

TRIAC (ISOLATED TYPE) TO-240 PACKAGE

TSR50AA40/60

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

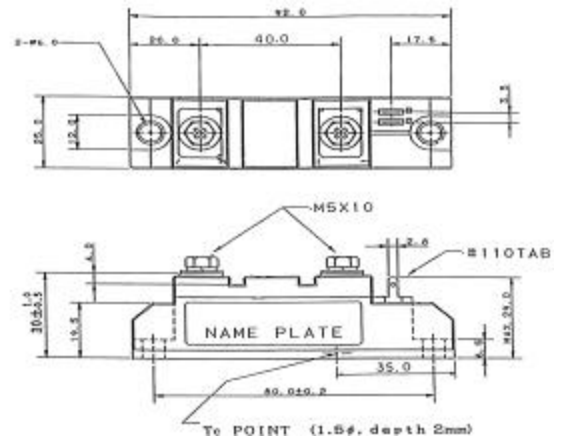
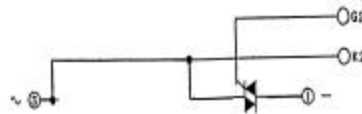
SanRex Triac **TSR50AA40/60** is designed for full-wave AC control applications. It can be used as an ON/OFF function or for phase control operations.

Features

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

Typical Applications

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



< Maximum Ratings >

(T_j = 25°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°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 = 1/2V _{DRM} di/dt = 1A/Fs	50	A/Fs	
T _j	Operation Junction Temperature		-40 to +125	°C	
T _{stg}	Storage Temperature		-40 to +125	°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°C Unless Otherwise Specified)

Symbol	Item	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
I _{DRM}	Repetitive Peak Off-state Current	T _j = 125°C, V _D = V _{DRM}			10	mA
V _{TM}	Peak On-State Voltage	I _T = 70A			1.3	V
I _{GT1+}	QI	V _D = 6V, I _T = 1A V _D = 6V, I _T = 1A			50	mA
I _{GT1-}	QII				50	mA
I _{GT3+}	QIV				-	mA
I _{GT3-}	QIII				50	mA
V _{GT1+}	QI	V _D = 6V, I _T = 1A V _D = 6V, I _T = 1A			3	V
V _{GT1-}	QII				3	V
V _{GT3+}	QIV				-	V
V _{GT3-}	QIII				3	V
V _{GD}	Non-Trigger Gate Voltage	T _j = 125°C, V _D = 1/2V _{DRM}	0.2			V
dv/dt	Critical Rate of Rise of Off-State Voltage	T _j = 125°C, V _D = 2/3V _{DRM} , exp. Wave	50			V/Fs
(dv/dt) _c	Critical Rate of Rise of Commutation Voltage	T _j = 125°C, V _D = 2/3V _{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	°C/W