

TRIAC (ISOLATED TYPE)

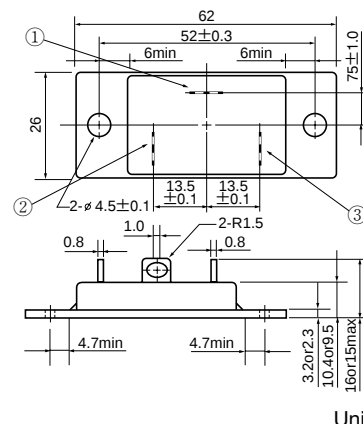
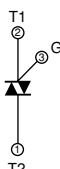
TG70AA40/60

TOP



TG70AA40/60 are isolated mould triac suitable for wide range of applications like copier, microwave oven, solid state switch, motor control, light control and heater control.

- $I_T(AV)$ 70A
- High surge capability 600A
- Isolated Mounting (AC650V)
- Tab Terminals



Unit : mm

Maximum Ratings

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

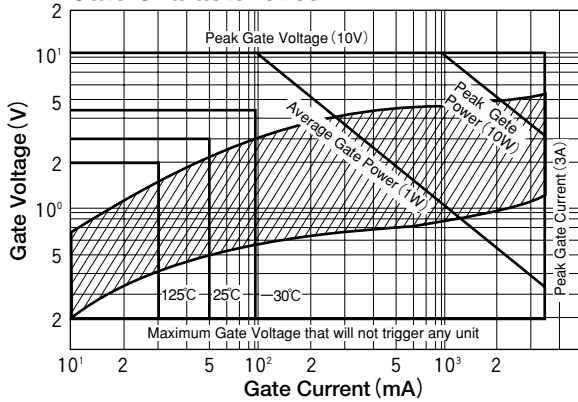
Symbol	Item	Ratings		Unit
		TG70AA40	TG70AA60	
V_{DRM}	Repetitive Peak Off-State Voltage	400	600	V
V_{DSM}	Non-Repetitive Peak Off-State Voltage	450	650	V

Symbol	Item	Conditions	Ratings	Unit
$I_T(RMS)$	R.M.S. On-State Current	$T_c=58^\circ\text{C}$	70	A
I_{TSM}	Surge On-State Current	One cycle, 50Hz/60Hz, peak, non-repetitive	1080/1200	A
I^2t	I^2t		6000	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	$I_G=100\text{mA}$, $T_j=25^\circ\text{C}$, $V_D=\frac{1}{2}V_{DRM}$, $dI_G/dt=1\text{A}/\mu\text{s}$	50	$\text{A}/\mu\text{s}$
T_j	Operating Junction Temperature		-40 to $+125$	$^\circ\text{C}$
T_{stg}	Storage Temperature		-40 to $+125$	$^\circ\text{C}$
V_{ISO}	Isolation Breakdown Voltage (R.M.S.)	A.C.1 minute	2500	V
	Mounting Torque (Mounting M4)	Recommended Value 1.0-1.4 (10-14)	1.5 (15)	$\text{N}\cdot\text{m}$ ($\text{kgf}\cdot\text{cm}$)
	Mass			g

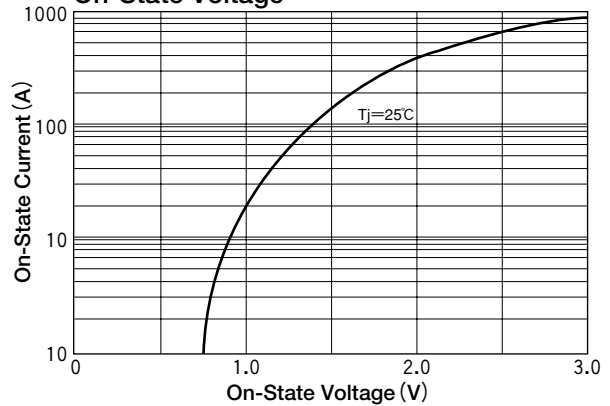
Electrical Characteristics

Symbol	Item	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
I_{DRM}	Reptitive Peak Off-State Current	$V_D=V_{DRM}$, Single phase, half wave, $T_j=125^\circ\text{C}$			10	mA
V_{TM}	Peak On-State Voltage	On-State Current, 100A, $I_T=25\text{A}$, Inst. measurement			1.35	V
I_{GT1}^+	Gate Trigger Current	$T_j=25^\circ\text{C}$, $I_T=1\text{A}$, $V_D=6\text{V}$			50	mA
I_{GT1}^-		$T_j=25^\circ\text{C}$, $I_T=1\text{A}$, $V_D=6\text{V}$			50	
I_{GT3}^+						
I_{GT3}^-		$T_j=25^\circ\text{C}$, $I_T=1\text{A}$, $V_D=6\text{V}$			50	
V_{GT1}^+	Gate Trigger Voltage	$T_j=25^\circ\text{C}$, $I_T=1\text{A}$, $V_D=6\text{V}$			3	V
V_{GT1}^-		$T_j=25^\circ\text{C}$, $I_T=1\text{A}$, $V_D=6\text{V}$			3	
V_{GT3}^+						
V_{GT3}^-		$T_j=25^\circ\text{C}$, $I_T=1\text{A}$, $V_D=6\text{V}$			3	
V_{GD}	Non-Trigger Gate Voltage	$T_j=125^\circ\text{C}$, $V_D=\frac{1}{2}V_{DRM}$	0.2			V
dv/dt	Critical Rate of Rise on-State Voltage,min.	$T_j=125^\circ\text{C}$, $V_D=\frac{2}{3}V_{DRM}$, Exponential wave.	50			$\text{V}/\mu\text{s}$
$[dv/dt]_c$	Critical Rate of Rise off-State Voltage at commutation	$T_j=125^\circ\text{C}$, $V_D=\frac{2}{3}V_{DRM}$, $[di/dt]_c=8\text{A}/\text{ms}$	6			$\text{V}/\mu\text{s}$
I_H	Holding Current	$T_j=25^\circ\text{C}$		50	100	mA
$R_{th}(j-c)$	Thermal Impedance	Junction to case			0.83	$^\circ\text{C}/\text{W}$

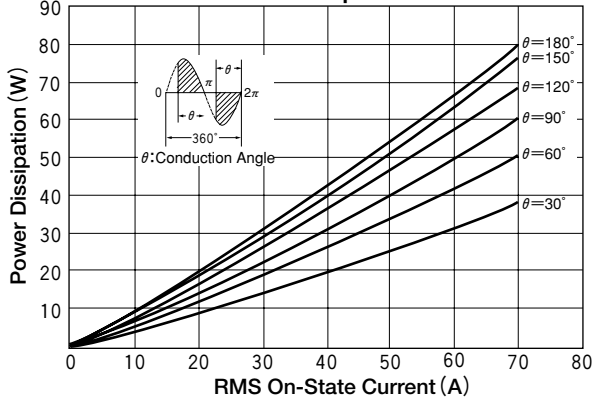
Gate Characteristics



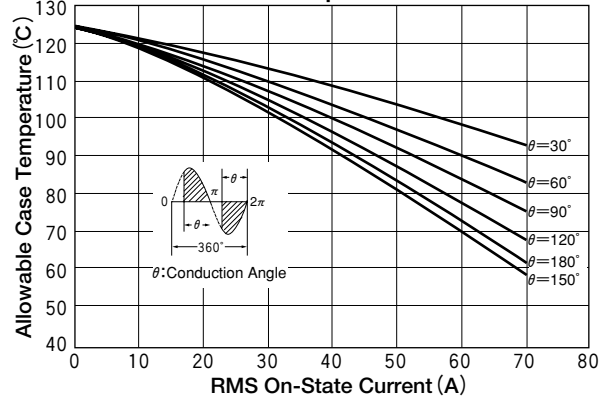
On-State Voltage



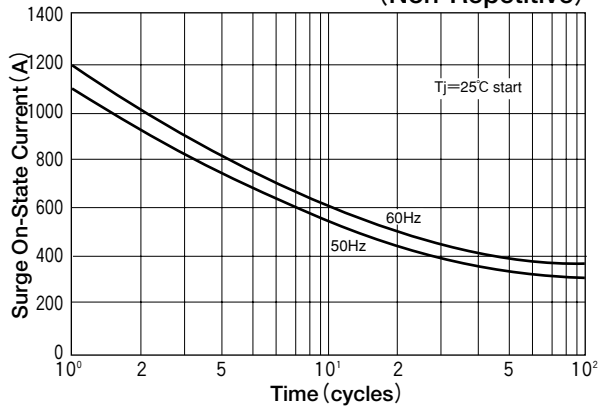
On State Current vs. Maximum Power Dissipation



On State Current vs. Allowable Case Temperature



Surge On-State Current Rating (Non-Repetitive)



Transient Thermal Impedance

