

TRIAC(Through Hole / Isolated)

TMG40C80J

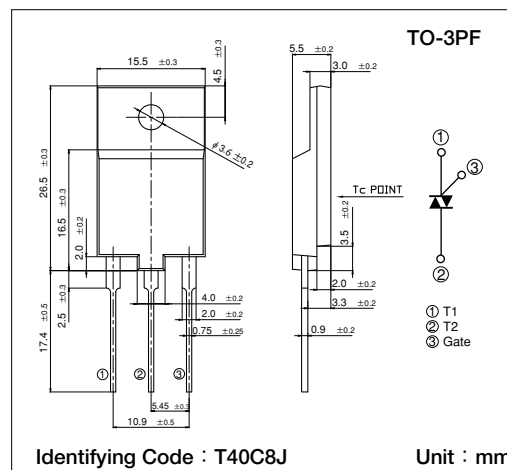
SanRex Triac TMG40C80J is designed for full wave AC control applications. It can be used as an ON/OFF function or for phase control operation.

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

(Tj=25°C unless otherwise)

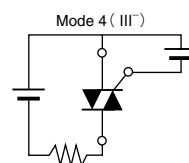
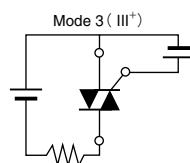
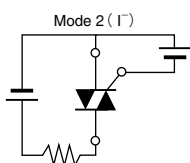
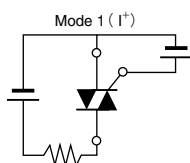
Symbol	Item	Reference	Ratings	Unit
V _{DRM}	Repetitive Peak Off-State Voltage		800	V
I _{T(RMS)}	R.M.S. On-State Current	T _c =73°C	40	A
I _{TSM}	Surge On-State Current	One cycle, 50Hz/60Hz, Peak value non-repetitive	380/420	A
I ² _t	I ² _t (for fusing)		730	A ² S
P _{GM}	Peak Gate Power Dissipation		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~+125	°C
T _{stg}	Storage Temperature		-40~+150	°C
	Mass		5.6	g

Electrical Characteristics

(Tj=25°C unless otherwise)

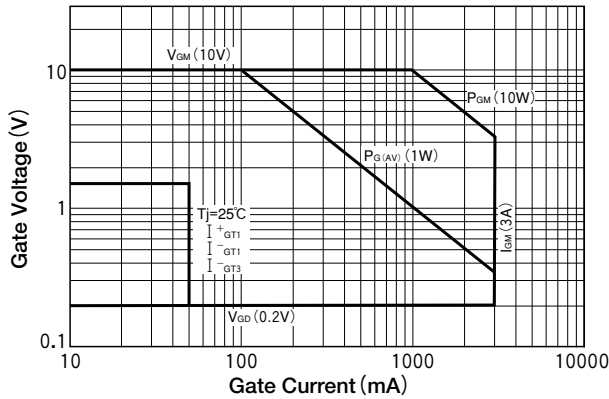
Symbol	Item		Reference	Ratings			Unit
				Min.	Typ.	Max.	
I _{DRM}	Repetitive Peak Off-State Current		V _D =V _{DRM} , Single phase, half wave, T _J =125°C			5	mA
V _{TM}	Peak On-State Voltage		I _T =60A, Inst. measurement			1.4	V
I _{GT1} ⁺	1	Gate Trigger Current	V _D =6V, R _L =10Ω			50	mA
I _{GT1} [−]	2					50	
I _{GT3} ⁺	3					—	
I _{GT3} [−]	4					50	
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 =125°C, V _D =½V _{DRM}	0.2			V
(dv/dt) _c	Critical Rate of Rise of Off-State Voltage at Commutation		T _J =125°C, [di/dt] _c =−20A/ms, V _D =400V	10			V/μs
I _H	Holding Current				30		mA
R _{th}	Thermal Resistance		Junction to case			1.1	°C/W

Trigger mode of the triac

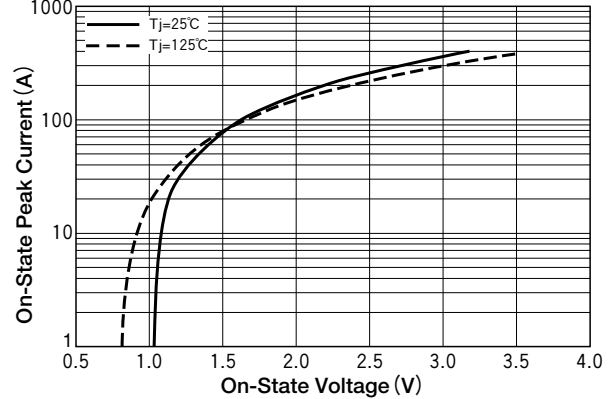


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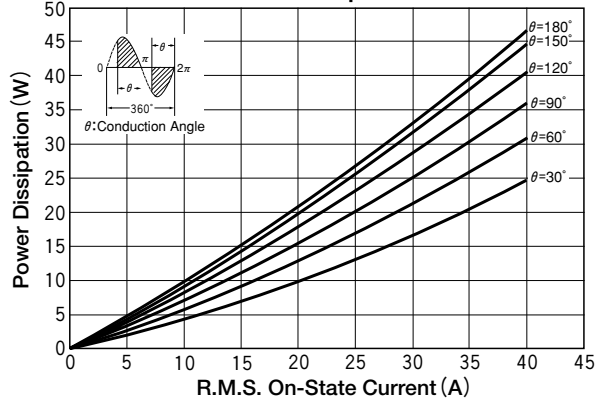
Gate Characteristics



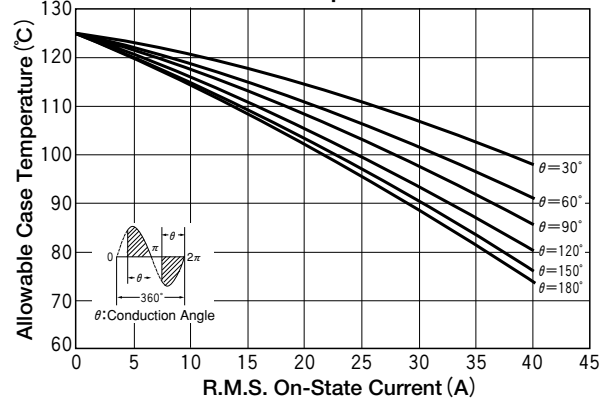
On-State Characteristics



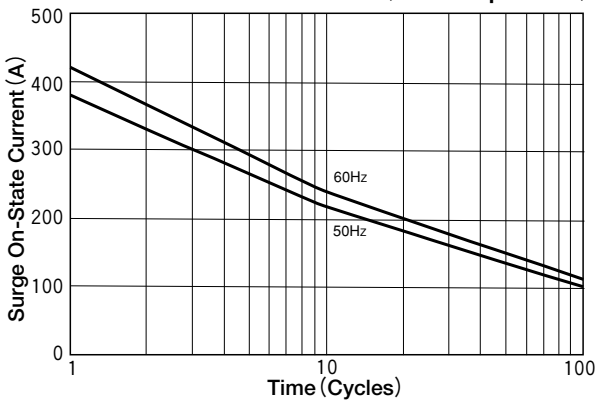
R.M.S. On-State Current vs Maximum Power Dissipation



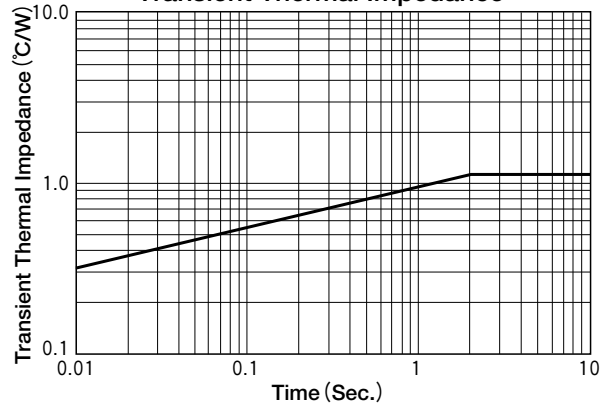
R.M.S. On-State vs Allowable Case Temperature



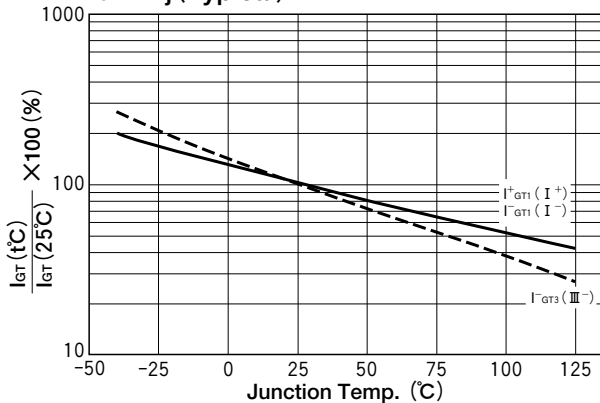
Surge On-State Current Rating (Non-Repetitive)



Transient Thermal Impedance



$I_{GT} - T_j$ (Typical)



$V_{GT} - T_j$ (Typical)

