

THYRISTOR(Through Hole/Non-isolated)

SMG3D60C

(Sensitive Gate)

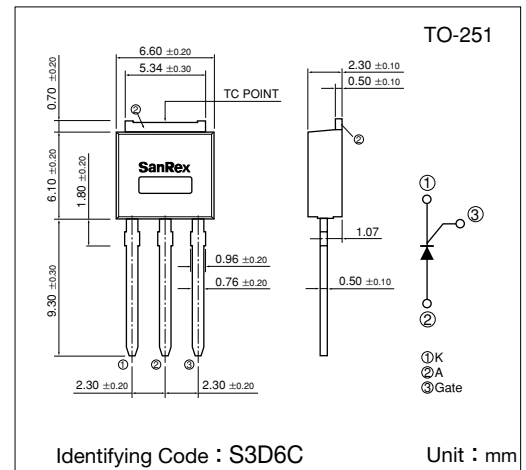
SanRex Thyristor **SMG3D60C** is designed for full wave AC control applications. It can be used as an ON/OFF function or for phase control operation.

Typical Applications

- Home Appliances : Electric Blankets, Starter for FL, other control applications
- Industrial Use : SMPS, Solenoid for Breakers, Motor Controls, Heater Controls, other control applications

Features

- $I_{T(AV)}=3A$
- High Surge Current
- Low Voltage Drop
- Lead-Free Package



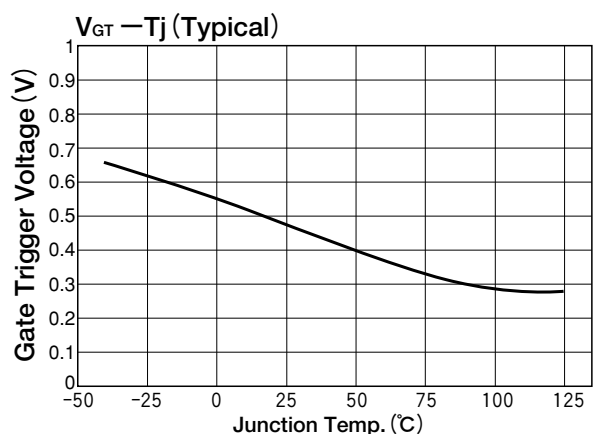
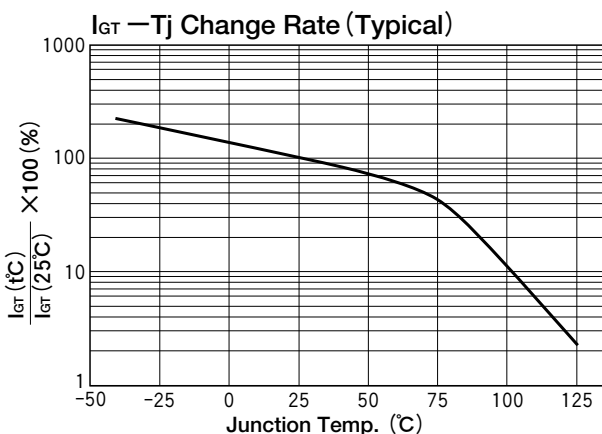
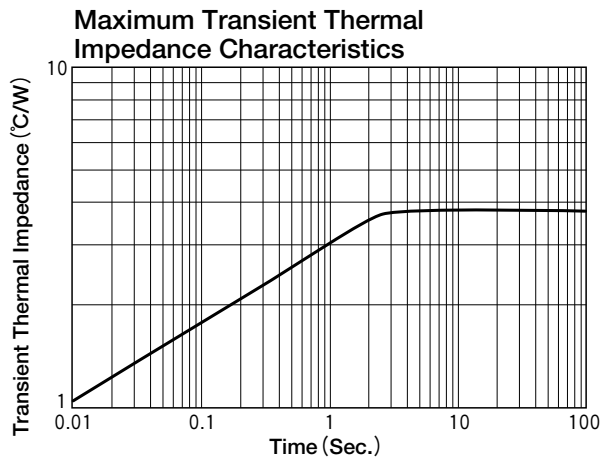
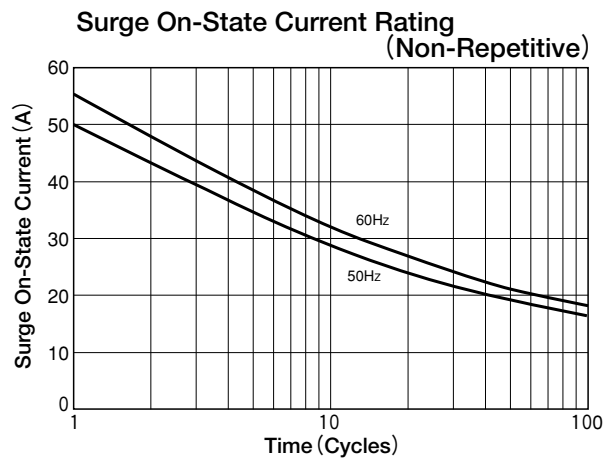
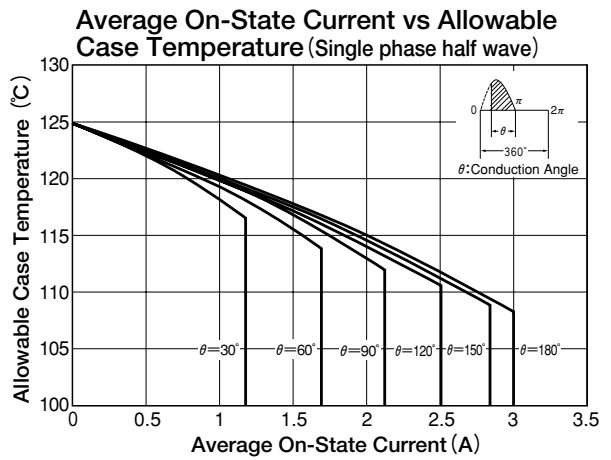
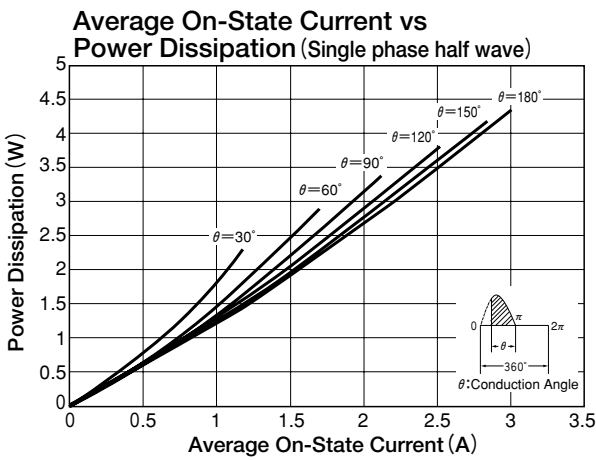
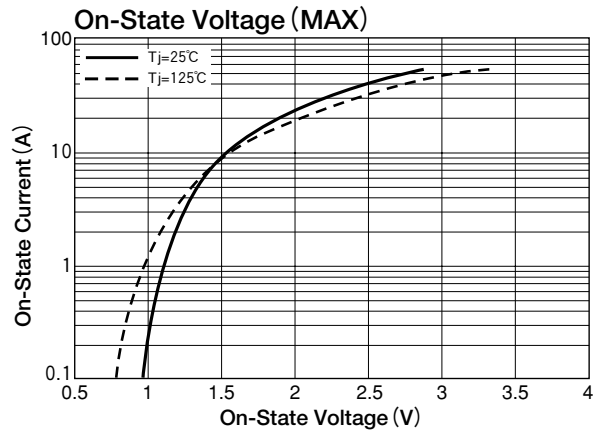
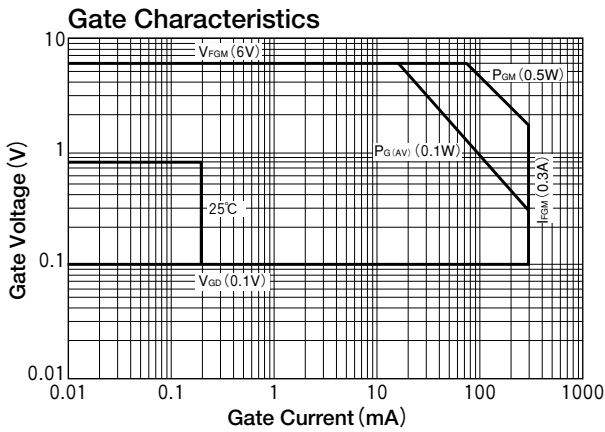
Maximum Ratings

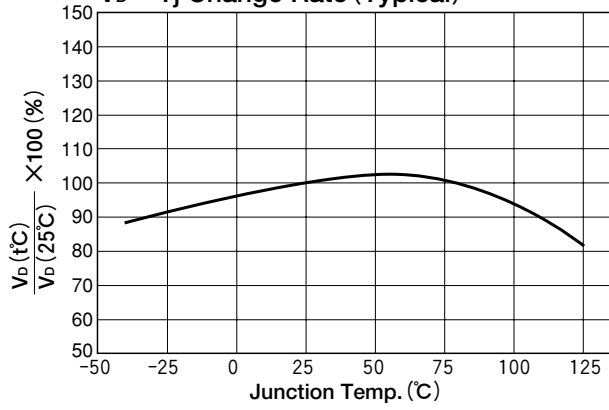
(T_j=25°C unless otherwise specified)

Symbol	Item	Reference	Ratings	Unit
V _{RRM}	Repetitive Peak Reverse Voltage		600	V
V _{RSM}	Non-Repetitive Peak Reverse Voltage		720	V
V _{DRM}	Repetitive Peak Off-State Voltage		600	V
I _{T(AV)}	Average On-State Current	Single phase, half wave, 180°, conduction, T _c =108°C	3	A
I _{T(RMS)}	R.M.S. On-State Current	Single phase, half wave, 180°, conduction, T _c =108°C	4.7	A
I _{TSM}	Surge On-State Current	50Hz/60Hz, 1/2 cycle Peak value, non-repetitive	50/55	A
I ² _t	I ² _t		12.5	A ² S
P _{GM}	Peak Gate Power Dissipation		0.5	W
P _{G(AV)}	Average Gate Power Dissipation		0.1	W
I _{FGM}	Peak Gate Current		0.3	A
V _{FGM}	Peak Gate Voltage (Forward)		6	V
V _{RGM}	Peak Gate Voltage (Reverse)		6	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	T _j =125°C, V _D =V _{DRM} , R _{GK} =220 Ω			1	mA
I _{RRM}	Repetitive Peak Reverse Current	T _j =125°C, V _R =V _{RRM} , R _{GK} =220 Ω			1	mA
V _{TM}	Peak On-State Voltage	I _T =9A, Inst. measurement			1.5	V
I _{GT}	Gate Trigger Current	V _D =6V, R _L =10 Ω	1		200	μA
V _{GT}	Gate Trigger Voltage				0.8	V
V _{GD}	Non-Trigger Gate Voltage	T _j =125°C, V _D =1/2 V _{DRM} , R _{GK} =220 Ω	0.1			V
I _H	Holding Current	R _{GK} =220 Ω		3.5		mA
R _{th(j-c)}	Thermal Resistance	Junction to case			3.8	°C/W



$V_D - T_j$ Change Rate (Typical) **$V_R - T_j$ Change Rate (Typical)**