

Thyristor/Thyristor Thyristor/Diode

SCA200AA, SCE200AA

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

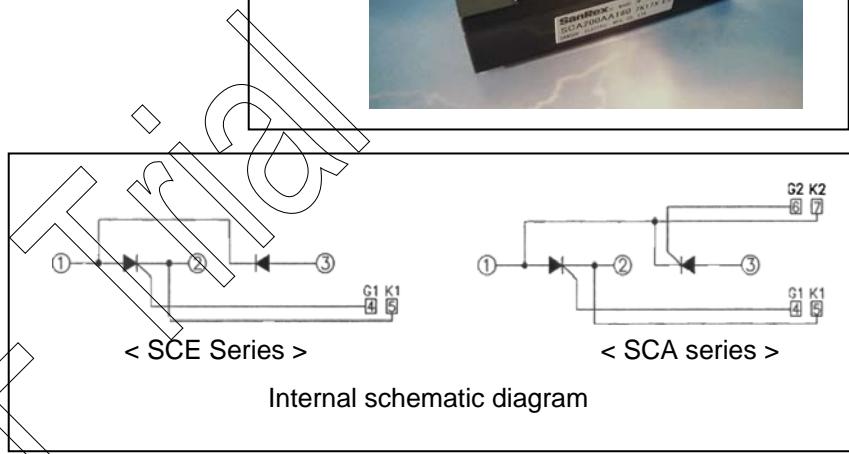
SanRex Thyristor/Thyristor (SCA series), Thyristor/Diode (SCE series) are designed for general purpose high voltage applications. **The modules are an Isolated Industrial Standard Package.**

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 >

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^2t	I^2t (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	$I_G=100mA, V_D=1/2V_{DRM}, di/dt=0.1A/Fs$		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	$N \cdot m$	
	Terminals M6	Recommended Value 2.5 to 3.9		4.7		
	Mass	Typical Value		210		g

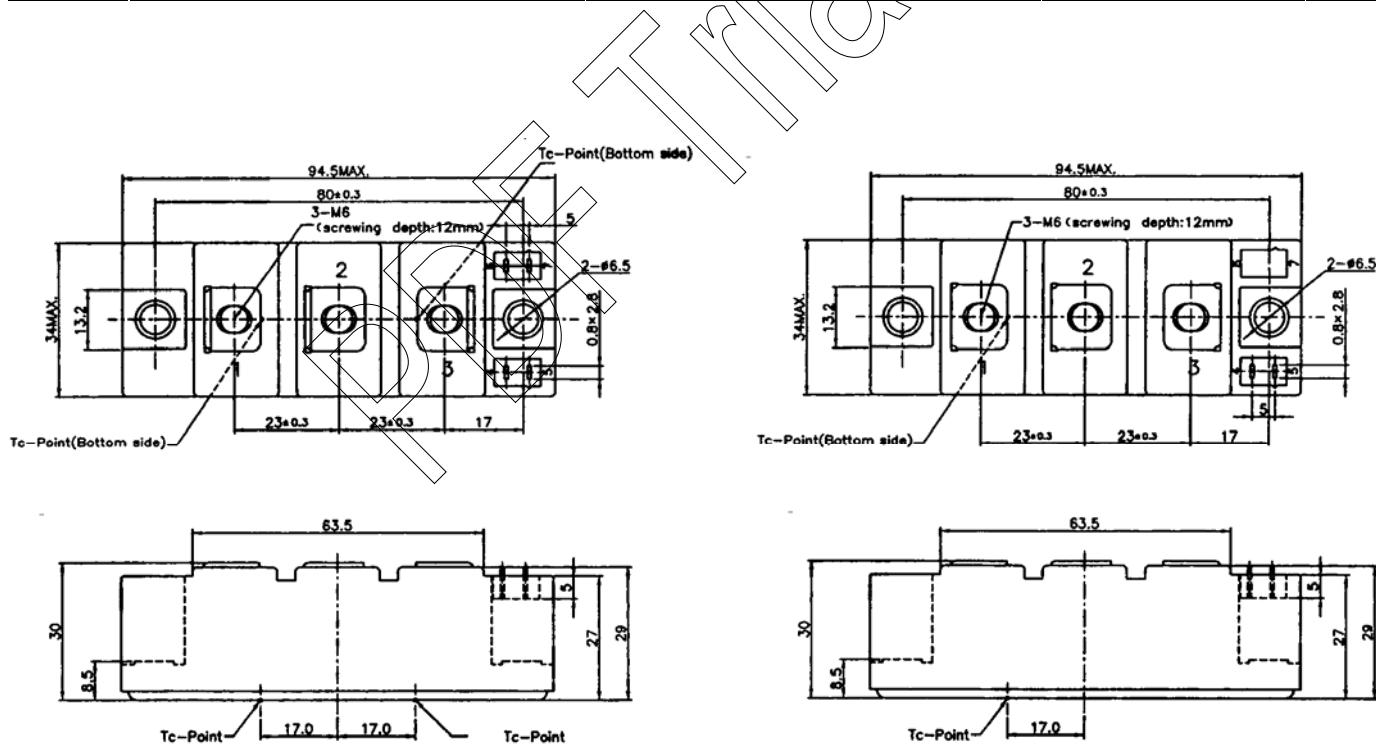
Thyristor/Thyristor, Thyristor/Diode Module

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
VT(T0)	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	$VD=6\text{V}$, $IT=1\text{A}$	100	mA
V_{GT}	Gate Trigger Voltage	$VD=6\text{V}$, $IT=1\text{A}$	3	V
V_{GD}	Non-Trigger Gate Voltage	$T_j = 125^\circ\text{C}$, $V_D = 1/2 V_{DRM}$	0.25	V
dv/dt	Critical Rate of Rise of Off-state Voltage	$T_j = 125^\circ\text{C}$, $V_D = 2/3 V_{DRM}$	1000	V/Fs
$R_{th(j-c)}$	Thermal Resistance	Junction to case	0.155	°C/W



< SCA series : Thyristor/Thyristor >

< SCE series : Thyristor/Diode >

* Dimensions in millimeters (1mm=0.0394")