

TRIAC(Through Hole/Non-isolated)

TMG2D80C

(Sensitive Gate)

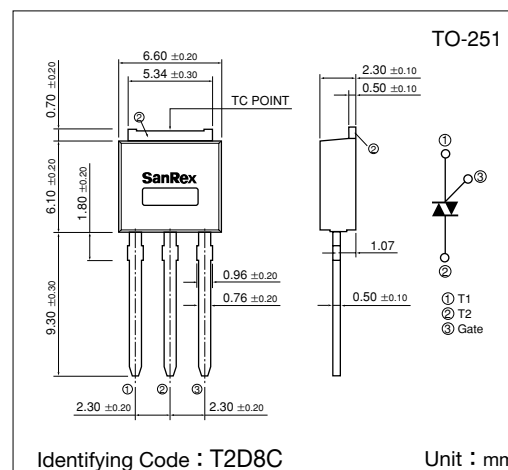
SanRex Triac TMG2D80C is designed for full wave AC control applications. It can be used as an ON/OFF function or for phase control operation.

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

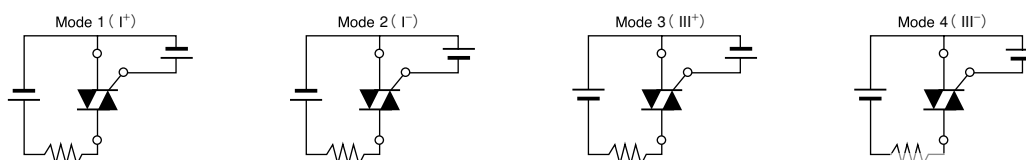
(Tj=25°C unless otherwise specified)

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 =109°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
T _j	Operating Junction Temperature		-40~+125	°C
T _{stg}	Storage Temperature		-40~+150	°C
	Mass		0.39	g

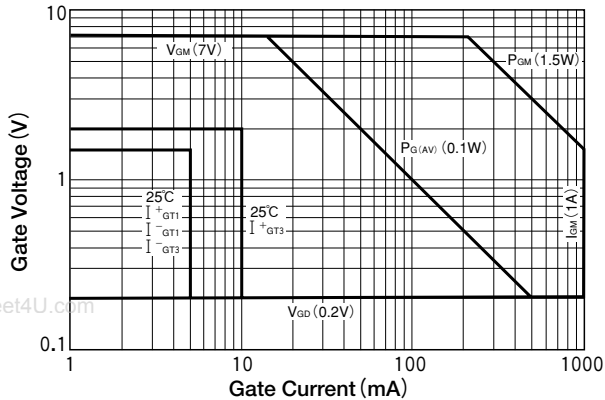
Electrical Characteristics

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 =125°C			1	mA
V _{TM}	Peak On-State Voltage		I _T =3A, Inst. measurement			1.6	V
I _{GT1} ⁺	1	Gate Trigger Current	V _D =6V, R _L =10 Ω			5	mA
I _{GT1} ⁻	2					5	
I _{GT3} ⁺	3					10	
I _{GT3} ⁻	4					5	
V _{GT1} ⁺	1	Gate Trigger Voltage				1.5	V
V _{GT1} ⁻	2					1.5	
V _{GT3} ⁺	3					2.0	
V _{GT3} ⁻	4					1.5	
V _{GD}	Non-Trigger Gate Voltage		T _j =125°C, V _D = $\frac{1}{2}$ V _{DRM}	0.2			V
(dv/dt) _c	Critical Rate of Rise of Off-State Voltage at Commutation		T _j =125°C, [di/dt] _c =-1A/ms, V _D =400V	3			V/μs
I _H	Holding Current				2		mA
R _{th} (j-c)	Thermal Resistance		Junction to case			5.8	°C/W
R _{th} (j-a)			Junction to ambient			60	°C/W

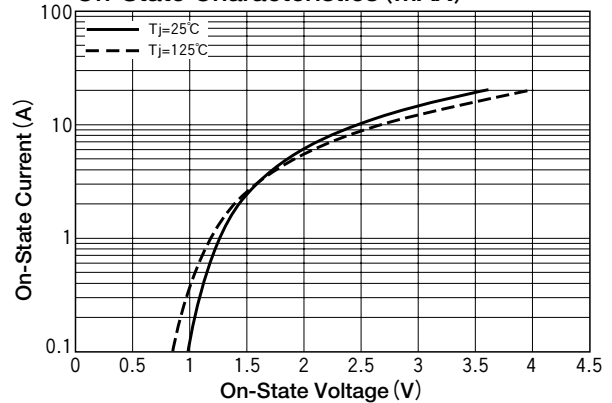
Trigger mode of the triac



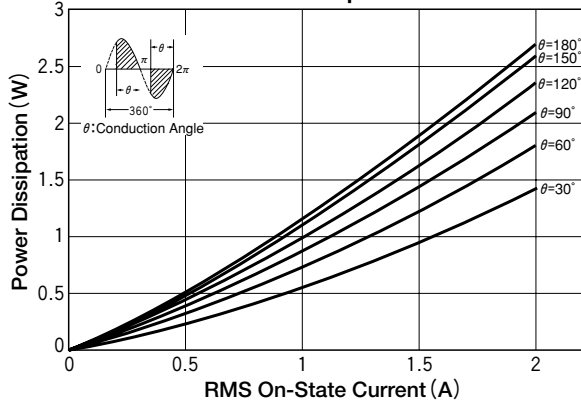
Gate Characteristics



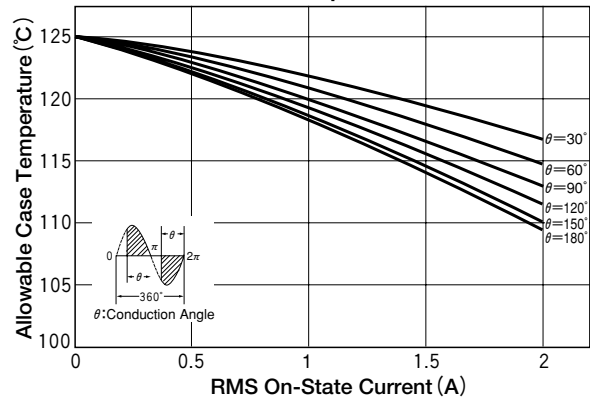
On-State Characteristics (MAX)



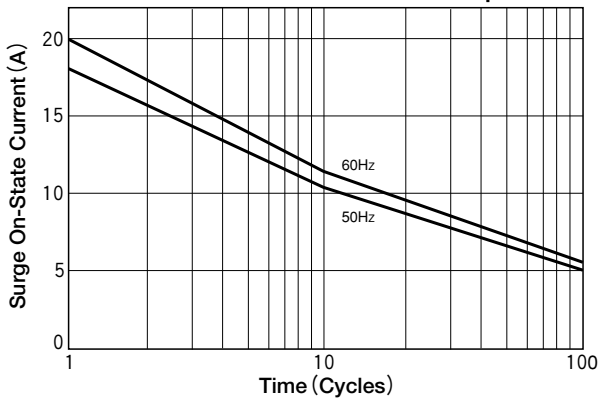
RMS On-State Current vs Maximum Power Dissipation



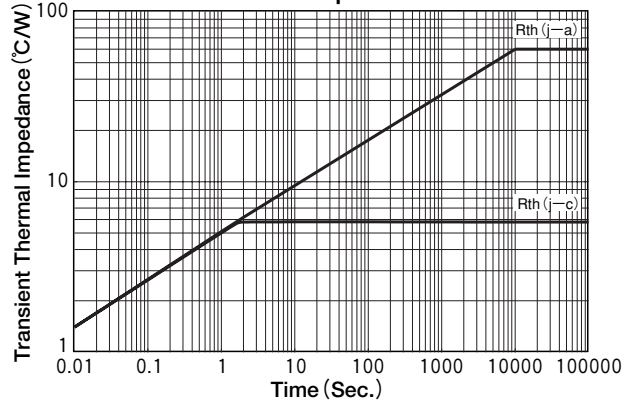
RMS On-State vs Allowable Case Temperature



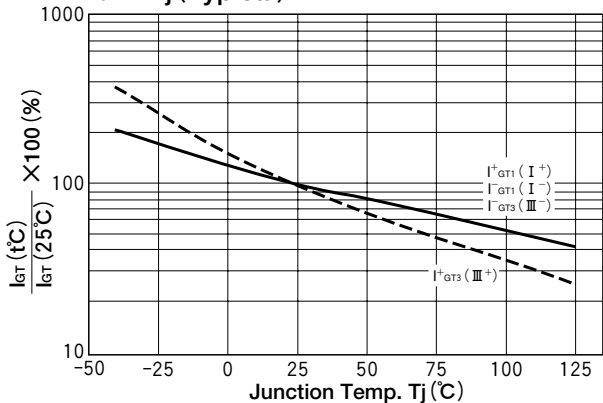
Surge On-State Current Rating (Non-Repetitive)



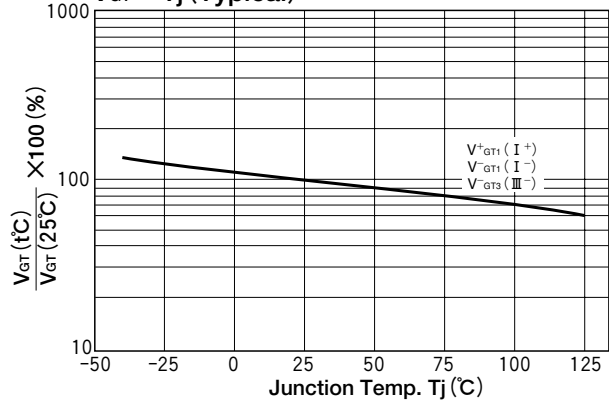
Transient Thermal Impedance



$I_{GT} - T_J$ (Typical)



$V_{GT} - T_J$ (Typical)



RMS On-State vs
Allowable Ambient Temperature

