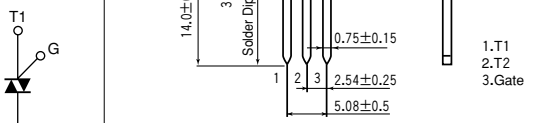
TRIAC (ISOLATED TYPE)

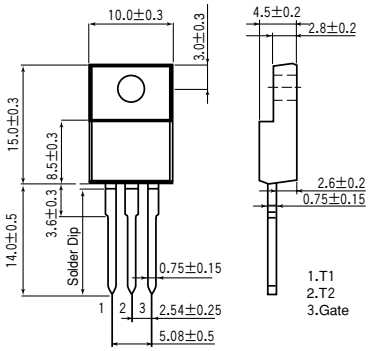
TMG5C40/60F

UL;E76102 (M)

TMG5C40/60F are isolated mold triac suitable for wide range of applications like copier, microwave oven, solid state switch, motor control, light and heater control.

- $I_{T(RMS)}$ 5A
- High surge capability 55A
- Full molded isolated type





Unit : mm

■Maximum Ratings

(Tj=25℃ unless otherwise specified)

Symbol	Item	Ratings		Unit
		TMG5C40F	TMG5C60F	
V_{DRM}	Repetitive Peak Off-State Voltage	400	600	V

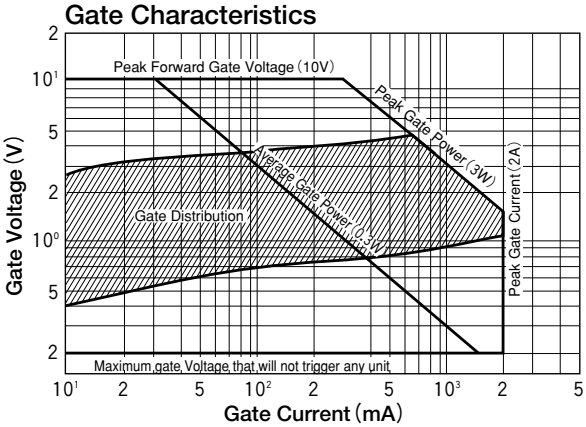
Symbol	Item	Conditions	Ratings	Unit
$I_{T(RMS)}$	R.M.S. On-State Current	Tc=100℃	5	A
I_{TSM}	Surge On-State Current	One cycle, 50Hz/60Hz, peak, non-repetitive	50/55	A
I^2t	I^2t		12.6	A^2S
P_{GM}	Peak Gate Power Dissipation		3	W
$P_{G(AV)}$	Average Gate Power Dissipation		0.3	W
I_{GM}	Peak Gate Current		2	A
V_{GM}	Peak Gate Voltage		10	V
V_{ISO}	Isolation Breakdown Voltage (R.M.S.)	A.C.1 minute	1500	V
Tj	Operating Junction Temperature		−40 to +125	℃
Tstg	Storage Temperature		−40 to +125	℃
	Mass		2	g

■Electrical Characteristics

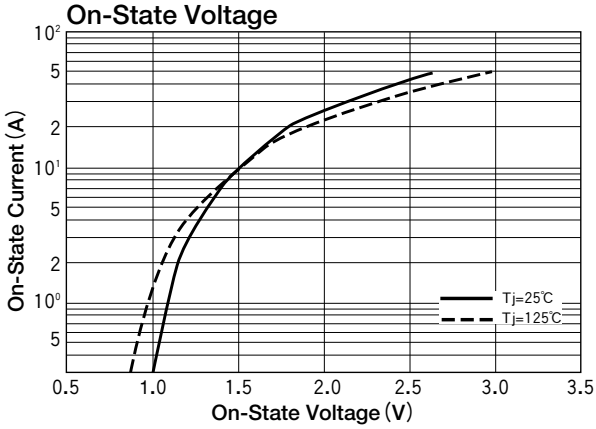
Symbol		Item	Conditions	Ratings			Unit
				Min.	Typ.	Max.	
I_{DRM}		Reptitive Peak Off-State Current	$V_D=V_{DRM}$, Single phase, half wave, Tj=125℃			1	mA
V_{TM}		Peak On-State Voltage	I_T=7A, Inst. measurement			1.4	V
I_{GT1}^{+}	1	Gate Trigger Current	V_D=6V, R_L=10Ω			20	mA
I_{GT1}^{-}	2					20	
I_{GT3}^{+}	3					—	
I_{GT3}^{-}	4					20	
V_{GT1}^{+}	1	Gate Trigger Voltage	V_D=6V, R_L=10Ω			1.5	V
V_{GT1}^{-}	2					1.5	
V_{GT3}^{+}	3					—	
V_{GT3}^{-}	4					1.5	
V_{GD}		Non-Trigger Gate Voltage	Tj=125℃, $V_D=\frac{1}{2}V_{DRM}$	0.2			V
(dv/dt)c		Critical Rate of Rise off-State Voltage at commutation	Tj=125℃, (di/dt)c=−2.5A/ms, $V_D=\frac{2}{3}V_{DRM}$	5			V/μs
I_H		Holding Current			10		mA
Rth(j-c)		Thermal Impedance	Junction to case			4.0	℃/W

SanRex

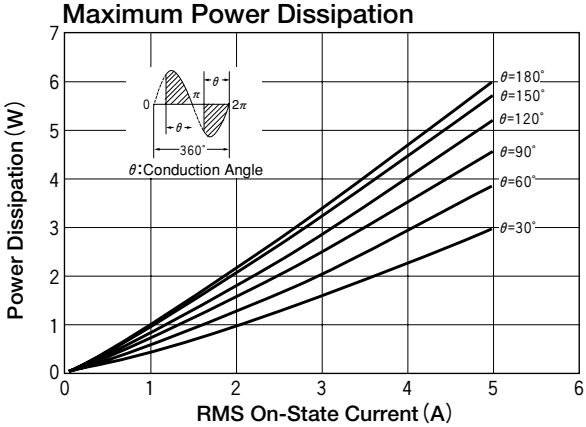
Gate Characteristics



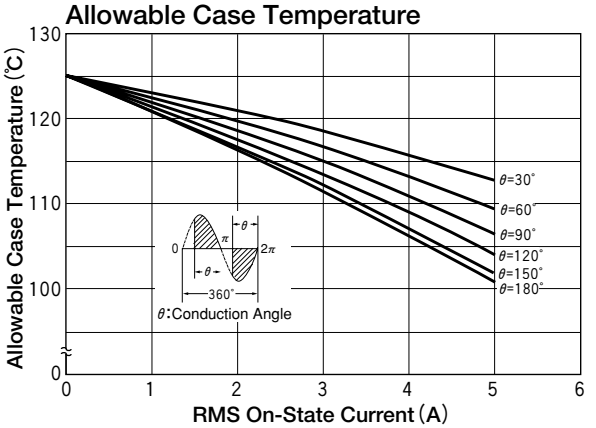
On-State Voltage



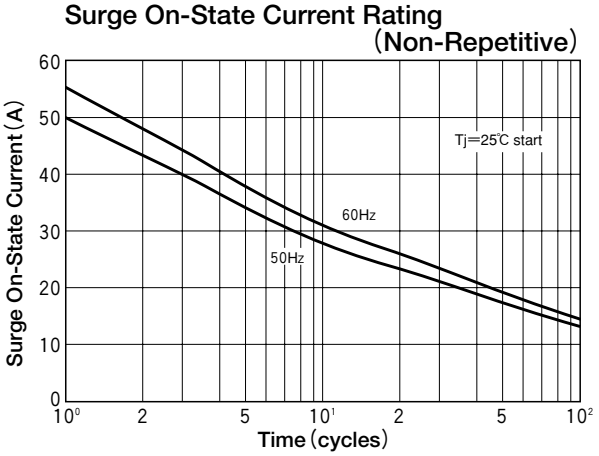
On State Current vs. Maximum Power Dissipation



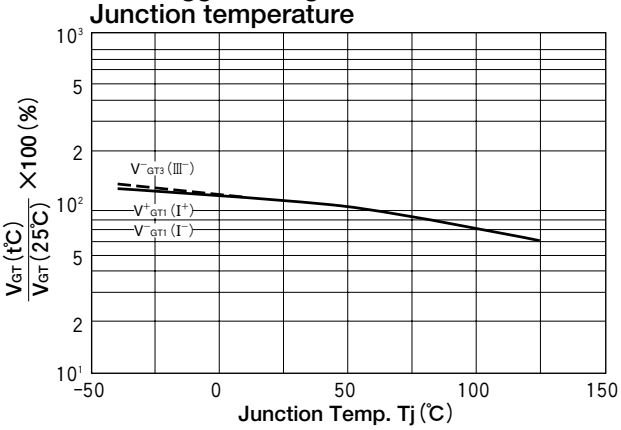
On State Current vs. Allowable Case Temperature



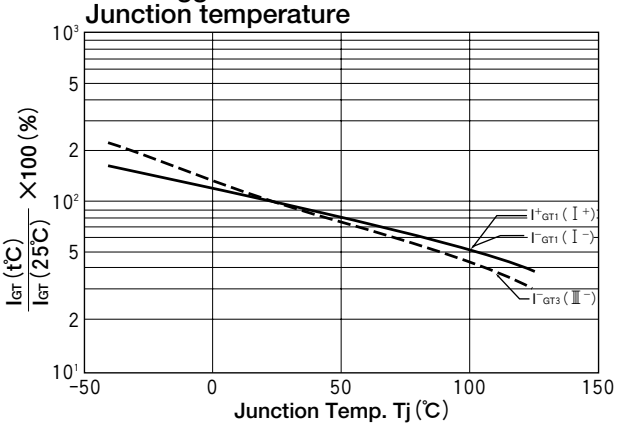
Surge On-State Current Rating (Non-Repetitive)



Gate trigger voltage vs. Junction temperature



Gate trigger current vs. Junction temperature



Transient Thermal Impedance