

## TRIAC (ISOLATED TYPE) TO-240 PACKAGE

# TSR100AA40/60

$I_{T(RMS)} = 100A$ ,  $V_{DRM} = 400/600V$

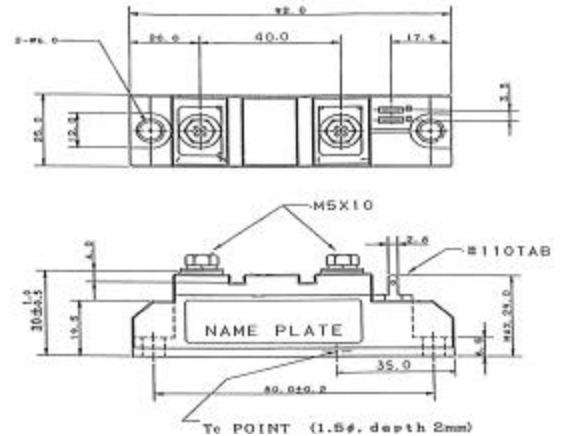
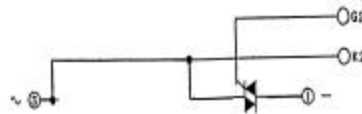
SanRex Triac **TSR100AA40/60** is designed for full-wave AC control applications. It can be used as an ON/OFF function or for phase control operations.

### Features

- \* Glass-passivated junctions Features
- \* High Surge Current
- \* UL registered E76102

### Typical Applications

- \* Heater Control
- \* Motor Control
- \* Lighting Control



< Maximum Ratings >

( $T_j = 25^\circ C$  Unless Otherwise Specified)

Symbol	Item	Ratings		Unit
		TSR100AA40	TSR100AA60	
$V_{DRM}$	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	$T_c = 88^\circ C$	100	A	
$I_{TSM}$	Surge On-state Current	One cycle, 50Hz/60Hz, Peak, non-repetitive	1080/1200	A	
$I^2t$	$I^2t$ (for fusing)	Value for one cycle surge current	6000	$A^2 s$	
$P_{GM}$	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	$I_G = 100mA$ , $V_D = 1/2 V_{DRM}$ , di/dt=1A/fs	50	A/fs	
$T_j$	Operation Junction Temperature		-40 to +125	$^\circ C$	
$T_{stg}$	Storage Temperature		-40 to +125	$^\circ C$	
$V_{ISO}$	Isolation Breakdown Voltage	A.C. 1 minute	2500	V	
	Mounting Torque	Mounting M5	Recommended Value 1.5 to 2.5 (15 to 25)	2.7(28)	N*m (kg * cm)
		Terminals M5	Recommended Value 1.5 to 2.5 (15 to 25)	2.7(28)	
	Mass	Typical Value	170	g	

< Electrical Characteristics >

( $T_j = 25^\circ C$  Unless Otherwise Specified)

Symbol	Item	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
$I_{DRM}$	Repetitive Peak Off-state Current	$T_j = 125^\circ C$ , $V_D = V_{DRM}$			10	mA
$V_{TM}$	Peak On-State Voltage	$I_T = 140A$			1.45	V
$I_{GT1^+}$	Gate Trigger Current	$V_D = 6V$ , $I_T = 1A$			50	mA
$I_{GT1^-}$					50	mA
$I_{GT3^+}$		$V_D = 6V$ , $I_T = 1A$			-	mA
$I_{GT3^-}$					50	mA
$V_{GT1^+}$	Gate Trigger Voltage	$V_D = 6V$ , $I_T = 1A$			3	V
$V_{GT1^-}$					3	V
$V_{GT3^+}$		$V_D = 6V$ , $I_T = 1A$			-	V
$V_{GT3^-}$					3	V
$V_{GD}$	Non-Trigger Gate Voltage	$T_j = 125^\circ C$ , $V_D = 1/2 V_{DRM}$	0.2			V
dv/dt	Critical Rate of Rise of Off-State Voltage	$T_j = 125^\circ C$ , $V_D = 2/3 V_{DRM}$ , exp. Wave	50			V/fs
(dv/dt) <sub>c</sub>	Critical Rate of Rise of Commutation Voltage	$T_j = 125^\circ C$ , $V_D = 2/3 V_{DRM}$ , (di/dt) <sub>c</sub> =8A/ms	6			V/fs
$I_H$	Holding Current			50	100	mA
$R_{th(j-c)}$	Thermal Resistance	Junction to case			0.3	$^\circ C/W$