TRIAC（ISOLATED MOLD TYPE）

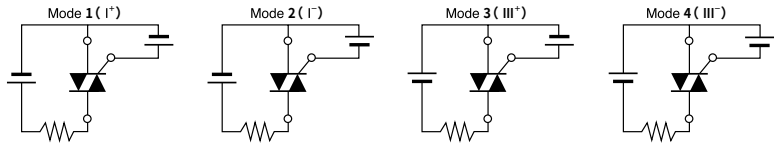
TG35C

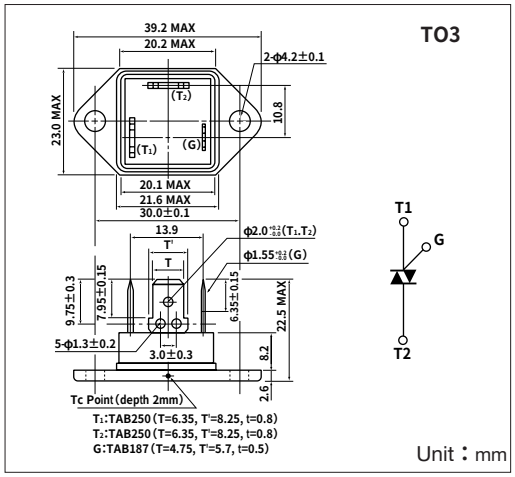
UL:E76102(M)

SanRex Triac **TG35C** is isolated mold TRIAC suitable for wide range of applications like Copier Machines, Micro Wave Ovens, Solid State Switches, Motor Controls, Light Controls and Heater Controls.

- $I_{T(AV)}$ 35A
- High surge capability 330A
- Isolated Mounting (AC2500V)
- Tab Terminals

Trigger mode of the triac





■Maximum Ratings

(Tj=25℃ unless otherwise specified)

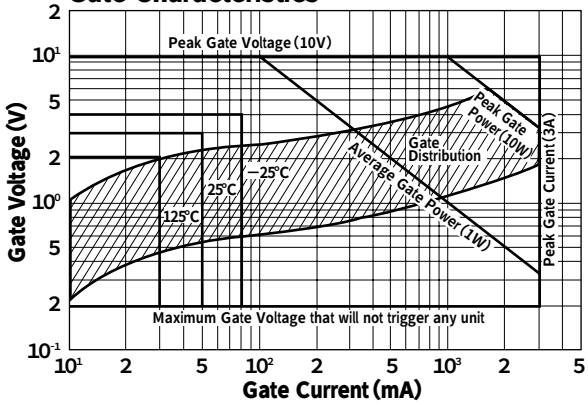
Symbol	Item	Ratings		Unit
		TG35C40	TG35C60	
V_{DRM}	Repetitive Peak Off-State Voltage	400	600	V

Symbol	Item	Conditions	Ratings	Unit
$I_{T(RMS)}$	R.M.S. On-State Current	Tc=58℃	35	A
I_{TSM}	Surge On-State Current	One cycle, 50Hz/60Hz, peak, non-repetitive	300/330	A
I^2t	I^2t	Value for one cycle of surge current	450	A^2S
P_{GM}	Peak Gate Power Dissipation		10	W
$P_{G(AV)}$	Average Gate Power Dissipation		1	W
I_{GM}	Peak Gate Current		3	A
V_{GM}	Peak Gate Voltage		10	V
di/dt	Critical Rate of Rise of On-State Current	I_G=100mA, Tj=25℃, $V_D=\frac{1}{2}V_{DRM}$, dI_G/dt=1A/μs	50	A/μs
Tj	Operating Junction Temperature		−25 to +125	℃
Tstg	Storage Temperature		−40 to +125	℃
V_{ISO}	Isolation Breakdown Voltage (R.M.S.)	A.C.1 minute	2500	V
	Mounting Torque(M4)	Recommended Value 1.0～1.4(10～14)	1.5(15)	N·m (kgf·cm)
	Mass	Typical value (Excluding bolt, nut and wrapping material)	23	g

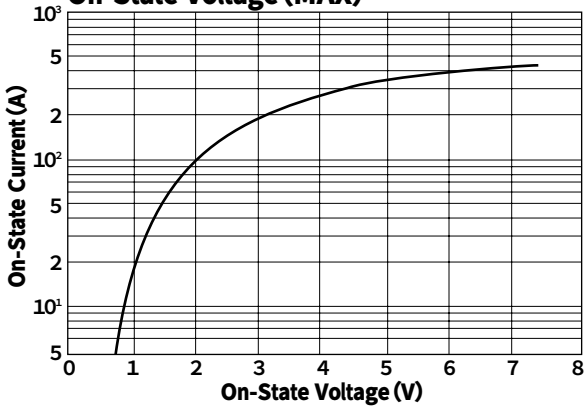
■Electrical Characteristics

Symbol		Item	Conditions	Ratings	Unit
I_{DRM}		Reptitive Peak Off-State Current, max	$V_D=V_{DRM}$, Single phase, half wave, Tj=125℃	5	mA
V_{TM}		Peak On-State Voltage, max	On-State Current {$\sqrt{2}\times I_{T(RMS)}$}, Inst. measurement	1.4	V
I_{GT1}^{+}	1	Gate Trigger Current, max	Tj=25℃, I_T=1A, V_D=6V	50	mA
I_{GT1}^{-}	2		Tj=25℃, I_T=1A, V_D=6V	50	
I_{GT3}^{+}	3			−	
I_{GT3}^{-}	4		Tj=25℃, I_T=1A, V_D=6V	50	
V_{GT1}^{+}	1	Gate Trigger Voltage, max	Tj=25℃, I_T=1A, V_D=6V	3	V
V_{GT1}^{-}	2		Tj=25℃, I_T=1A, V_D=6V	3	
V_{GT3}^{+}	3			−	
V_{GT3}^{-}	4		Tj=25℃, I_T=1A, V_D=6V	3	
V_{GD}		Non-Trigger Gate Voltage, min	Tj=125℃, $V_D=\frac{1}{2}V_{DRM}$	0.2	V
tgt		Turn On Time, max.	$I_{T(RMS)}$, I_G=100mA, $V_D=\frac{1}{2}V_{DRM}$, Tj=25℃, dI_G/dt=1A/μs	10	V
dv/dt		Critical Rate of Rise on-State Voltage,min.	Tj=125℃, $V_D=\frac{2}{3}V_{DRM}$, Exponential wave.	20	V/μs
(dv/dt)c		Critical Rate of Rise off-State Voltage at commutation, min	Tj=125℃, $V_D=\frac{2}{3}V_{DRM}$, (di/dt) c=15A/ms	5	V/μs
I_H		Holding Current, typ.	Tj=25℃	30	mA
Rth(j-c)		Thermal Impedance, max	Junction to case	1.5	℃/W

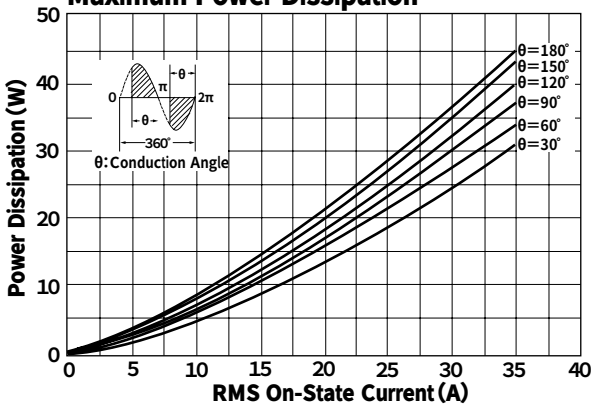
Gate Characteristics



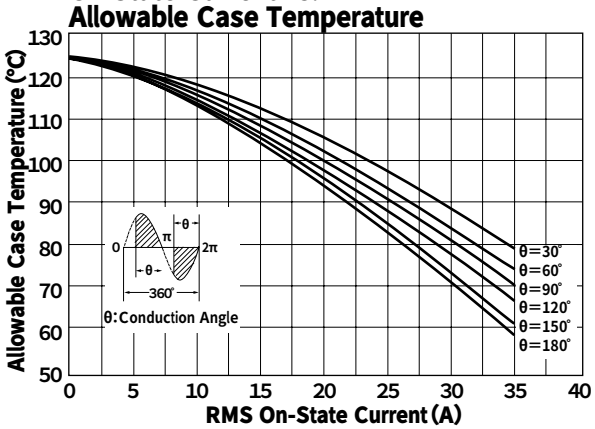
On-State Voltage (MAX)



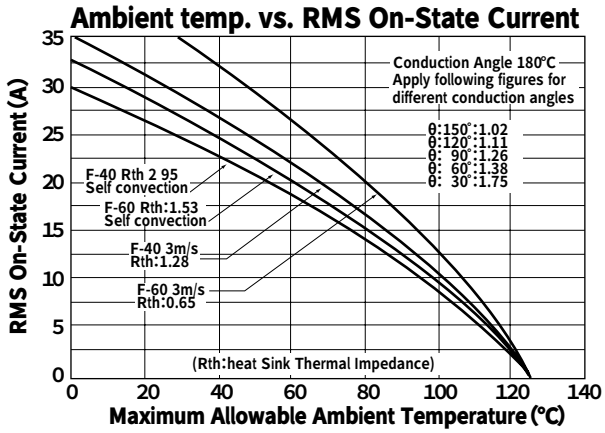
On State Current vs. Maximum Power Dissipation



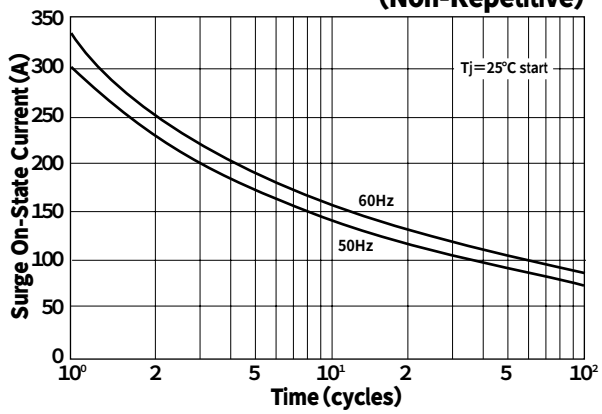
On State Current vs. Allowable Case Temperature



Ambient temp. vs. RMS On-State Current



Surge On-State Current Rating (Non-Repetitive)



Transient Thermal Impedance