# TRIAC(Through Hole / Isolated)

TMG25C60J

SanRex Triac **TMG25C60J** 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

- $I_{T(RMS)}$=25A
- High Surge Current
- Low Voltage Drop
- Lead-Free Package

TO-3PF

① T1
② T2
③ Gate

Identifying Code : T25C6J   Unit : mm
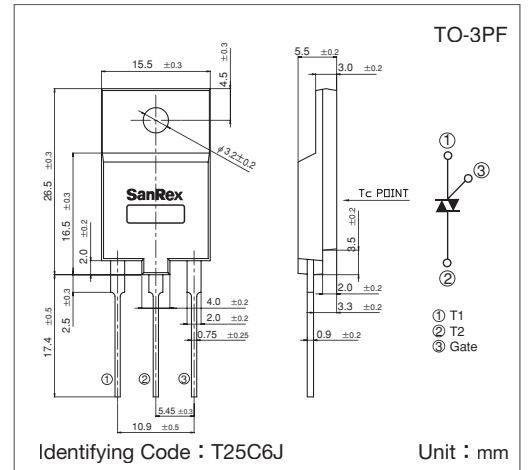
■Maximum Ratings

(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=83℃	25	A
I_{TSM}	Surge On-State Current	One cycle, 50Hz/60Hz, Peak value non-repetitive	225/250	A
I^2t	I^2t (for fusing)		260	A²S
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
Tj	Operating Junction Temperature		−40～+125	℃
Tstg	Storage Temperature		−40～+150	℃
	Mass		5.6	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, Tj=125℃			5	mA
V_{TM}		Peak On-State Voltage	I_T=35A, Inst. measurement			1.4	V
I_{GT1}^+	1	Gate Trigger Current	V_D=6V, R_L=10Ω			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	Tj=125℃, V_D=½V_{DRM}	0.2			V
(dv/dt)c		Critical Rate of Rise of Off-State Voltage at Commutation	Tj=125℃, (di/dt)c=−12.5A/ms, V_D=⅔V_{DRM}	10			V/μs
I_H		Holding Current			35		mA
Rth		Thermal Resistance	Junction to case			1.4	℃/W

Trigger mode of the triac

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

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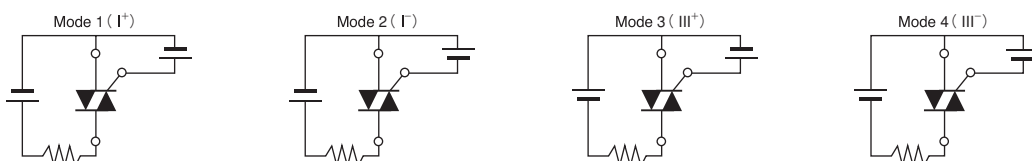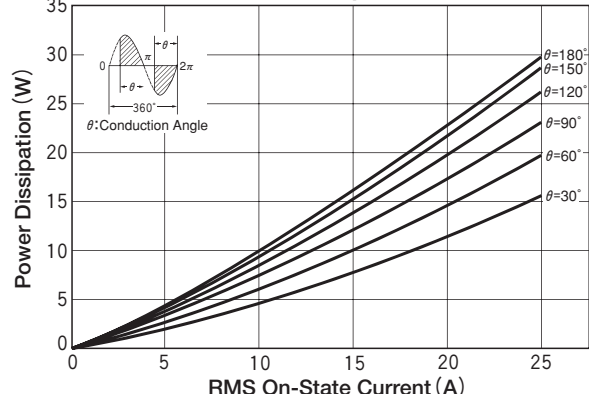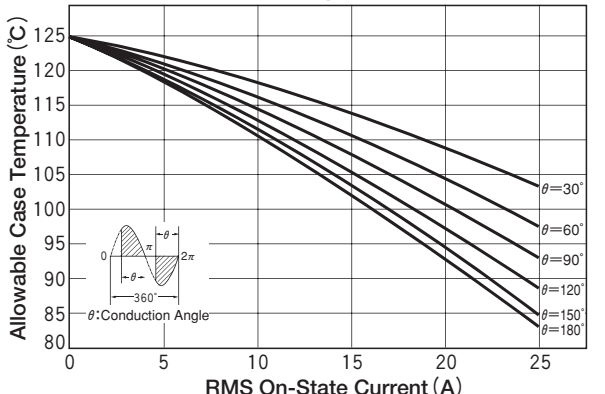
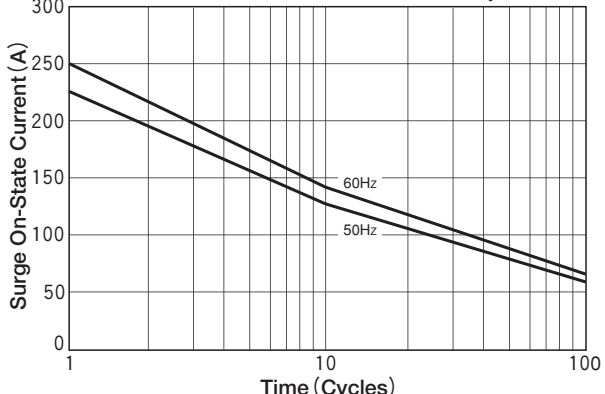## Gate Characteristics
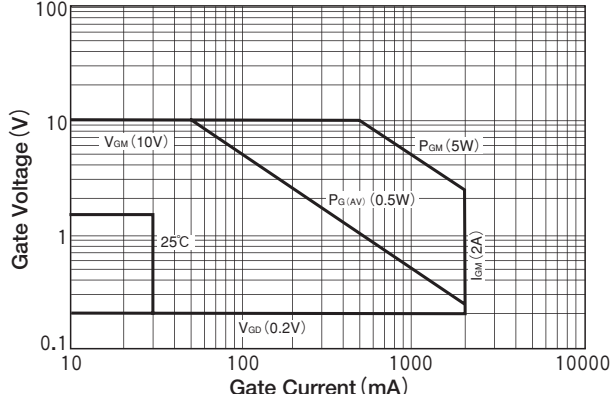
On-State Characteristics（MAX）
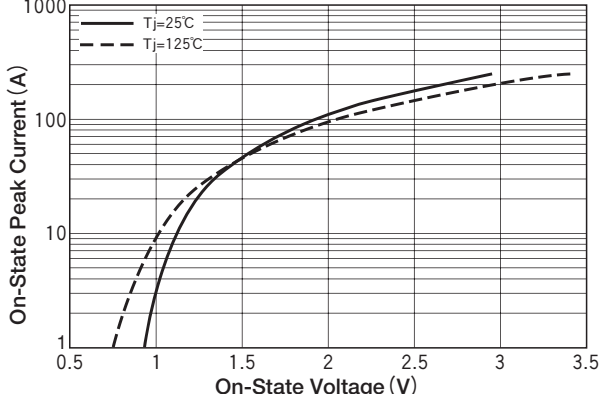
RMS On-State Current vs Maximum Power Dissipation

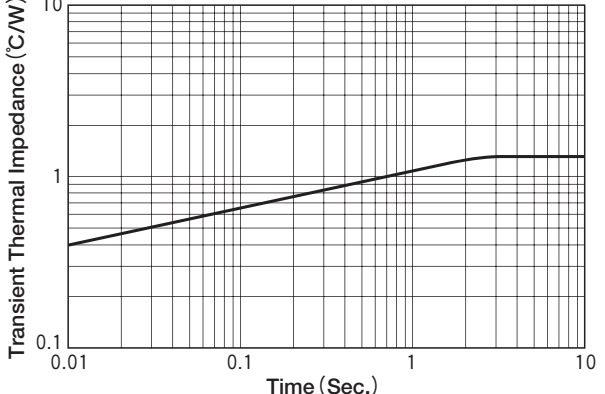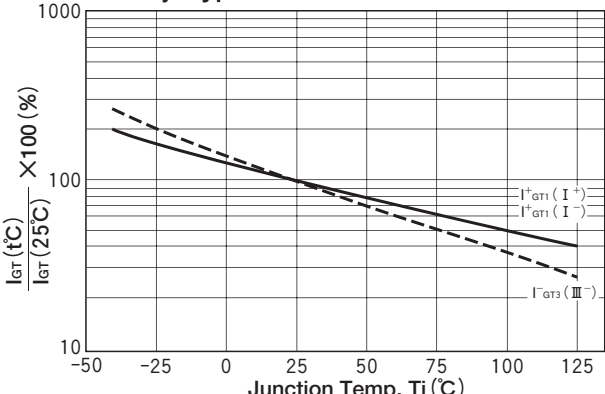## RMS On-State vs Allowable Case Temperature

Surge On-State Current Rating（Non-Repetitive）

Transient Thermal Impedance

$I_{GT}-T_j$（Typical）

$V_{GT}-T_j$（Typical）

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