	I^2t (for fusing)		260	A ² S
PGM	Peak Gate Power Dissipation		5	W
PG(AV)	Average Gate Power Dissipation		0.5	W
IGM	Peak Gate Current		2	A
VGM	Peak Gate Voltage		10	V
Viso	Isolation Breakdown Voltage (R.M.S.)	A.C. 1minute	1500	V
Tj	Operating Junction Temperature		-40~+125	°C
Tstg	Storage Temperature		-40~+150	°C
	Mass		5.6	g

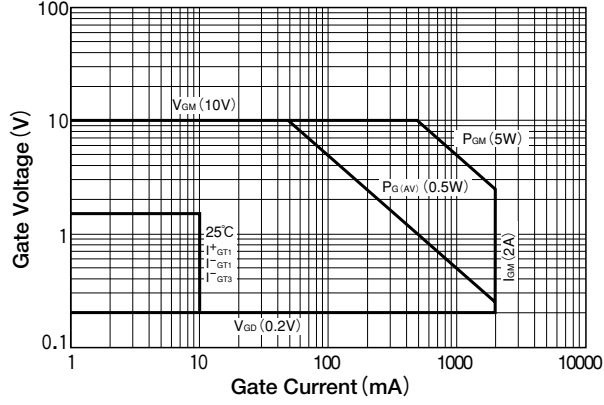
Electrical Characteristics

Symbol	Item	Reference	Ratings			Unit
			Min.	Typ.	Max.	
IDRM	Repetitive Peak Off-State Current	$V_D=V_{DRM}$, Single phase, half wave, $T_j=125^{\circ}C$			5	mA
VTM	Peak On-State Voltage	$I_T=35A$, Inst. measurement			1.4	V
I_{GT1}^{+}	1	$V_D=6V$, $R_L=10\Omega$			10	mA
I_{GT1}^{-}	2				10	
I_{GT3}^{+}	3				—	
I_{GT3}^{-}	4				10	
V_{GT1}^{+}	1				1.5	V
V_{GT1}^{-}	2				1.5	
V_{GT3}^{+}	3				—	
V_{GT3}^{-}	4				1.5	
VG D	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	$T_j=125^{\circ}C$, $[di/dt]_c=-8A/ms$, $V_D=\frac{2}{3}V_{DRM}$	10			V/ μs
IH	Holding Current			35		mA
Rth	Thermal Resistance	Junction to case			1.4	$^{\circ}C/W$

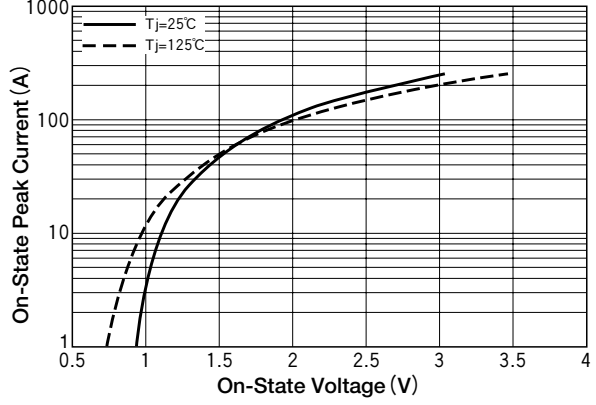
Trigger mode of the triac



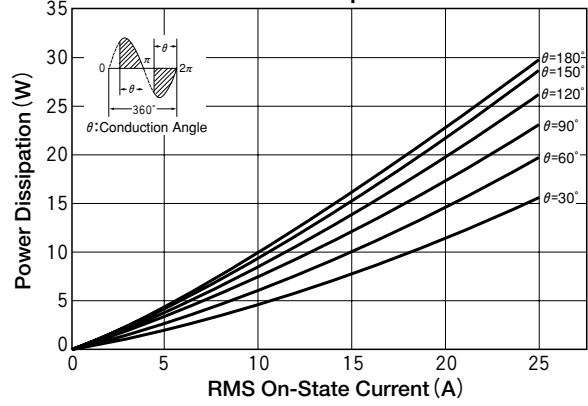
Gate Characteristics



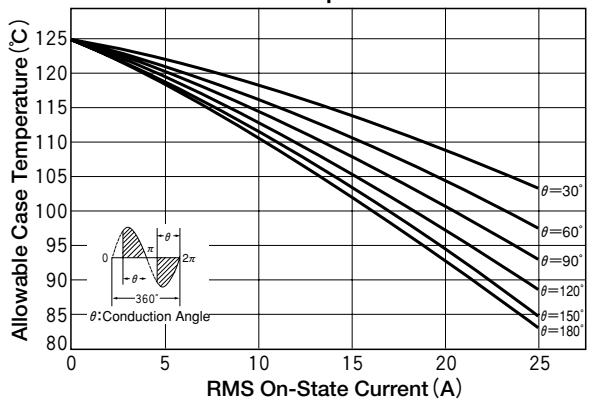
On-State Characteristics (MAX)



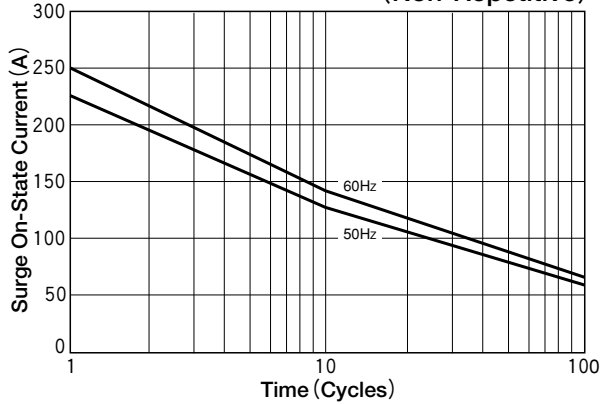
RMS On-State Current vs Maximum Power Dissipation



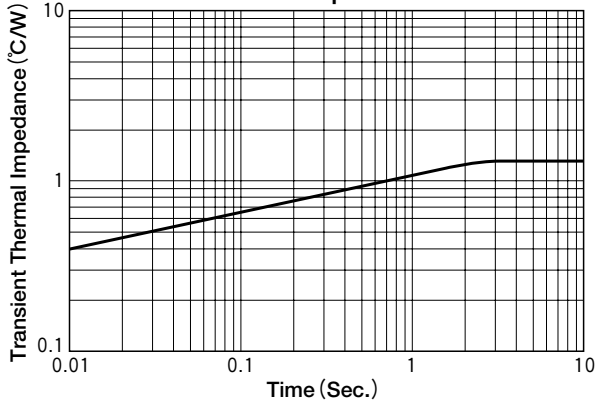
RMS On-State vs Allowable Case Temperature



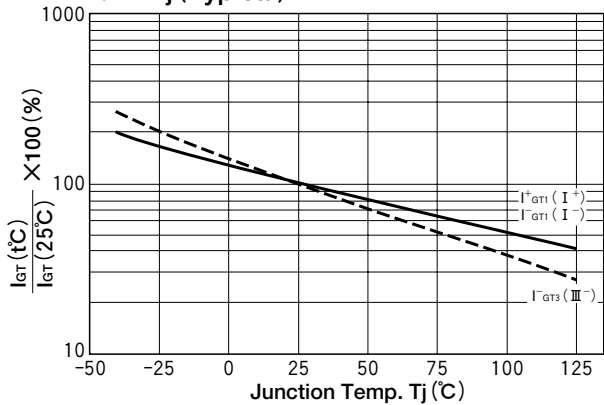
Surge On-State Current Rating (Non-Repetitive)



Transient Thermal Impedance



I_GT - T_J (Typical)



V_GT - T_J (Typical)

