TRIAC(Through Hole/Isolated)

TMG2CQ60F 5

(T_j=150℃)

SanRex Triac **TMG2CQ60F 5** 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
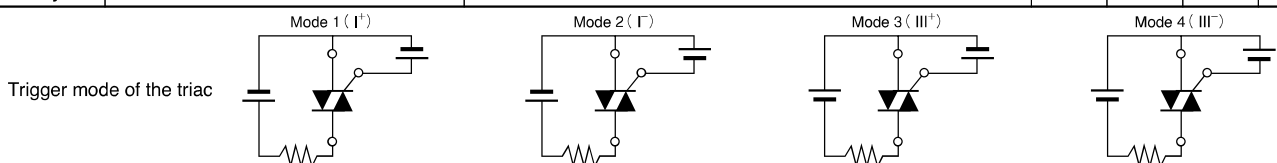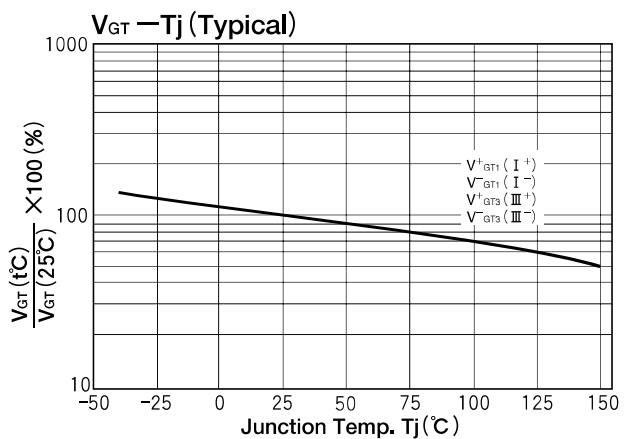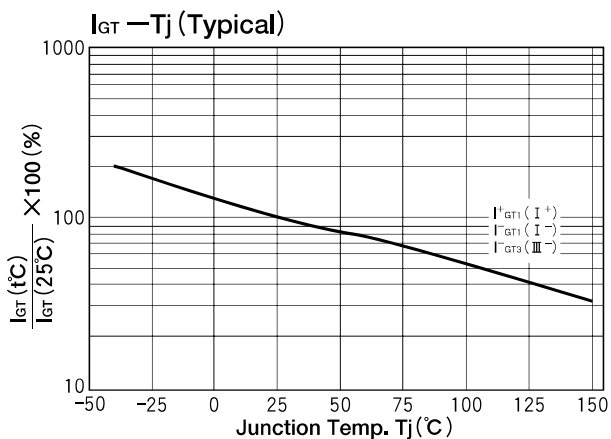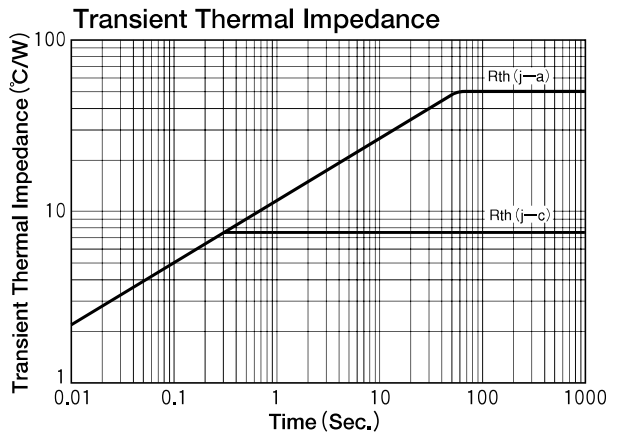- $I_{T(RMS)}$=2A
- High Surge Current

TO-220F 5

① T1
② T2
③ Gate

Identifying Code : T2CQ6F 5   Unit : mm
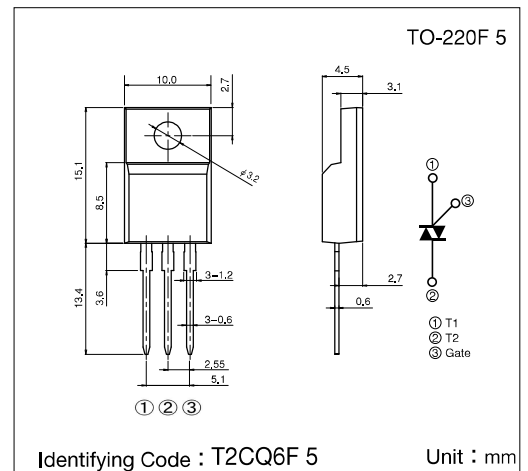
■Maximum Ratings

(Tj=25℃ 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	Tc=129℃	2	A
I_{TSM}	Surge On-State Current	One cycle, 50Hz/60Hz, Peak value, non-repetitive	18/20	A
I^2t	I^2t (for fusing)		1.67	A^2s
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
Tj	Operating Junction Temperature		−40～+150	℃
Tstg	Storage Temperature		−40～+150	℃
	Mass		2	g

■Electrical Characteristics

Symbol		Item	Reference	Min.	Typ.	Max.	Unit
I_{DRM}		Repetitive Peak Off-State Current	V_D=V_{DRM}, Single phase, half wave, Tj=150℃			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=10Ω			15	mA
I^-_{GT1}	2					15	
I^+_{GT3}	3					—	
I^-_{GT3}	4					15	
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	Tj=150℃, V_D=½V_{DRM}	0.1			V
(dv/dt)c		Critical Rate of Rise of Off-State Voltage at Commutation	Tj=150℃, (di/dt)c=−1A/ms, V_D=⅔V_{DRM}	1			V/μs
I_H		Holding Current				2	mA
Rth(j-c)		Thermal Resistance	Junction to case			7.5	℃/W
Rth(j-a)			Junction to ambient			50	℃/W

Mode 1 (I⁺)   Mode 2 (I⁻)   Mode 3 (III⁺)   Mode 4 (III⁻)

Trigger mode of the triac

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Gate Characteristics

On-State Characteristics（MAX）

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} — Tj（Typical）

V_{GT} — Tj（Typical）

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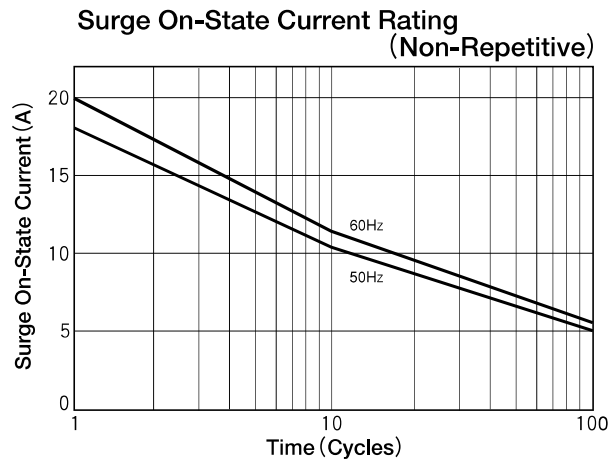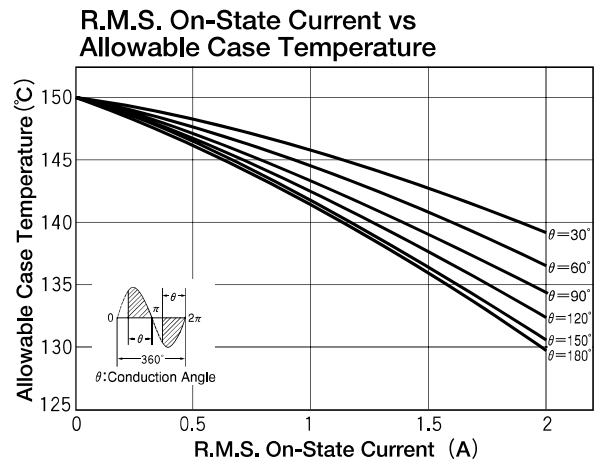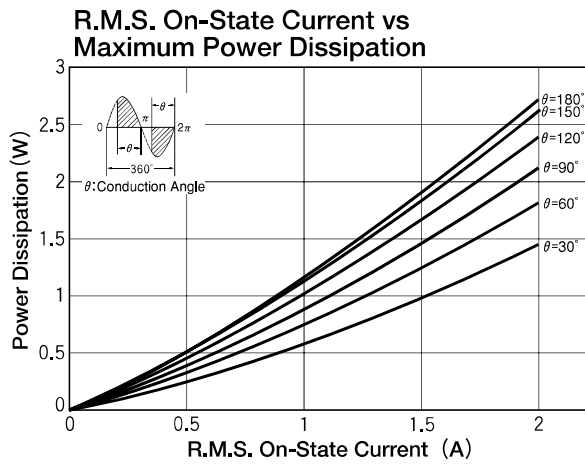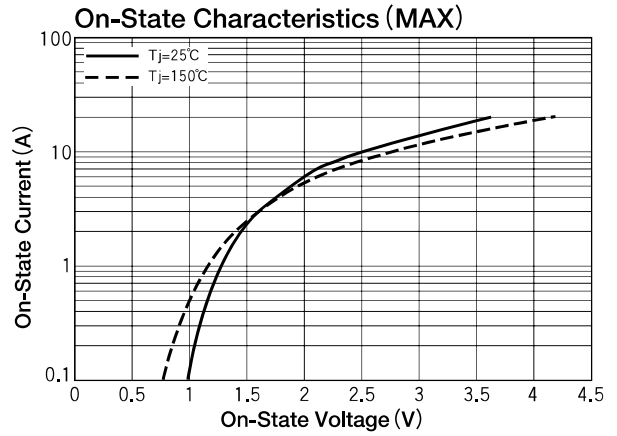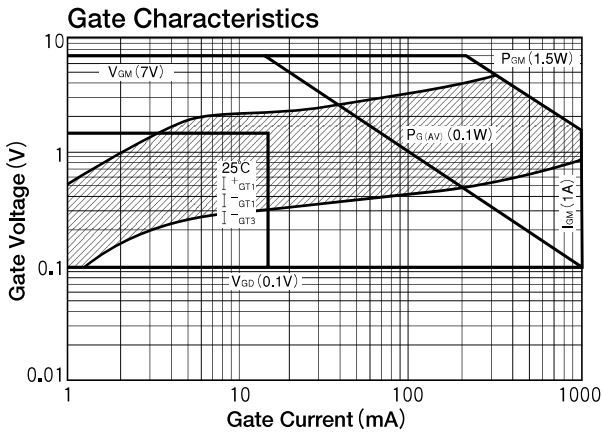
R.M.S. On-State vs Allowable Ambient Temperature