

TRIAC(Through Hole / Isolated)

TMG2DQ60F

(T_j=150°C / Sensitive Gate)

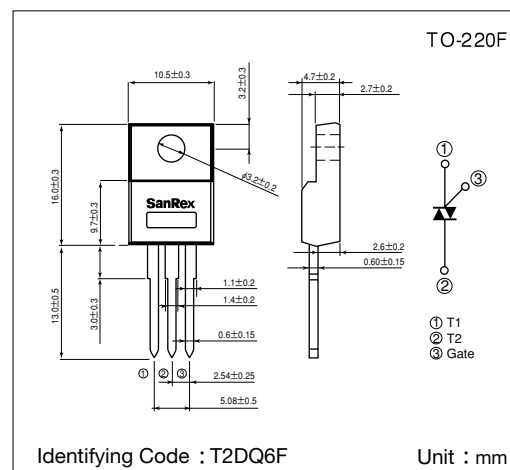
SanRex Triac TMG2DQ60F is designed for full wave AC control applications. It can be used as an ON/OFF function or for phase control operation.

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)}=2A
- High Surge Current
- Lead-Free Package



Maximum Ratings

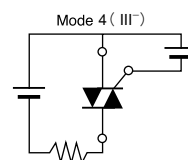
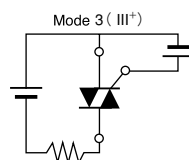
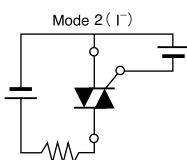
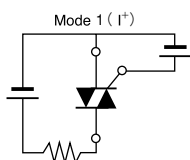
(T_j=25°C unless otherwise specified)

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 =129°C	2	A
I _{TSM}	Surge On-State Current	One cycle, 50Hz/60Hz, Peak value non-repetitive	18/20	A
I ² _t	I ² _t (for fusing)		1.67	A ² S
P _{GM}	Peak Gate Power Dissipation		1.5	W
P _{G(AV)}	Average Gate Power Dissipation		0.1	W
I _{GM}	Peak Gate Current		1	A
V _{GM}	Peak Gate Voltage		7	V
V _{ISO}	Isolation Breakdown Voltage (R.M.S.)	A.C. 1minute	1500	V
T _j	Operating Junction Temperature		-40 ~ +150	°C
T _{stg}	Storage Temperature		-40 ~ +150	°C
	Mass		2	g

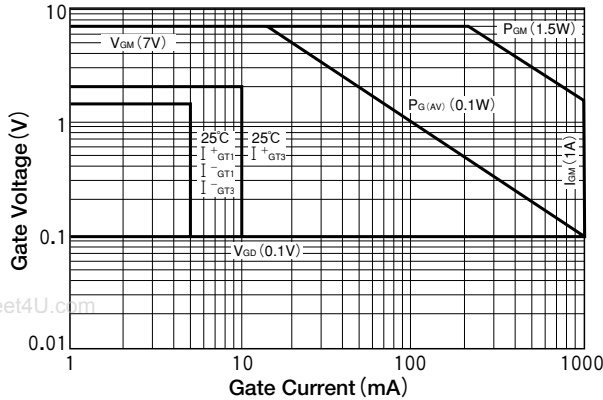
Electrical Characteristics

Symbol	Item		Reference	Ratings			Unit
				Min.	Typ.	Max.	
IDRM	Repetitive Peak Off-State Current		VD=VDRM, Single phase, half wave, Tj=150 °C			1	mA
VTM	Peak On-State Voltage		IT=3A, Inst. measurement			1.6	V
IGT1 ⁺	1	Gate Trigger Current	VD=6V, RL=10 Ω			5	mA
IGT1 ⁻	2					5	
IGT3 ⁺	3					10	
IGT3 ⁻	4					5	
VGT1 ⁺	1	Gate Trigger Voltage				1.5	V
VGT1 ⁻	2					1.5	
VGT3 ⁺	3					2.0	
VGT3 ⁻	4					1.5	
VGD	Non-Trigger Gate Voltage		Tj=150 °C, VD=1/2VDRM	0.1			V
(dv/dt)c	Critical Rate of Rise of Off-State Voltage at Commutation		Tj=150 °C, [di/dt]c=-1A/ms, VD=2/3VDRM	1			V/μs
IH	Holding Current				2		mA
Rth(j-c)	Thermal Resistance		Junction to case			7.5	°C/W
Rth(j-a)			Junction to ambient			50	

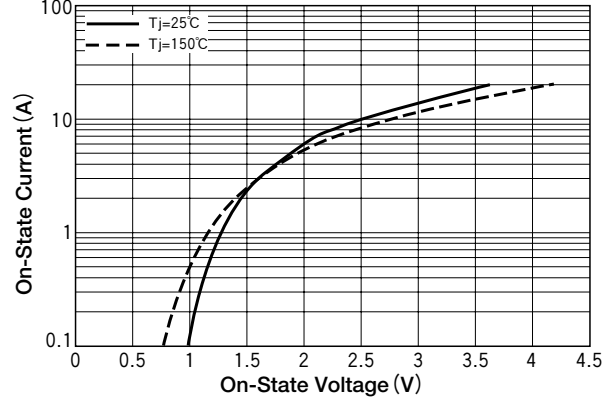
Trigger mode of the triac



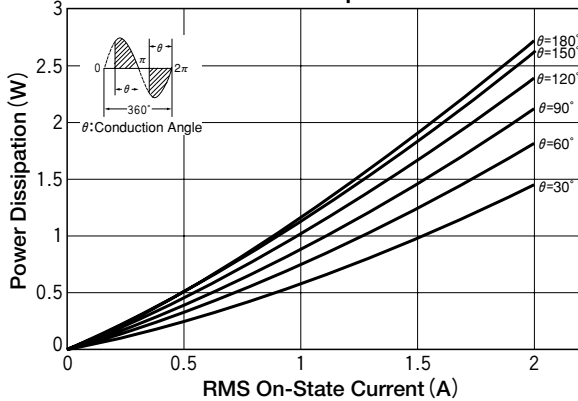
Gate Characteristics



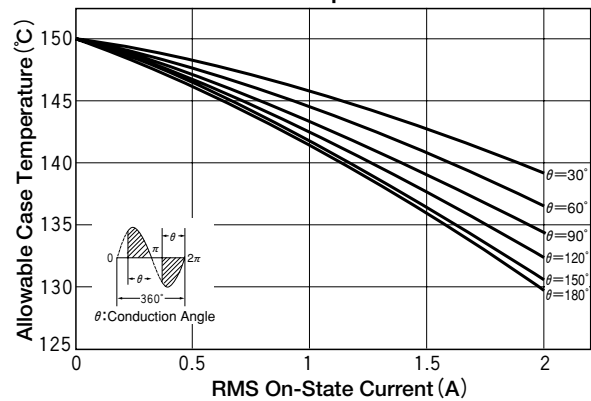
On-State Characteristics (MAX)



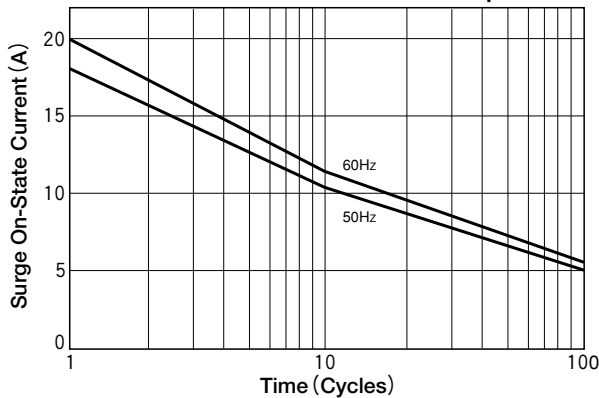
RMS On-State Current vs Maximum Power Dissipation



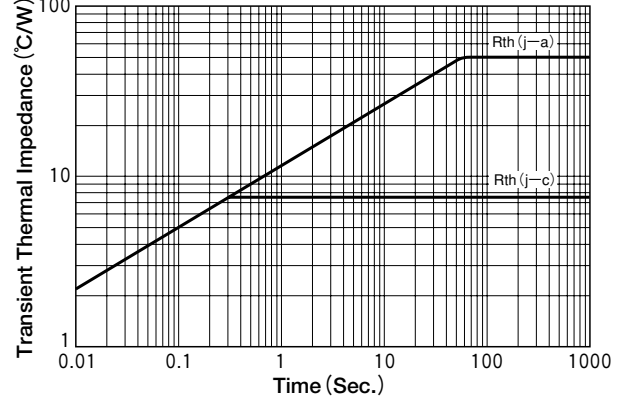
RMS On-State vs Allowable Case Temperature



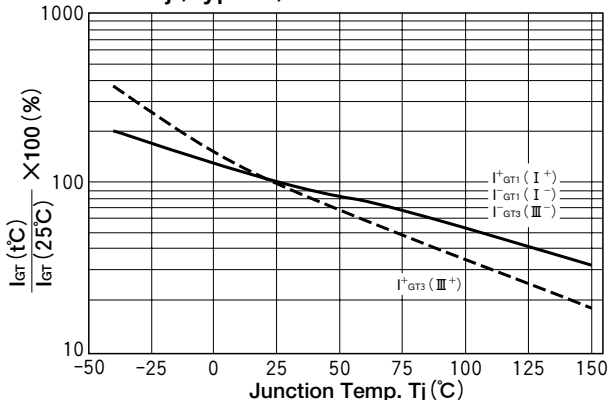
Surge On-State Current Rating (Non-Repetitive)



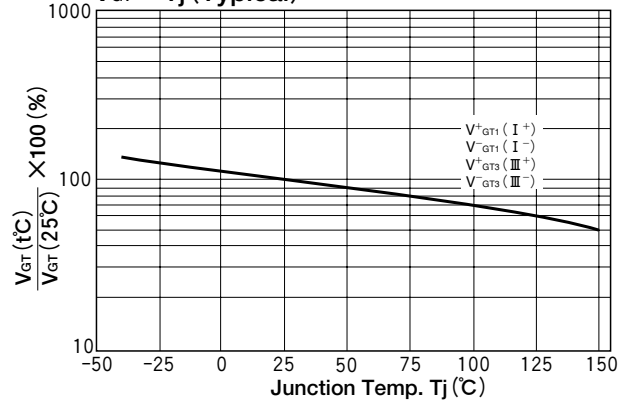
Transient Thermal Impedance



$I_{GT} - T_j$ (Typical)



$V_{GT} - T_j$ (Typical)



**RMS On-State vs
Allowable Ambient Temperature**

