

THYRISTOR(Through Hole/Isolated)

SMG8C60F

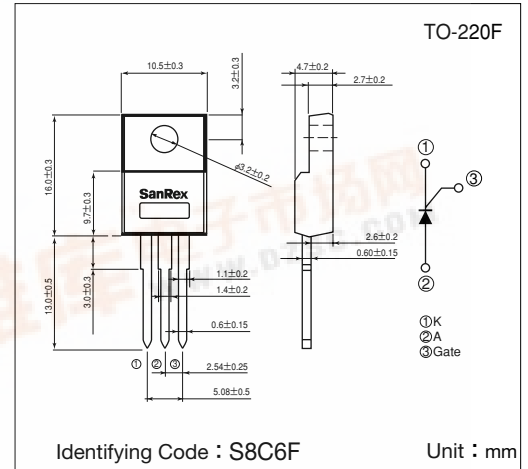
SanRex Thyristor **SMG8C60F** is designed for full wave AC control applications. It can be used as an ON/OFF function or for phase control operation.

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

- $I_{T(AV)}=8A$
- High Surge Current
- Low Voltage Drop
- Lead-Free Package



Maximum Ratings

(Tj=25°C unless otherwise specified)

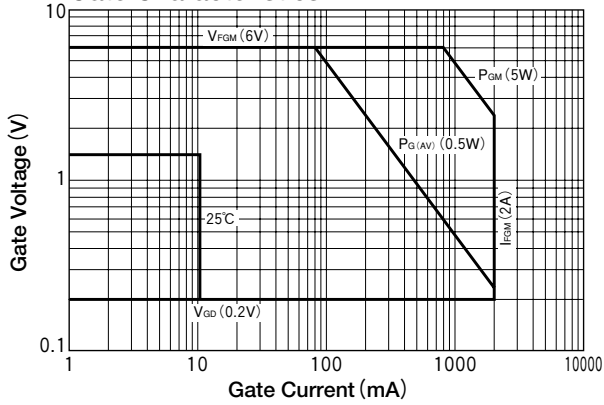
Symbol	Item	Reference	Ratings	Unit
VRRM	Repetitive Peak Reverse Voltage		600	V
VRSM	Non-Repetitive Peak Reverse Voltage		720	V
VDRM	Repetitive Peak Off-State Voltage		600	V
IT(AV)	Average On-State Current	Single phase, half wave, 180°, conduction, Tc=83°C	8	A
IT(RMS)	R.M.S. On-State Current	Single phase, half wave, 180°, conduction, Tc=83°C	12.6	A
ITSM	Surge On-State Current	50Hz/60Hz, 1/2 cycle Peak value, non-repetitive	120/130	A
I ² t	I ² t		72	A ² S
PGM	Peak Gate Power Dissipation		5	W
PG(AV)	Average Gate Power Dissipation		0.5	W
IFGM	Peak Gate Current		2	A
VFGM	Peak Gate Voltage (Forward)		6	V
VRGM	Peak Gate Voltage (Reverse)		10	V
VISO	Isolation Breakdown (R.M.S.)	A.C 1minute	1500	V
Tj	Operating Junction Temperature		-40~+125	°C
Tstg	Storage Temperature		-40~+150	°C
	Mass		2	g

Electrical Characteristics

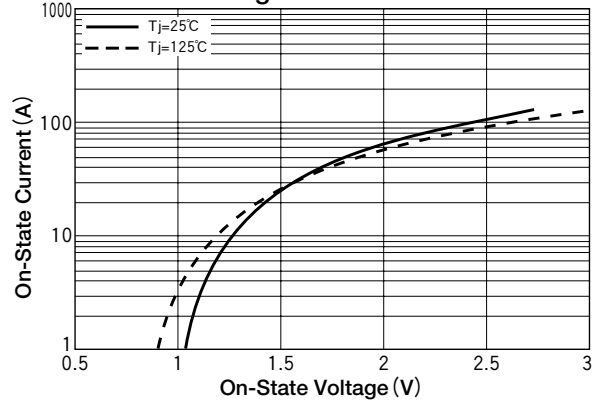
Symbol	Item	Reference	Ratings			Unit
			Min.	Typ.	Max.	
IDRM	Repetitive Peak Off-State Current	Tj=125°C, V _D =V _{DRM}			2	mA
IRRM	Repetitive Peak Reverse Current	Tj=125°C, V _R =V _{RRM}			2	mA
V _{TM}	Peak On-State Voltage	I _T =25A, Inst. measurement			1.5	V
I _{GT}	Gate Trigger Current	V _D =6V, R _L =10Ω			10	mA
V _{GT}	Gate Trigger Voltage				1.4	V
V _{GD}	Non-Trigger Gate Voltage	Tj=125°C, V _D =1/2V _{DRM}	0.2			V
I _H	Holding Current			15		mA
R _{th(j-c)}	Thermal Resistance	Junction to case			3.7	°C/W



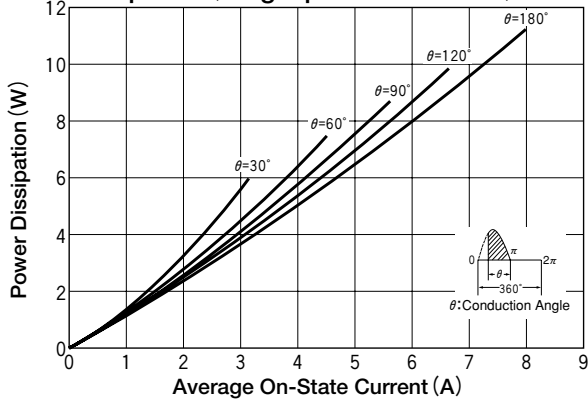
Gate Characteristics



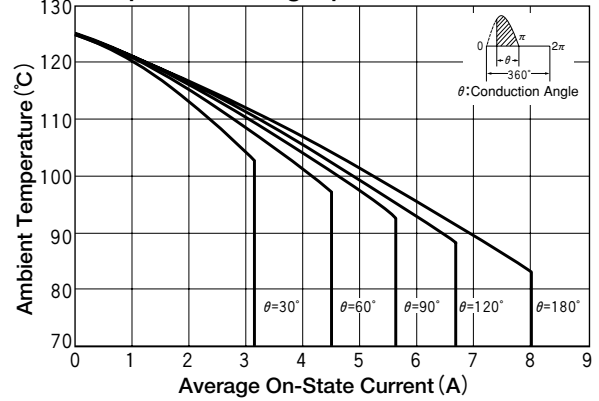
On-State Voltage Max



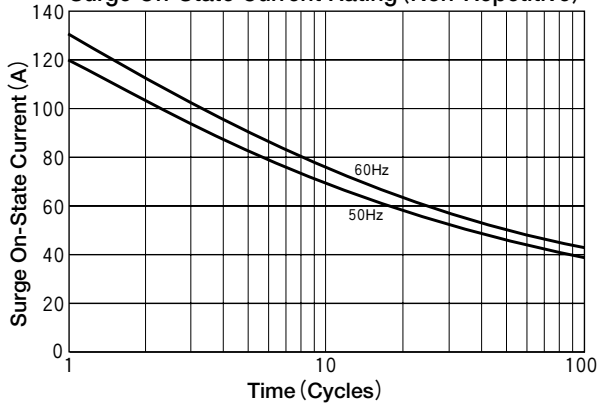
Average On-State Current vs Power Dissipation (Single phase half wave)



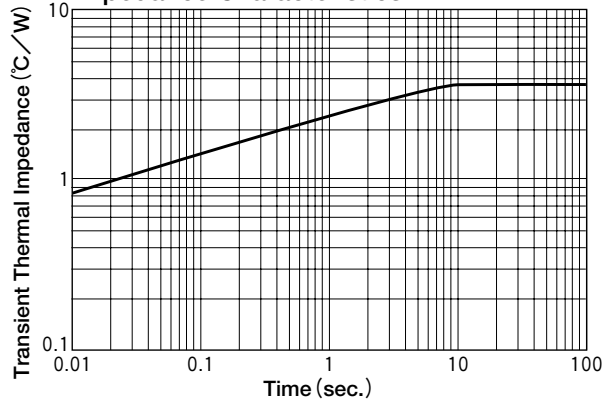
Average On-State Current vs Ambient Temperature (Single phase half wave)



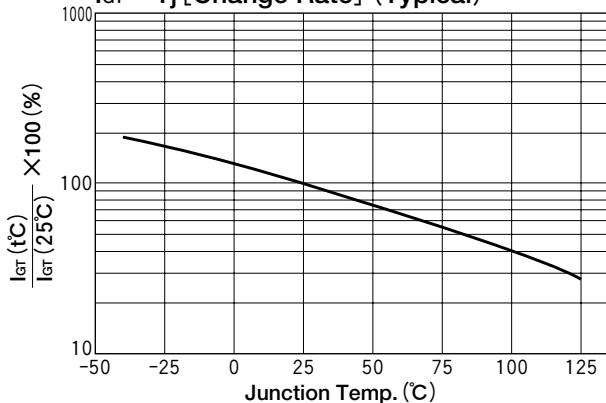
Surge On-State Current Rating (Non-Repetitive)



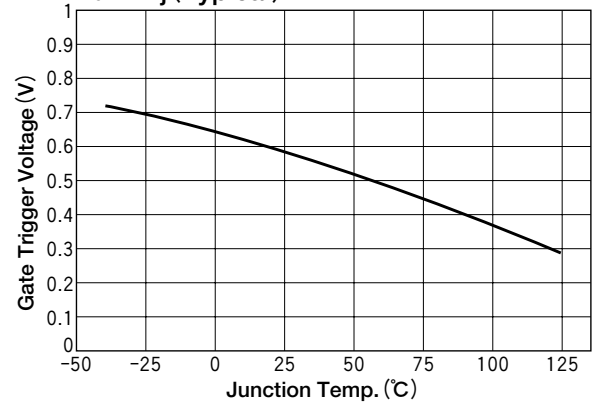
Maximum Transient Thermal Impedance Characteristics



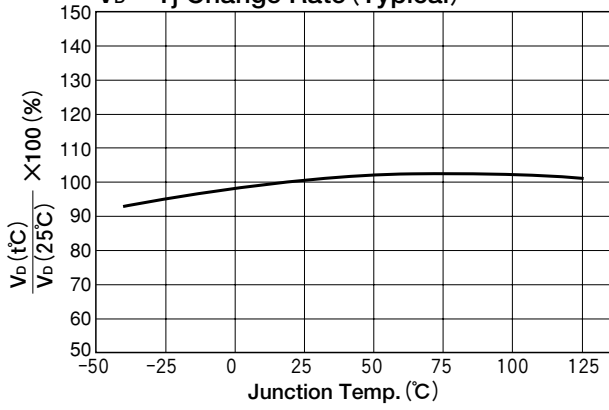
I_{GT} - T_j [Change Rate] (Typical)



V_{GT} - T_j (Typical)



$V_D - T_j$ Change Rate (Typical)



$V_R - T_j$ Change Rate (Typical)

