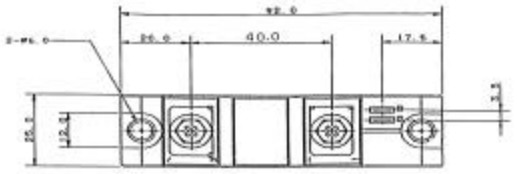
SanRex

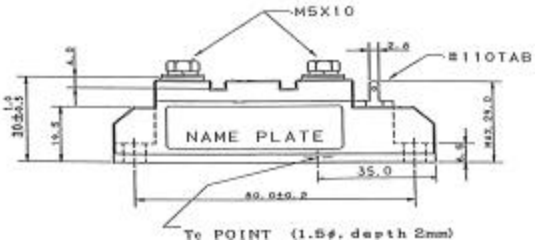
TRIAC (ISOLATED TYPE) TO-240 PACKAGE

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.



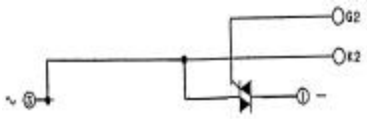


Features

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

Typical Applications

* Heater Control
* Motor Control
* Lighting Control



< Maximum Ratings > (Tj = 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^2t	I^2t (for fusing)		Value for one cycle surge current	2660	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 V_D=1/2V_{DRM} di/dt=1A/Fs	50	A/Fs
Tj	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 Value1.5 to 2.5 (15 to 25)	2.7(28)	
	Mass		Typical Value	170	g

< Electrical Characteristics > (Tj = 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
$I_{GT}1^+$	QI	Gate Trigger Current	V_D = 6V, I_T = 1A			50	mA
$I_{GT}1^-$	QII		V_D = 6V, I_T = 1A			50	mA
$I_{GT}3^+$	QIV			-	-	-	mA
$I_{GT}3^-$	QIII		V_D = 6V, I_T = 1A			50	mA
$V_{GT}1^+$	QI	Gate Trigger Voltage	V_D = 6V, I_T = 1A			3	V
$V_{GT}1^-$	QII		V_D = 6V, I_T = 1A			3	V
$V_{GT}3^+$	QIV			-	-	-	V
$V_{GT}3^-$	QIII		V_D = 6V, I_T = 1A			3	V
V_{GD}	Non-Trigger Gate Voltage		Tj = 125°C, V_D=1/2V_{DRM}	0.2			V
dv/dt	Critical Rate of Rise of Off-State Voltage		Tj = 125°C, V_D=2/3V_{DRM}, exp. Wave	50			V/Fs
(dv/dt)c	Critical Rate of Rise of Commutation Voltage		Tj = 125°C, V_D=2/3V_{DRM} (di/dt)c=8A/ms	6			V/Fs
I_H	Holding Current				50	100	mA
Rth(j-c)	Thermal Resistance		Junction to case			0.55	°C/W

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