

TRIAC(Through Hole / Isolated)

TMG40CQ60J

(T_j=150°C)

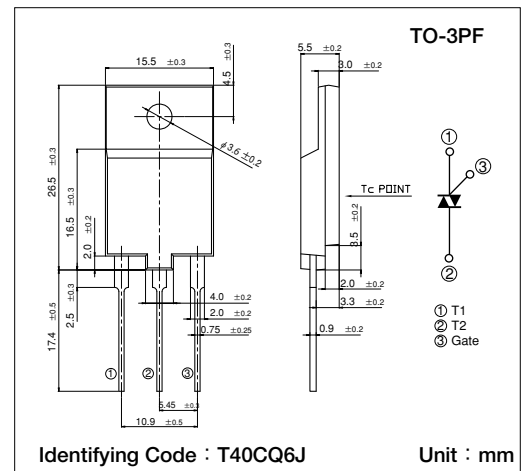
SanRex Triac TMG40CQ60J is designed for full wave AC control applications. It can be used as an ON/OFF function or for phase control operation.

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)}=40A
- High Surge Current
- Lead-Free Package



Maximum Ratings

(T_j=25°C unless otherwise)

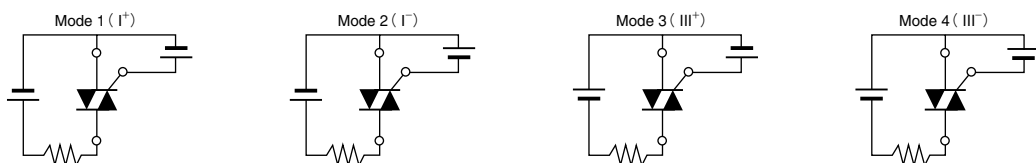
Symbol	Item	Reference	Ratings	Unit
V _{DRM}	Repetitive Peak Off-State Voltage		600	V
I _{T(RMS)}	R.M.S. On-State Current	T _c =98°C	40	A
I _{TSM}	Surge On-State Current	One cycle, 50Hz/60Hz, Peak value non-repetitive	380/420	A
I ² _t	I ² _t (for fusing)		730	A ² S
P _{GM}	Peak Gate Power Dissipation		10	W
P _{G(AV)}	Average Gate Power Dissipation		1	W
I _{GM}	Peak Gate Current		3	A
V _{GM}	Peak Gate Voltage		10	V
V _{ISO}	Isolation Breakdown Voltage (R.M.S.)	A.C. 1 minute	1500	V
T _j	Operating Junction Temperature		-40~+150	°C
T _{stg}	Storage Temperature		-40~+150	°C
	Mass		5.6	g

Electrical Characteristics

(T_j=25°C unless otherwise)

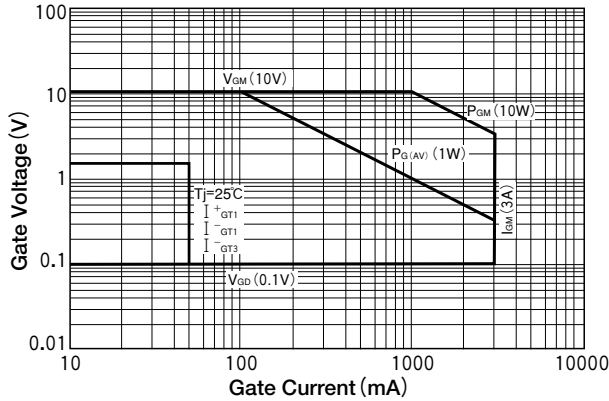
Symbol	Item	Reference	Ratings			Unit
			Min.	Typ.	Max.	
IDRM	Repetitive Peak Off-State Current	VD=VDRM, Single phase, half wave, Tj=150°C			8	mA
VTM	Peak On-State Voltage	It=60A, Inst. measurement			1.4	V
IGT1 ⁺	1	VD=6V, RL=10Ω			50	mA
IGT1 [−]	2				50	
IGT3 ⁺	3				—	
IGT3 [−]	4				50	
VGT1 ⁺	1				1.5	V
VGT1 [−]	2				1.5	
VGT3 ⁺	3				—	
VGT3 [−]	4				1.5	
VGD	Non-Trigger Gate Voltage	Tj=150°C, Vd=½VDRM	0.1			V
(dv/dt)c	Critical Rate of Rise of Off-State Voltage at Commutation	Tj=150°C, [di/dt]c=−20A/ms, VD=⅔VDRM	5			V/μs
IH	Holding Current			30		mA
Rth	Thermal Resistance	Junction to case			1.1	°C/W

Trigger mode of the triac

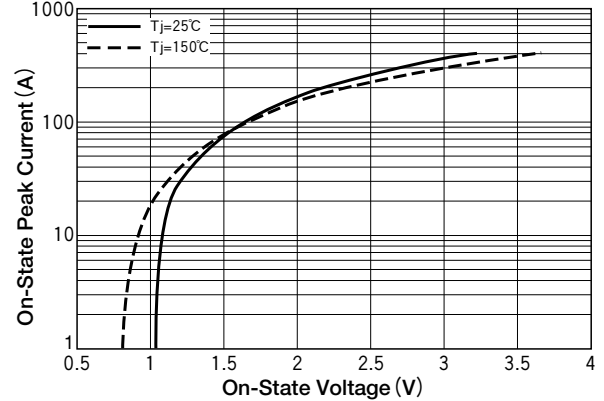


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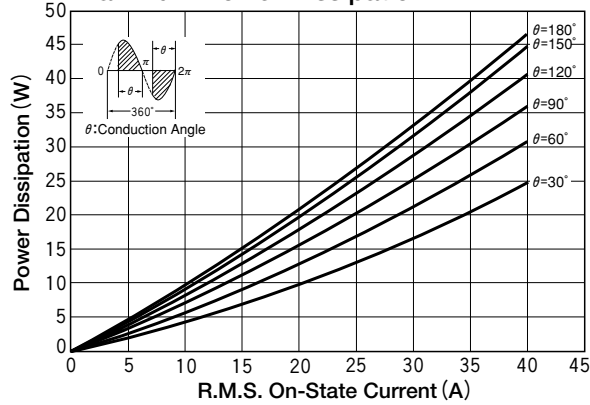
Gate Characteristics



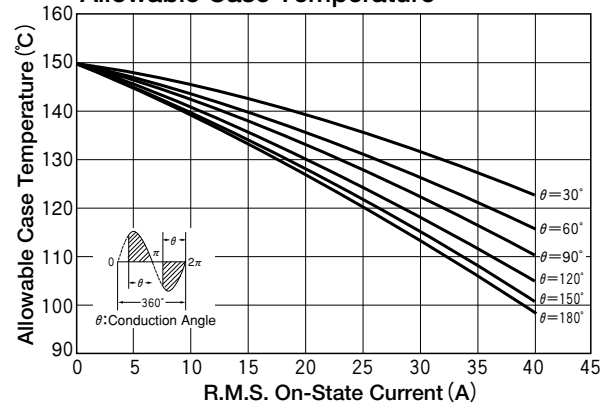
On-State Characteristics



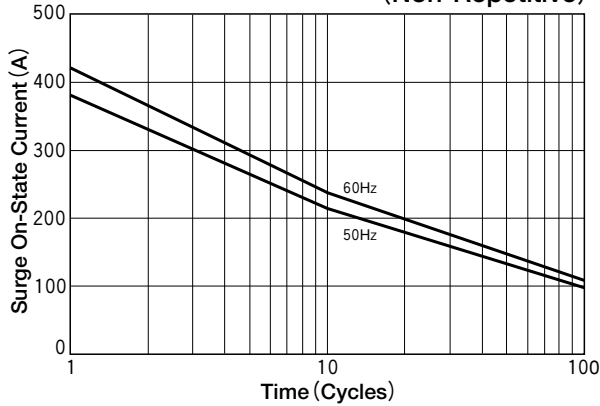
R.M.S. On-State Current vs Maximum Power Dissipation



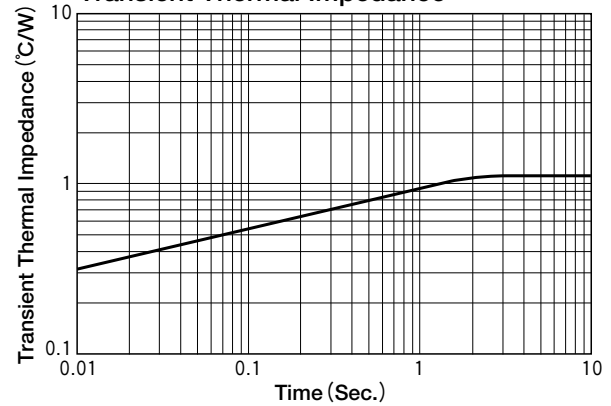
R.M.S. On-State Current vs Allowable Case Temperature



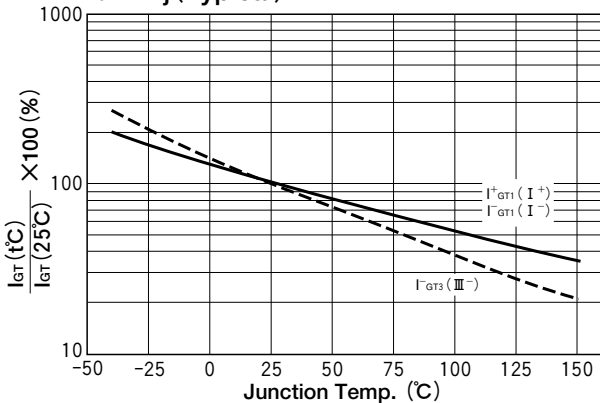
Surge On-State Current Rating (Non-Repetitive)



Transient Thermal Impedance



$I_{GT} - T_j$ (Typical)



$V_{GT} - T_j$ (Typical)

