

TRIAC(Through Hole / Isolated)

TMG8CQ60F

(T_j=150°C)

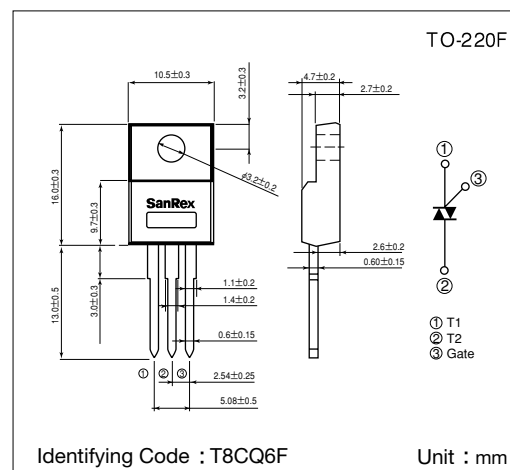
SanRex Triac TMG8CQ60F is designed for full wave AC control applications. It can be used as an ON/OFF function or for phase control operation.

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)}=8A
- High Surge Current
- Low Voltage Drop
- Lead-Free Package



Maximum Ratings

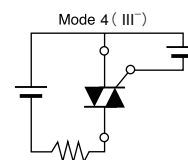
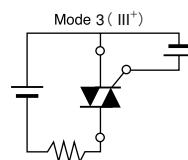
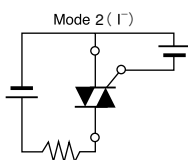
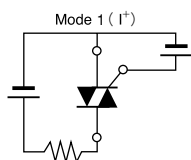
(T_j=25 °C unless otherwise specified)

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 =114 °C	8	A
I _{TSM}	Surge On-State Current	One cycle, 50Hz/60Hz, Peak value non-repetitive	80/88	A
I ² _t	I ² _t (for fusing)		32	A ² S
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 (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

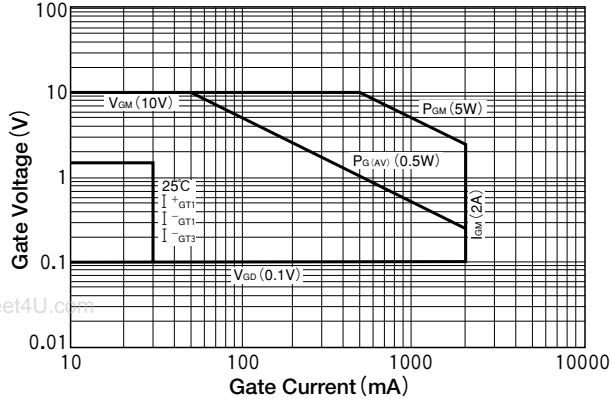
Electrical Characteristics

Symbol	Item		Reference	Ratings			Unit
				Min.	Typ.	Max.	
I _{DRM}	Repetitive Peak Off-State Current		V _D =V _{DRM} , Single phase, half wave, T _j =150 °C			2	mA
V _{TM}	Peak On-State Voltage		I _T =12A, Inst. measurement			1.4	V
I _{GT1} ⁺	1	Gate Trigger Current	V _D =6V, R _L =10 Ω			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 =150 °C, V _D = $\frac{1}{2}$ V _{DRM}	0.1			V
(dv/dt) _c	Critical Rate of Rise of Off-State Voltage at Commutation		T _j =150 °C, (di/dt) _c =−4A/ms, V _D = $\frac{2}{3}$ V _{DRM}	5			V/μs
I _H	Holding Current				15		mA
R _{th}	Thermal Resistance		Junction to case			3.7	°C/W

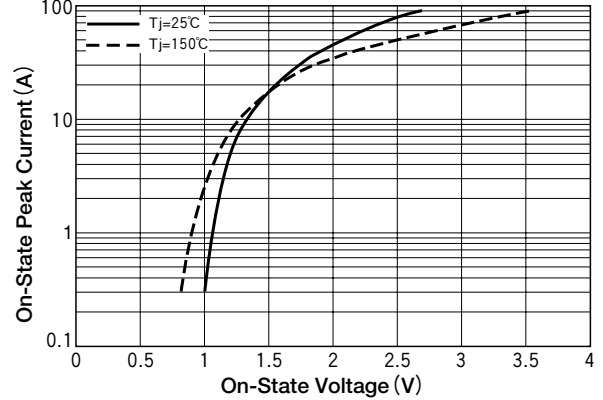
Trigger mode of the triac



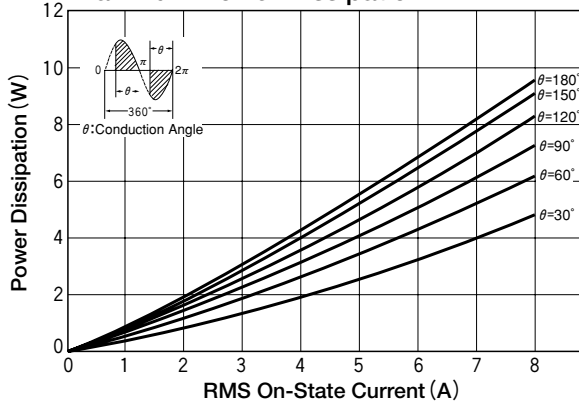
Gate Characteristics



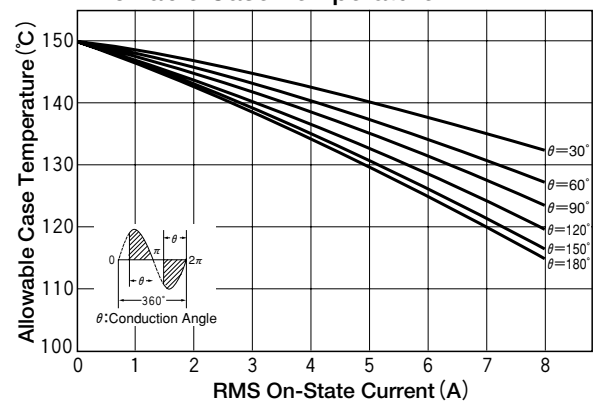
On-State Characteristics (MAX)



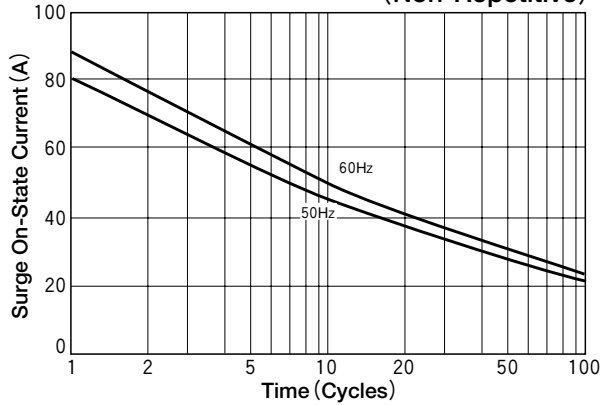
RMS On-State Current vs Maximum Power Dissipation



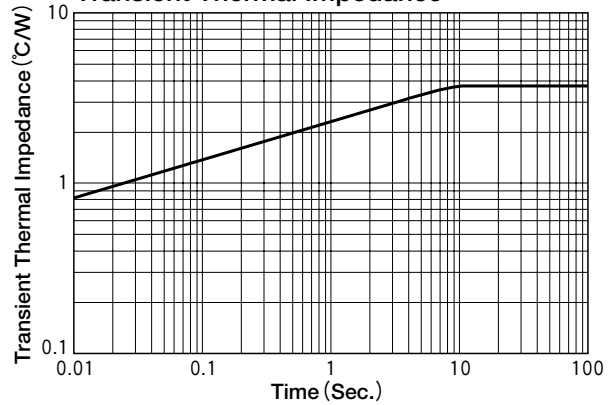
RMS On-State vs Allowable Case Temperature



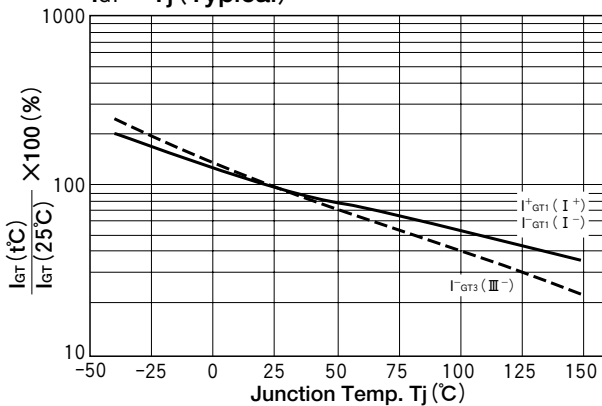
Surge On-State Current Rating (Non-Repetitive)



Transient Thermal Impedance



I_{GT} - T_J (Typical)



V_{GT} - T_J (Typical)

