

# TRIAC (ISOLATED TYPE)

# TMG5C40/60F

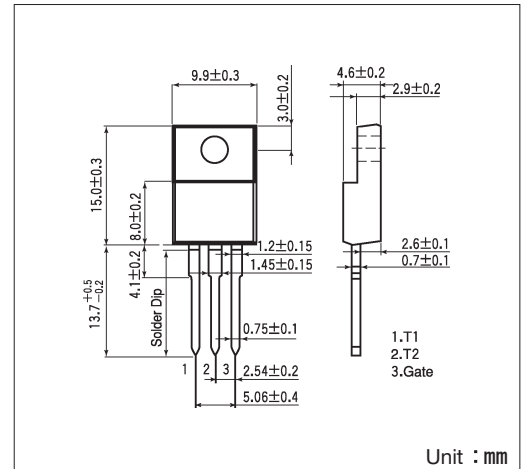
TOP



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
- Three types of lead forming



## Maximum Ratings

( $T_j=25^{\circ}\text{C}$  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	$T_c=100^{\circ}\text{C}$	5	A
$I_{TSM}$	Surge On-State Current	One cycle, 50Hz/60Hz, peak, non-repetitive	50/55	A
$I^2t$	$I^2t$		12.6	$\text{A}^2\text{S}$
$P_{GM}$	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
$T_j$	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, $T_j=125^{\circ}\text{C}$			1	mA
$V_{TM}$	Peak On-State Voltage	$I_T=7\text{A}$ , Inst. measurement			1.4	V
$I_{GT1}^{+}$	Gate Trigger Current	$V_D=6\text{V}$ , $R_L=10\ \Omega$			20	mA
$I_{GT1}^{-}$					20	
$I_{GT3}^{+}$					—	
$I_{GT3}^{-}$					20	
$V_{GT1}^{+}$	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	$T_j=125^{\circ}\text{C}$ , $(di/dt)_c=-2.5\text{A/ms}$ , $V_D=\frac{2}{3}V_{DRM}$	5			$\text{V}/\mu\text{s}$
$I_H$	Holding Current			10		mA
$R_{th}(j-c)$	Thermal Impedance	Junction to case			4.0	$^{\circ}\text{C}/\text{W}$

