

TRIAC(ISOLATED TYPE)

TMG10C40/60F

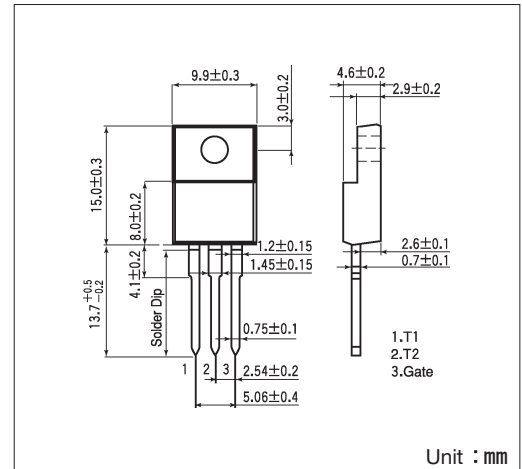
TOP



UL;E76102 (M)

TMG10C40/60F 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) 10A
- High surge capability 110A
- Full molded isolated type
- Three types of lead forming



Unit : mm

Maximum Ratings

($T_j=25^\circ\text{C}$ unless otherwise specified)

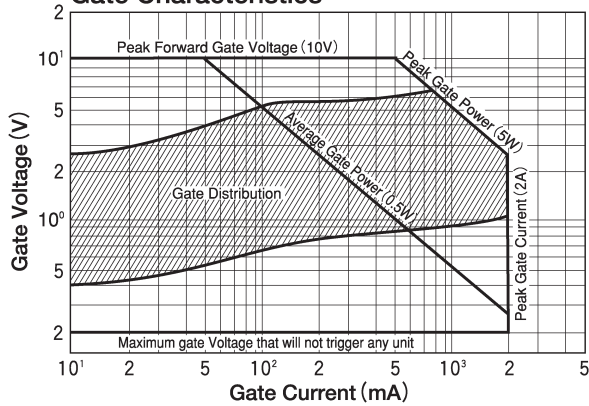
Symbol	Item	Ratings		Unit
		TMG10C40F	TMG10C60F	
V_{DRM}	Repetitive Peak Off-State Voltage	400	600	V

Symbol	Item	Conditions	Ratings	Unit
I_T (RMS)	R.M.S. On-State Current	$T_c=83^\circ\text{C}$	10	A
I_{TSM}	Surge On-State Current	One cycle, 50Hz/60Hz, peak, non-repetitive	100/110	A
I^2t	I^2t		50	A^2S
P_{GM}	Peak Gate Power Dissipation		5	W
P_G (AV)	Average Gate Power Dissipation		0.5	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
T_j	Operating Junction Temperature		$-40 \sim +125$	$^\circ\text{C}$
T_{stg}	Storage Temperature		$-40 \sim +125$	$^\circ\text{C}$
	Mass		2	g

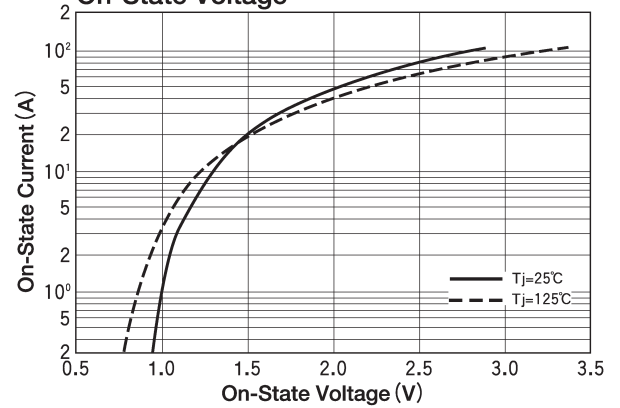
Electrical Characteristics

Symbol	Item	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
I_{DRM}	Reptitive Peak Off-State Current	$V_D=V_{DRM}$, Single phase, half wave, $T_j=125^\circ\text{C}$			2	mA
V_{TM}	Peak On-State Voltage	$I_T=15\text{A}$, Inst. measurement			1.4	V
I_{GT1}^+	Gate Trigger Current	$V_D=6\text{V}$, $R_L=10\ \Omega$			30	mA
I_{GT1}^-					30	
I_{GT3}^+					—	
I_{GT3}^-					30	
V_{GT1}^+	Gate Trigger Voltage	$V_D=6\text{V}$, $R_L=10\ \Omega$			1.5	V
V_{GT1}^-					1.5	
V_{GT3}^+					—	
V_{GT3}^-					1.5	
V_{GD}	Non-Trigger Gate Voltage	$T_j=125^\circ\text{C}$, $V_D=\frac{1}{2}V_{DRM}$	0.2			V
$(dv/dt)_c$	Critical Rate of Rise off-State Voltage at commutation	$T_j=125^\circ\text{C}$, $(di/dt)_c=-5\text{A/ms}$, $V_D=\frac{2}{3}V_{DRM}$	10			$\text{V}/\mu\text{s}$
I_H	Holding Current			20		mA
$R_{th}(j-c)$	Thermal Impedance	Junction to case			3.5	$^\circ\text{C}/\text{W}$

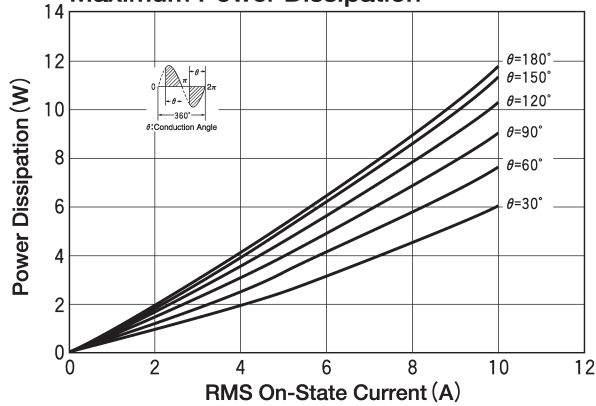
Gate Characteristics



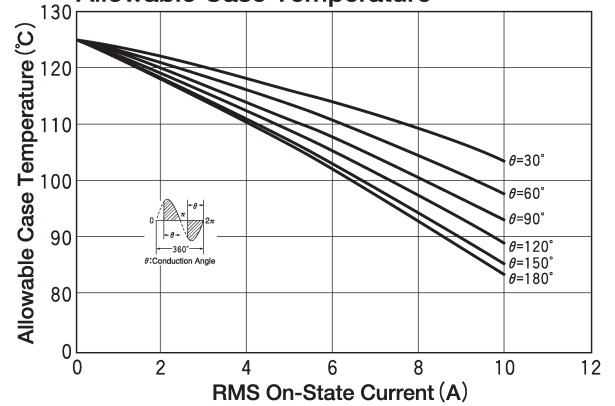
On-State Voltage



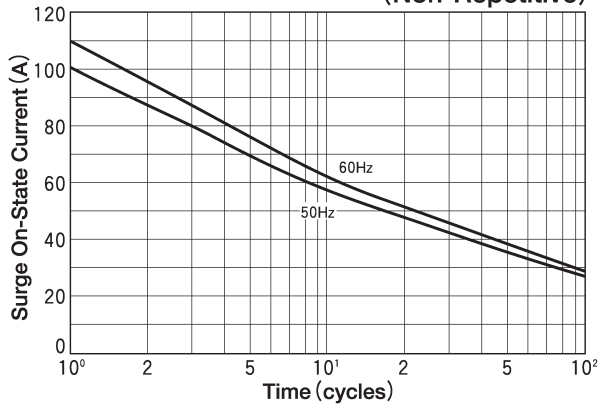
On State Current vs. Maximum Power Dissipation



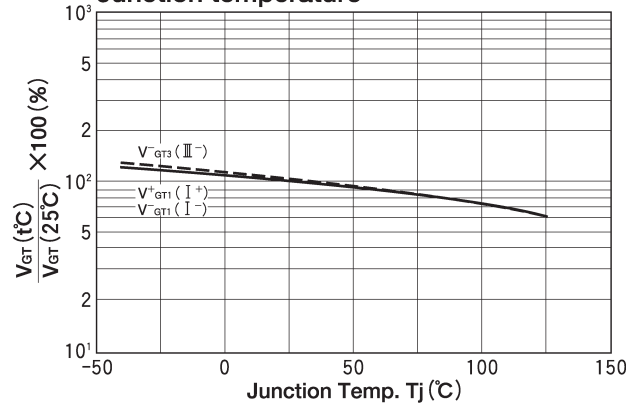
On State Current vs. Allowable Case Temperature



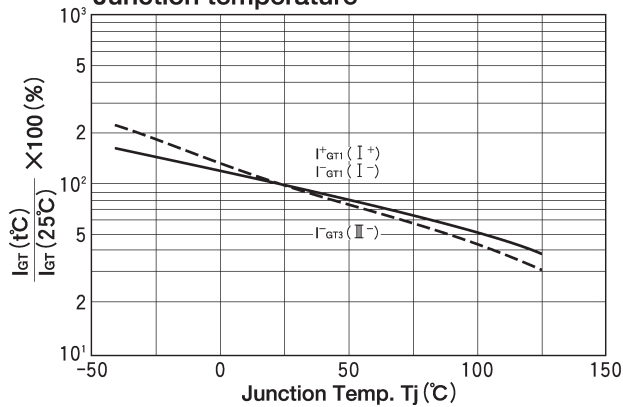
Surge On-State Current Rating (Non-Repetitive)



Gate trigger voltage vs. Junction temperature



Gate trigger current vs. Junction temperature



Transient Thermal Impedance

