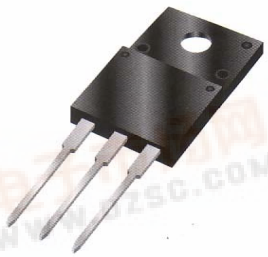
SanRex®

TRIAC
For High Temperature

TMG40CQ60J

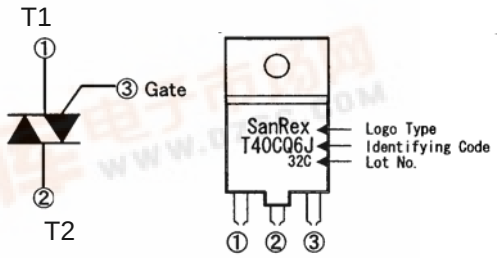
$I_{T(RMS)}$=40A, V_{DRM}=600V, Tj=150°C

SanRex Triac **TMG40CQ60J** is specially designed for use in high temperature environment. Thanks to SanRex's new isolated diffusion technology, the **TMG40CQ60J** increases Tj(max) from 125°C to 150 °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.



Isolated TO-3PF Package

Features
* Glass-passivated junctions features
* High surge Current
* Low voltage drop
* Lead-free solder plated terminals
* UL registered E76102



Internal schematic diagram

Typical Applications
* Home Appliances
* Heater Controls
* Lighting Controls
* Temperature Controls

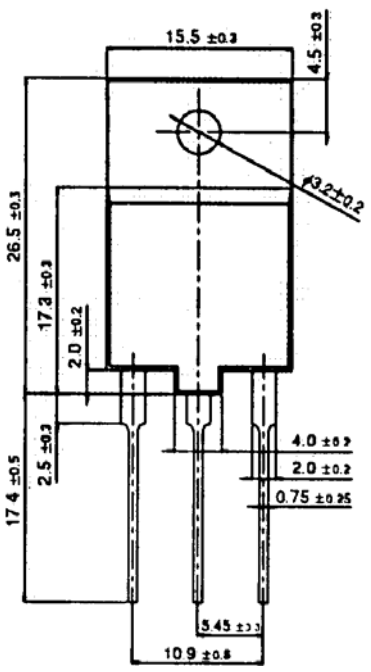
< Maximum Ratings> (Tj = 25°C unless otherwise noted)

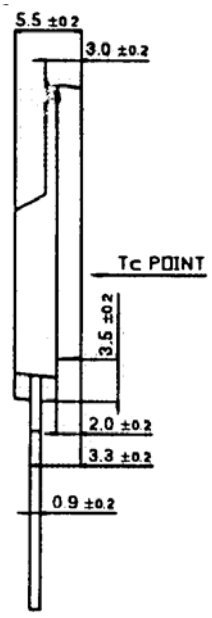
Symbol	Item	Conditions	Ratings	Unit
V_{DRM}	Repetitive Peak Off-state Voltage		600	V
$I_{T(RMS)}$	R.M.S. On-state Current	T_C = 98°C	40	A
I_{TSM}	Surge On-state Current	One cycle, 60Hz, Peak, non-repetitive	420	A
I^2t	I^2t (for fusing)	Value for one cycle surge current	730	A^2s
P_{GM}	Peak Gate Power 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
Viso	Isolation Breakdown Voltage	A.C. 1 minute	1500	V
Tj	Operation Junction Temperature		-40 to +150	°C
T_{stg}	Storage Temperature		-40 to +150	°C
	Mass	Typical Value	5.6	g

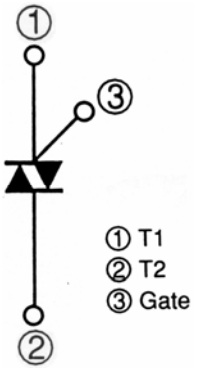
TRIAC TMG40CQ60J

< Electrical Characteristics > (Tj= 25°C unless otherwise noted)

Symbol	Item		Conditions	Ratings			Unit
				Min.	Typ.	Max.	
I_{DRM}	Repetitive Peak Off-state Current		T_j = 150°C, V_D = V_{DRM}, Single Phase, Half wave			8	mA
V_{TM}	Peak On-State Voltage		I_T =60A, Instant measurement			1.4	V
$I_{GT}1^+$	QI	Gate Trigger Current	V_D = 6V, I_T = 1A			50	mA
$I_{GT}1^-$	QII					50	mA
$I_{GT}3^+$	QIV					-	mA
$I_{GT}3^-$	QIII					50	mA
$V_{GT}1^+$	QI	Gate Trigger Voltage	V_D = 6V, I_T = 1A			1.5	V
$V_{GT}1^-$	QII					1.5	V
$V_{GT}3^+$	QIV					-	V
$V_{GT}3^-$	QIII					1.5	V
V_{GD}	Non-Trigger Gate Voltage		Tj = 150°C, V_D=1/2V_{DRM}	0.1			V
(dv/dt)c	Critical Rate of Rise of Commutation Voltage		Tj = 150°C, V_D=2/3V_{DRM}, (di/dt)c=-20A/ms	5			V/Fs
I_H	Holding Current				30		mA
Rth(j-c)	Thermal Resistance		Junction to case			1.1	°C/W







* Dimensions in millimeters