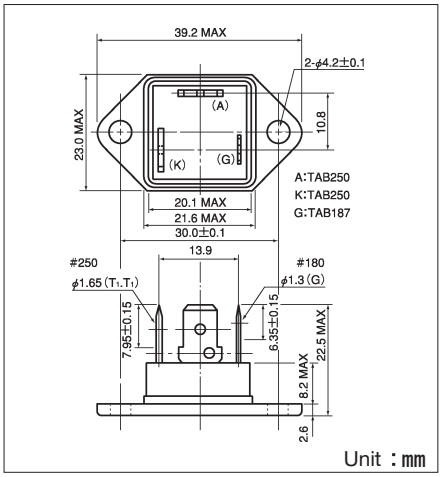
THYRISTOR MODULE (ISOLATED MOLD TYPE)

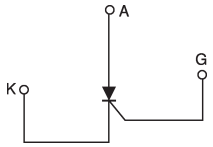
SG16AA

UL:E76102 (M)

SG16AA is an isolated molded thyristor which is suitable fora wide range of industrial and home electronics uses. **SG16AA** uses highly relible glass passivation.

- $I_{T(AV)}$=16A
- high Surge Capability
- Tab terminals for easy wiring.





■Maximum Ratings

Symbol	Item	Ratings			Unit
		SG16AA20	SG16AA40	SG16AA60	
V_{RRM}	Repetitive Peak Reverse Voltage	200	400	600	V
V_{RSM}	Non-Repetitive Peak Reverse Voltage	240	480	720	V
V_{DRM}	Repetitive Peak Off-State Voltage	200	400	600	V

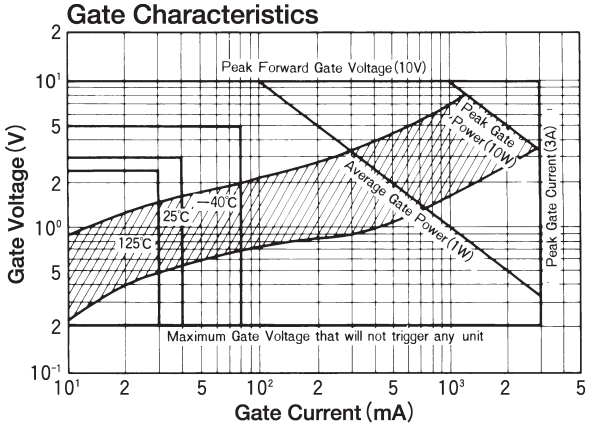
Symbol	Item	Conditions	Ratings	Unit
$I_{T(AV)}$	Average On-State Current	Single phase, half wave, 180˚conduction, Tc：80℃	16	A
$I_{T(RMS)}$	R.M.S. On-State Current	Single phase, half wave, 180˚conduction, Tc：80℃	25	A
I_{TSM}	Surge On-State Current	½cycle, 50Hz/60Hz, peak value, non-repetitive	220/250	A
I^2t	I^2t	2～10ms	260	A^2S
P_{GM}	Peak Gate Power Dissipation		10	W
$P_{G(AV)}$	Average Gate Power Dissipation		1	W
I_{FGM}	Peak Gate Current		3	A
V_{FGM}	Peak Gate Voltage(Forward)		10	V
V_{RGM}	Peak Gate Voltage(Reverse)		5	V
di／dt	Critical Rate of Rise of On-State Current	I_G=100mA,Tj=25℃,V_D=½V_{DRM},dI_G/dt=1A/μs	100	A/μs
V_{ISO}	Isolation Breakdown Voltage (R.M.S.)	A.C.1minute	2500	V
Tj	Operating Junction Temperature		−40～+125	℃
Tstg	Storage Temperature		−40～+125	℃
	Mounting Torque （M4）	Recommended Value 1.0～1.4（10～14）	1.5（15）	N・m (kgf・cm)
	Mass		23	g

■Electrical Characteristics

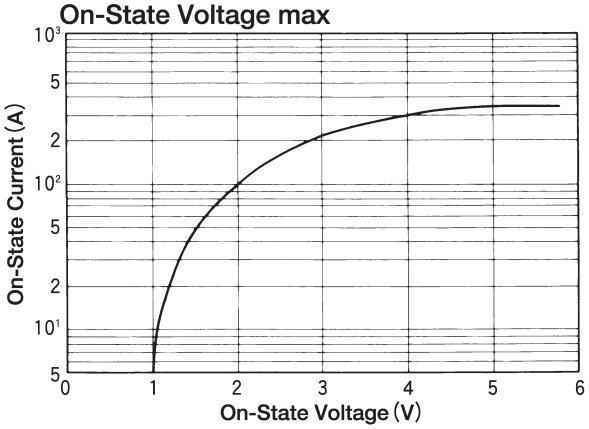
Symbol	Item	Conditions	Ratings	Unit
I_{DRM}	Repetitive Peak Off-State Current, max.	at V_{DRM}, single phase, half wave, Tj=125℃	3	mA
I_{RRM}	Repetitive Peak Reverse Current, max.	at V_{DRM}, single phase, half wave, Tj=125℃	3	mA
V_{TM}	Peak On-State Voltage, max.	On-State Current 50A, Tj=25℃ Inst. measurement	1.50	V
I_{GT}／V_{GT}	Gate Trigger Current/Voltage, max.	Tj=25℃, I_T=1A, V_D=6V	40/3	mA/V
V_{GD}	Non-Trigger Gate, Voltage. min.	Tj=125℃, V_D=½V_{DRM}	0.2	V
tgt	Turn On Time, max.	I_T=16A, I_G=100mA, Tj=25℃, V_D=½V_{DRM}, dI_G/dt=1A/μs	10	μs
dv／dt	Critical Rate of Rise of Off-State Voltage, min.	Tj=125℃, V_D=⅔V_{DRM}, Exponential wave.	100	V/μs
I_H	Holding Current, typ.	Tj=25℃	30	mA
Rth (j-c)	Thermal Impedance, max.	Junction to case	2.0	℃/W

SanRex

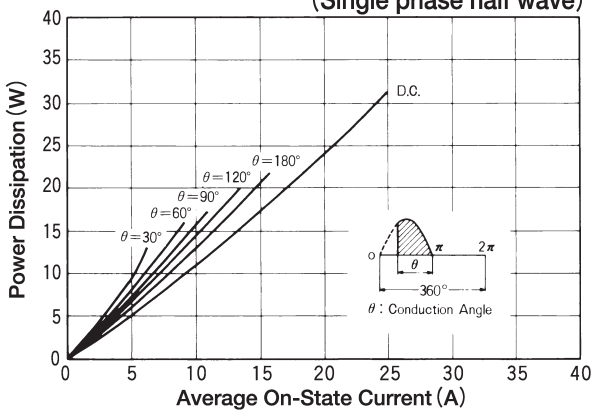
Gate Characteristics



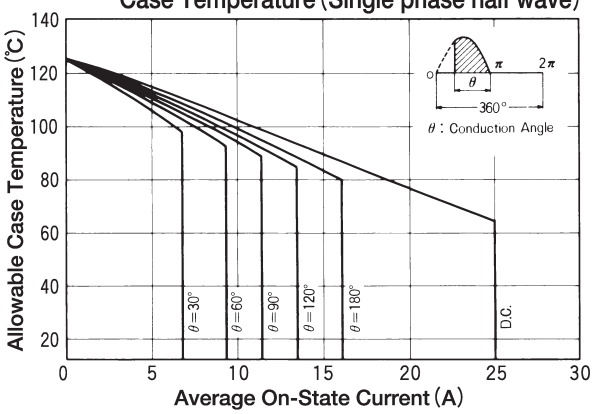
On-State Voltage max



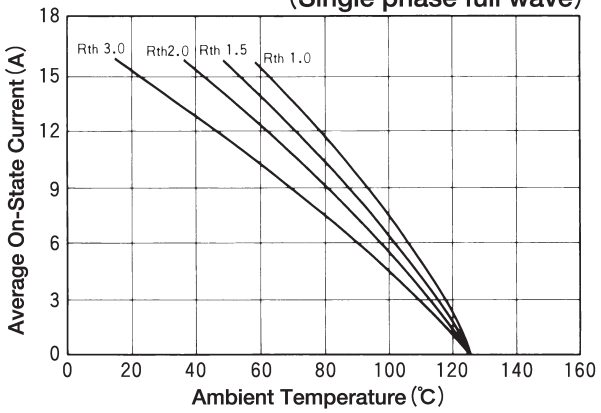
Average On-State Current Vs Power Dissipation (Single phase half wave)



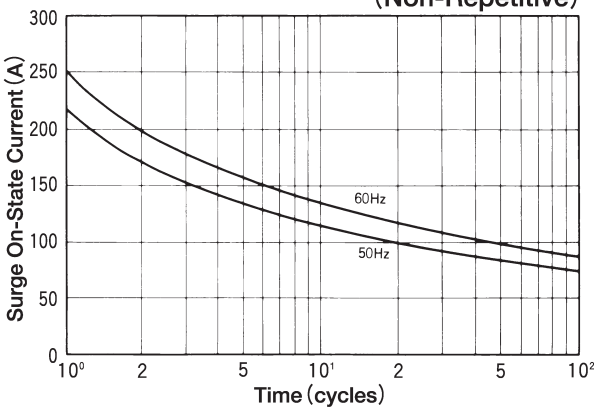
Average On-State Current Vs Maximum Allowable Case Temperature (Single phase half wave)



Ambient Temperature Average On-State (Single phase full wave)



Surge On-State Current Rating (Non-Repetitive)



Transient Thermal Impedance