

TRIAC (ISOLATED TYPE) TO-240 PACKAGE

TSR50AA40/60

$I_{T(RMS)} = 50A, V_{DRM} = 400/600V$

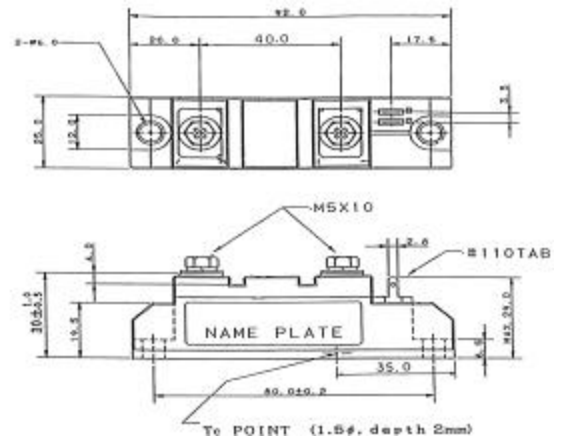
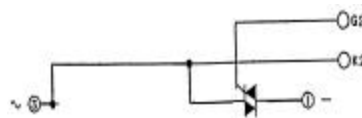
SanRex Triac **TSR50AA40/60** is designed for full-wave AC control applications. It can be used as an ON/OFF function or for phase control operations.

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
		TSR50AA40	TSR50AA60	
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	$T_c = 94^\circ C$	50	A	
I_{TSM}	Surge On-state Current	One cycle, 50Hz/60Hz, Peak, non-repetitive	730/800	A	
$I^2 t$	$I^2 t$ (for fusing)	Value for one cycle surge current	2660	$A^2 s$	
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	$I_T = 70A$			1.3	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	$T_j = 125^\circ C, V_D = 2/3 V_{DRM}, \text{exp. Wave}$	50			V/fs
$(dv/dt)_c$	Critical Rate of Rise of Commutation Voltage	$T_j = 125^\circ C, V_D = 2/3 V_{DRM}, (di/dt)_c = 8A/ms$	6			V/fs
I_H	Holding Current			50	100	mA
$R_{th(j-c)}$	Thermal Resistance	Junction to case			0.55	$^\circ C/W$