

## Thyristor/Thyristor Thyristor/Diode

### SCA200AA, SCE200AA

$I_{T(AV)} = 200A$ ,  $V_{RRM} = 800 - 1800V$

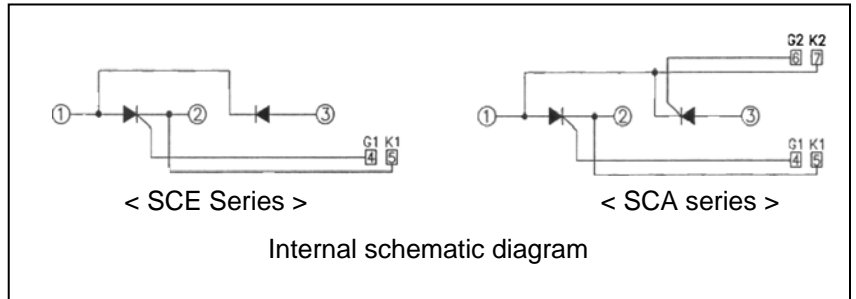
**SanRex Thyristor/Thyristor (SCA series), Thyristor/Diode (SCE series)** are designed for general purpose high voltage applications. **The modules are an Isolated Industrial Standard Package.**

#### Features

- \* Glass-passivated Junctions Feature
- \* High Surge Current ( $I_{TSM}=6500A$ )
- \* Low On-State Voltage Drop ( $V_{TM}=1.4V$ )
- \* UL E76102 approved
- \* RoHS compliance

#### Typical Applications

- \* Welders
- \* Uninterruptible Power Supplies (UPS)
- \* Temperature and Lighting Controls
- \* Soft Starters
- \* Battery Chargers



#### < Maximum Ratings >

$T_j = 25^\circ C$  (unless otherwise noted) per diode

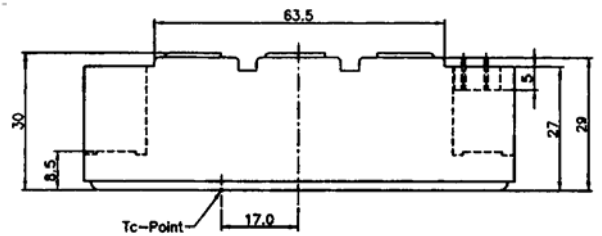
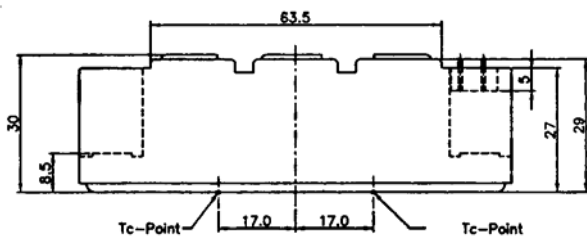
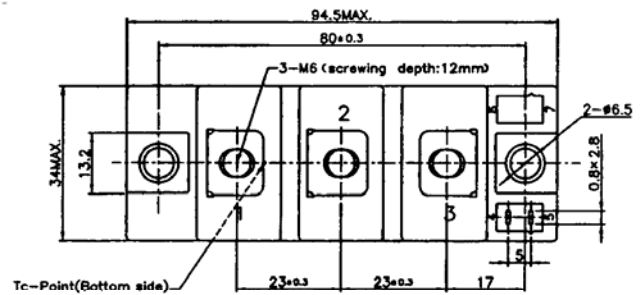
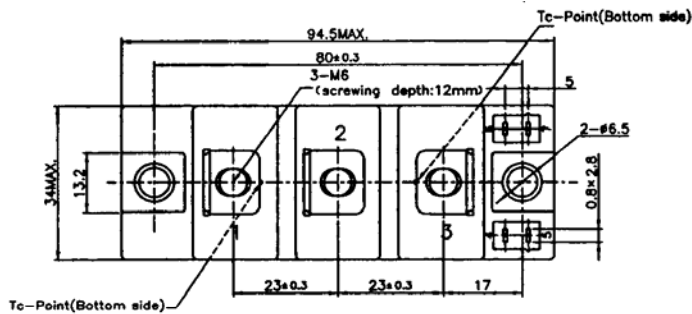
Symbol	Item	Ratings				Unit
		SCA200AA80 SCE200AA80	SCA200AA120 SCE200AA120	SCA200AA160 SCE200AA160	SCA200AA180 SCE200AA180	
$V_{RRM}$	Repetitive Peak Reverse Voltage	800	1200	1600	1800	V
$V_{RSM}$	Non-Repetitive Peak Reverse Voltage	960	1300	1700	1900	V
$V_{DRM}$	Repetitive Peak Off-state Voltage	800	1200	1600	1800	V
$I_{T(AV)}$	Average On-state Current	$T_C = 82^\circ C$			200	A
$I_{T(RMS)}$	R.M.S. On-state Current	$T_C = 82^\circ C$			314	A
$I_{TSM}$	Surge On-state Current	1/2 cycle, 50Hz/60Hz, Peak value, Non-repetitive			6000/6500	A
$I^2 t$	$I^2 t$ (for fusing)	Value for one cycle surge current			180000	$A^2 s$
$P_{GM}$	Peak Gate Power Dissipation				10	W
$P_{G(AV)}$	Average Gate Power Dissipation				3	W
$I_{FGM}$	Peak Gate Current				3	A
$V_{FGM}$	Peak Gate Voltage (Forward)				10	V
$V_{RGM}$	Peak Gate Voltage (Reverse)				5	V
di/dt	Critical Rate of Rise of On-state Current	$I_G=100mA$ , $V_D=1/2V_{DRM}$ , $dig/dt=0.1A/Fs$			200	A/Fs
$V_{ISO}$	Isolation Breakdown Voltage	A.C. 1 minute			3000	
$T_j$	Operating Junction Temperature				-40 to +125	$^\circ C$
$T_{stg}$	Storage Temperature				-40 to +125	$^\circ C$
	Mounting Torque	Mounting M6	Recommended Value 2.5 to 3.9		4.7	N*m
		Terminals M6	Recommended Value 2.5 to 3.9		4.7	
	Mass	Typical Value			210	g

## Thyristor/Thyristor, Thyristor/Diode Module SCA200AA, SCE200AA series

< Electrical Characteristics >

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

Symbol	Item	Conditions	Ratings	Unit
$I_{DRM}$	Repetitive Peak Off-state Current	$T_j = 125^\circ\text{C}, V_D = V_{DRM}$	100	mA
$I_{RRM}$	Repetitive Peak Reverse Current	$T_j = 125^\circ\text{C}, V_R = V_{RRM}$	100	mA
$V_{TM}$	Peak On-State Voltage	$I_T = 600\text{A}$	1.4	V
$V_T(T_0)$	Threshold Voltage	$T_j = 25^\circ\text{C}$	1.0	V
		$T_j = 125^\circ\text{C}$	0.85	V
rt	Slope Resistance	$T_j = 25^\circ\text{C}$	0.8	M Ohm
		$T_j = 125^\circ\text{C}$	1.1	
$I_{GT}$	Gate Trigger Current	$V_D=6\text{V}, I_T=1\text{A}$	100	mA
$V_{GT}$	Gate Trigger Voltage	$V_D=6\text{V}, I_T=1\text{A}$	3	V
$V_{G,D}$	Non-Trigger Gate Voltage	$T_j = 125^\circ\text{C}, V_D=1/2V_{DRM}$	0.25	V
dv/dt	Critical Rate of Rise of Off-state Voltage	$T_j = 125^\circ\text{C}, V_D=2/3V_{DRM}$	1000	V/Fs
Rth(j-c)	Thermal Resistance	Junction to case	0.155	$^\circ\text{C/W}$



< SCA series : Thyristor/Thyristor >

< SCE series : Thyristor/Diode >

\* Dimensions in millimeters (1mm=0.0394")