

## TRIAC For High Temperature

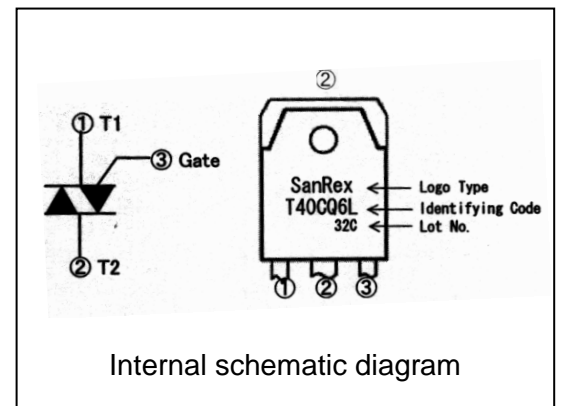
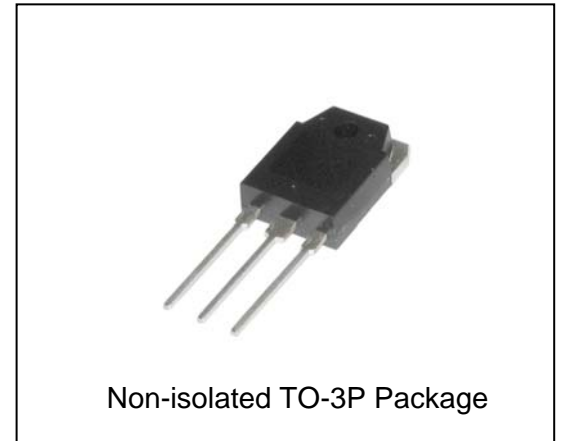
### TMG40CQ60L

$I_{T(RMS)}=40A$ ,  $V_{DRM}=600V$ ,  $T_j=150^{\circ}C$

SanRex Triac **TMG40CQ60L** is specially designed for use in high temperature environment. Thanks to SanRex's new isolated diffusion technology, the **TMG40CQ60L** increases  $T_j(max)$  from  $125^{\circ}C$  to  $150^{\circ}C$ . This advantage reduces the needed heat sink size or eliminate the heat sink. Reducing cooling parts contributes not only to lower cost but also high efficiency and reliability.

#### Features

- \* Glass-passivated junctions features
- \* High surge Current
- \* Low voltage drop
- \* Lead-free solder plated terminals



#### Typical Applications

- \* Home Appliances
- \* Heater Controls
- \* Lighting Controls
- \* Temperature Controls

#### < Maximum Ratings >

( $T_j = 25^{\circ}C$  unless otherwise noted)

Symbol	Item	Conditions	Ratings	Unit
$V_{DRM}$	Repetitive Peak Off-state Voltage		600	V
$I_{T(RMS)}$	R.M.S. On-state Current	$T_c = 122^{\circ}C$	40	A
$I_{TSM}$	Surge On-state Current	One cycle, 60Hz, Peak, non-repetitive	420	A
$I^2t$	$I^2t$ (for fusing)	Value for one cycle surge current	730	$A^2 s$
$P_{GM}$	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
$T_j$	Operation Junction Temperature		-40 to +150	$^{\circ}C$
$T_{stg}$	Storage Temperature		-40 to +150	$^{\circ}C$
	Mass	Typical Value	5.1	g

< Electrical Characteristics >

(T<sub>j</sub> = 25°C unless otherwise noted)

Symbol	Item	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
I <sub>DRM</sub>	Repetitive Peak Off-state Current	T <sub>j</sub> = 150°C, V <sub>D</sub> = V <sub>DRM</sub> , Single Phase, Half wave			8	mA
V <sub>TM</sub>	Peak On-State Voltage	I <sub>T</sub> = 60A, Instant measurement			1.4	V
I <sub>GT1+</sub>	QI	V <sub>D</sub> = 6V, I <sub>T</sub> = 1A			50	mA
I <sub>GT1-</sub>	QII				50	mA
I <sub>GT3+</sub>	QIV				-	mA
I <sub>GT3-</sub>	QIII				50	mA
V <sub>GT1+</sub>	QI	V <sub>D</sub> = 6V, I <sub>T</sub> = 1A			1.5	V
V <sub>GT1-</sub>	QII				1.5	V
V <sub>GT3+</sub>	QIV				-	V
V <sub>GT3-</sub>	QIII				1.5	V
V <sub>GD</sub>	Non-Trigger Gate Voltage	T <sub>j</sub> = 150°C, V <sub>D</sub> = 1/2V <sub>DRM</sub>	0.1			V
(dv/dt) <sub>c</sub>	Critical Rate of Rise of Commutation Voltage	T <sub>j</sub> = 150°C, V <sub>D</sub> = 2/3V <sub>DRM</sub> , (di/dt) <sub>c</sub> = -20A/ms	5			V/Fs
I <sub>H</sub>	Holding Current			35		mA
R <sub>th(j-c)</sub>	Thermal Resistance	Junction to case			0.6	°C/W

