TRIAC （ISOLATED TYPE）
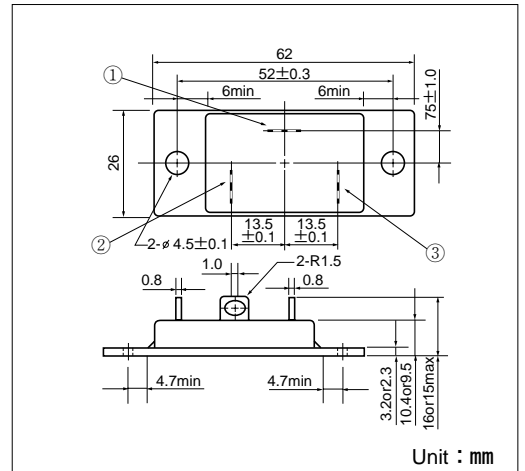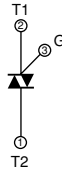# TG70AA40/60

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 Nounting （AC650V）
- Tab Terminals

Unit：**mm**

■Maximum Ratings

（Tj=25℃ unless otherwise specified）

Symbol	Item	Ratings TG70AA40	Ratings TG70AA60	Unit
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	Tc＝58℃	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＝100mA, Tj＝25℃, V_D＝½V_{DRM}, dI_G/dt＝1A/μs	50	A/μs
Tj	Operating Junction Temperature		−40 to ＋125	℃
Tstg	Storage Temperature		−40 to ＋125	℃
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）	N・m (kgf・cm)
	Mass			g

■Electrical Characteristics

Symbol		Item	Conditions	Min.	Typ.	Max.	Unit
I_{DRM}		Reptitive Peak Off-State Current	V_D＝V_{DRM}, Single phase, half wave, Tj＝125℃			10	mA
V_{TM}		Peak On-State Voltage	On-State Current, 100A, I_T＝25A, Inst. measurement			1.35	V
I^+_{GT1}	1	Gate Trigger Current	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	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	Tj＝125℃, V_D＝½V_{DRM}	0.2			V
dv/dt		Critical Rate of Rise on-State Voltage,min.	Tj＝125℃, V_D＝⅔V_{DRM}, Exoponential wave.	50			V/μs
[dv/dt]c		Critical Rate of Rise off-State Voltage at commutation	Tj＝125℃, V_D＝⅔V_{DRM}, [di/dt] c＝8A/ms	6			V/μs
I_H		Holding Current	Tj＝25℃		50	100	mA
Rth(j-c)		Thermal Impedance	Junction to case			0.83	℃/W

Gate Characteristics

Gate Voltage (V) vs **Gate Current (mA)**

Peak Gate Voltage (10V)
Peak Gate Power (10W)
Average Gate Power (1W)
Peak Gate Current (3A)
125℃ 25℃ −30℃
Maximum Gate Voltage that will not trigger any unit

On-State Voltage

On-State Current (A) vs **On-State Voltage (V)**

Tj=25℃

On State Current vs. Maximum Power Dissipation

Power Dissipation (W) vs **RMS On-State Current (A)**

θ=180°
θ=150°
θ=120°
θ=90°
θ=60°
θ=30°

θ : Conduction Angle

On State Current vs. Allowable Case Temperature

Allowable Case Temperature (℃) vs **RMS On-State Current (A)**

θ=30°
θ=60°
θ=90°
θ=120°
θ=180°
θ=150°

θ : Conduction Angle

Surge On-State Current Rating (Non-Repetitive)

Surge On-State Current (A) vs **Time (cycles)**

Tj=25℃ start
60Hz
50Hz

Transient Thermal Impedance

Transient Thermal Impedance θj-c (℃/W) vs **Time t (sec)**

Junction to Case