

TRIAC(Through Hole / Non-isolated)

TMG16D60L

(Sensitive Gate)

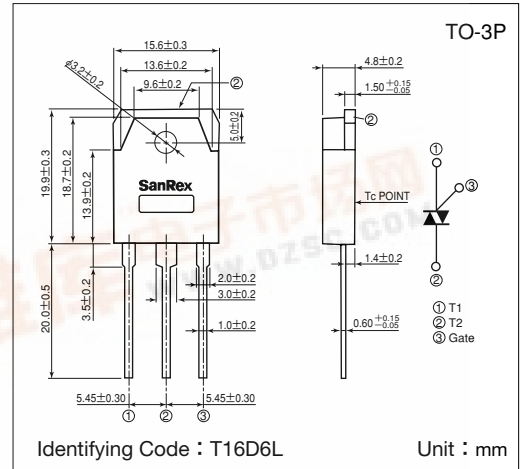
SanRex Triac **TMG16D60L** is designed for full wave AC control applications. It can be used as an ON/OFF function or for phase control operation.

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

- $I_{T(RMS)}=16A$
- High Surge Current
- Low Voltage Drop
- Lead-Free Package



Maximum Ratings

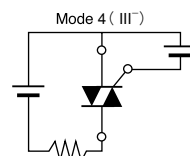
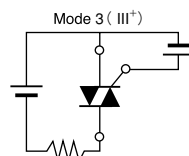
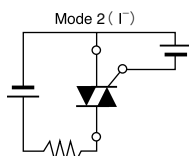
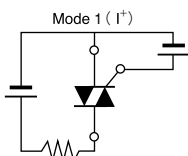
($T_j=25^{\circ}C$ unless otherwise specified)

Symbol	Item	Reference	Ratings	Unit
V_{DRM}	Repetitive Peak Off-State Voltage		600	V
$I_{T(RMS)}$	R.M.S. On-State Current	$T_c=100^{\circ}C$	16	A
I_{TSM}	Surge On-State Current	One cycle, 50Hz/60Hz, Peak value non-repetitive	155/170	A
I^2t	I^2t (for fusing)		120	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
T_j	Operating Junction Temperature		$-40 \sim +125$	$^{\circ}C$
T_{stg}	Storage Temperature		$-40 \sim +150$	$^{\circ}C$
	Mass		5.1	g

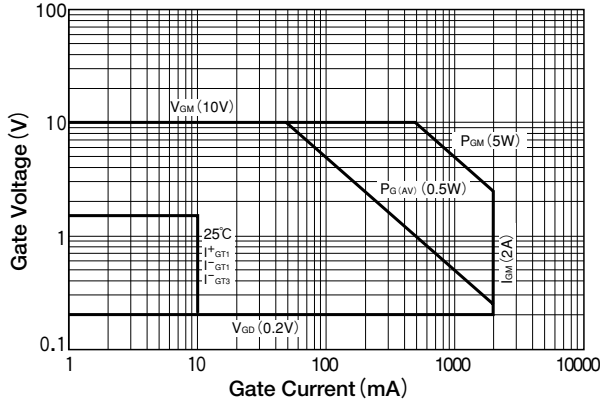
Electrical Characteristics

Symbol	Item	Reference	Ratings			Unit	
			Min.	Typ.	Max.		
IDRM	Repetitive Peak Off-State Current	VD=VDRM, Single phase, half wave, Tj=125℃			2	mA	
VTM	Peak On-State Voltage	It=25A, Inst. measurement			1.4	V	
I_{GT1}^{+}	1	VD=6V, RL=10Ω			10	mA	
I_{GT1}^{-}	2				10		
I_{GT3}^{+}	3				—		
I_{GT3}^{-}	4				10		
V_{GT1}^{+}	1		Gate Trigger Voltage			1.5	V
V_{GT1}^{-}	2					1.5	
V_{GT3}^{+}	3					—	
V_{GT3}^{-}	4					1.5	
VGD	Non-Trigger Gate Voltage	Tj=125℃, VD=½VDRM	0.2			V	
(dv/dt)c	Critical Rate of Rise of Off-State Voltage at Commutation	Tj=125℃, [di/dt]c=−8A/ms, VD=⅔VDRM	10			V/μs	
IH	Holding Current			25		mA	
Rth	Thermal Resistance	Junction to case			1.3	℃/W	

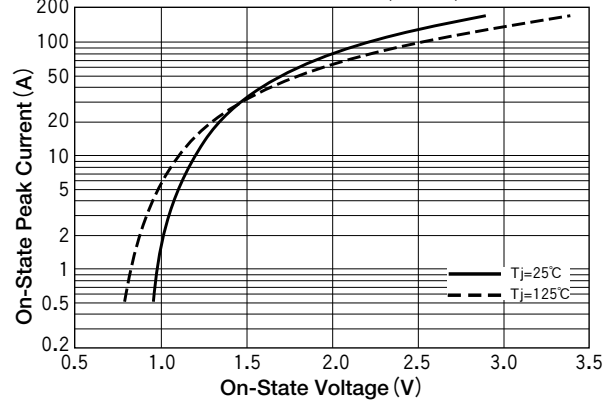
Trigger mode of the triac



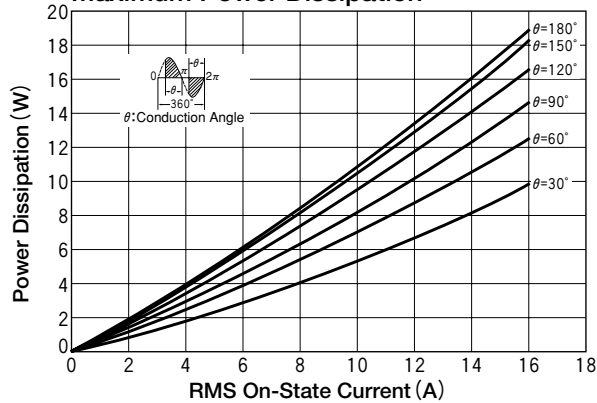
Gate Characteristics



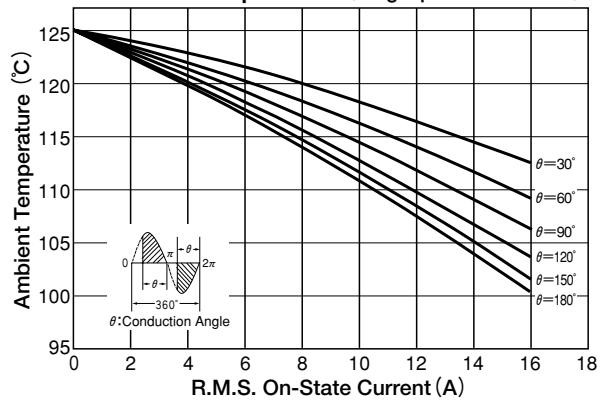
On-State Characteristics (MAX)



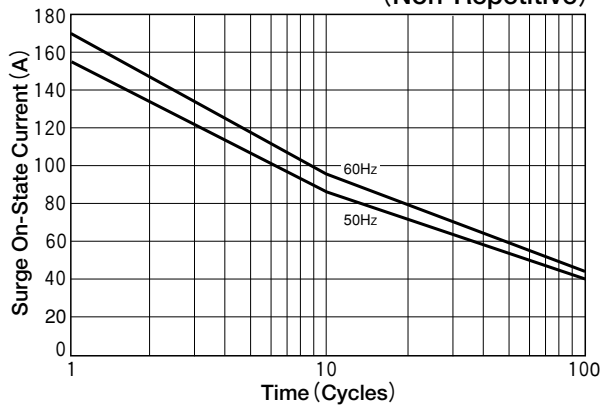
RMS On-State vs Maximum Power Dissipation



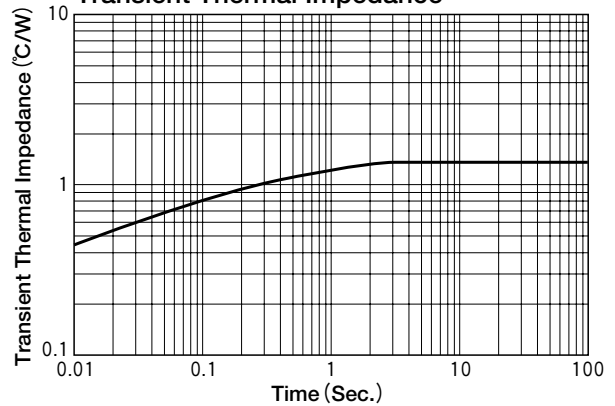
Average On-State Current vs Ambient Temperature (Single phase half wave)



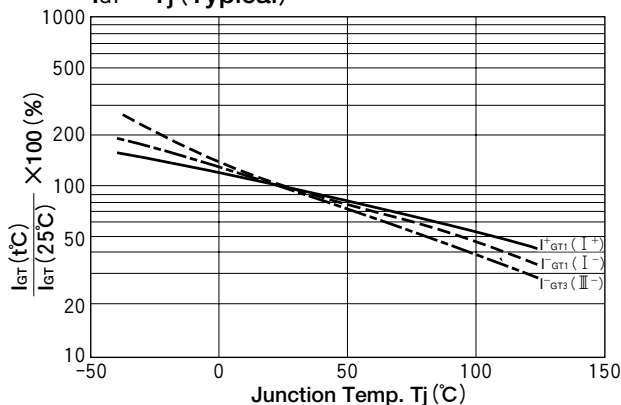
Surge On-State Current Rating (Non-Repetitive)



Transient Thermal Impedance



$I_{GT} - T_J$ (Typical)



$V_{GT} - T_J$ (Typical)

