

- Preliminary -

SanRex®

Thyristor/Thyristor, Thyristor/Diode
For High Temperature

SCA200BA, SCE200BA

$I_{T(AV)}= 200A, V_{RRM}= 1600V, T_j=150^{\circ}C$

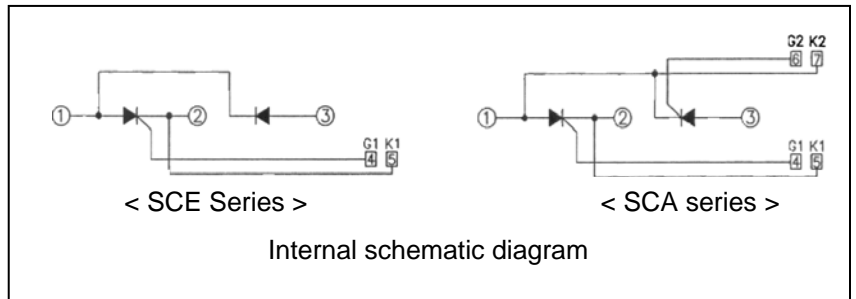
SanRex Thyristor/Thyristor (**SCA series**), Thyristor/Diode (**SCE series**) are specially designed for use in high temperature environment. This advantage reduces the needed heatsink size.

Features

- * Glass-passivated Junctions Feature
- * Maximum Junction Temperature $T_j=150^{\circ}C$
- * Low On-State Voltage Drop ($V_{TM}=1.68V$)
- * High Surge Current ($I_{TSM}=5500A$)
- * RoHS compliance

Typical Applications

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



< Maximum Ratings >

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

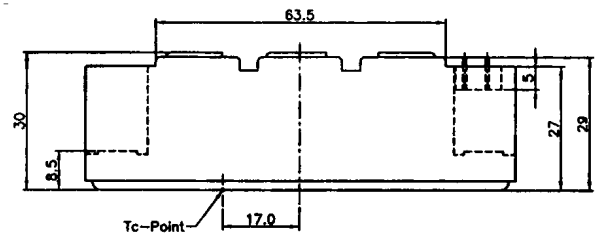
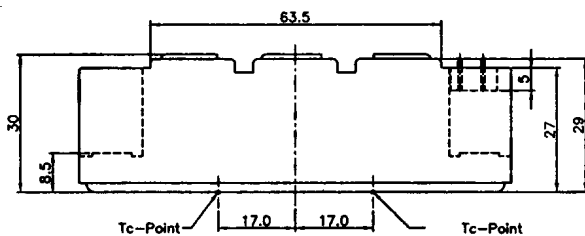
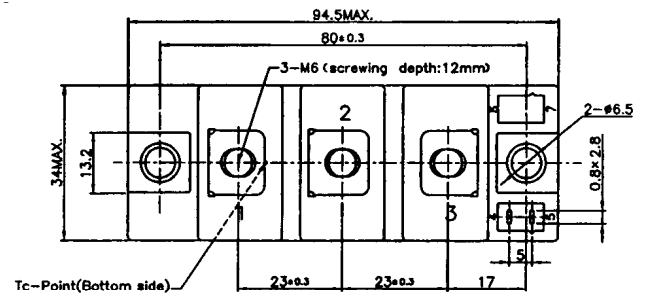
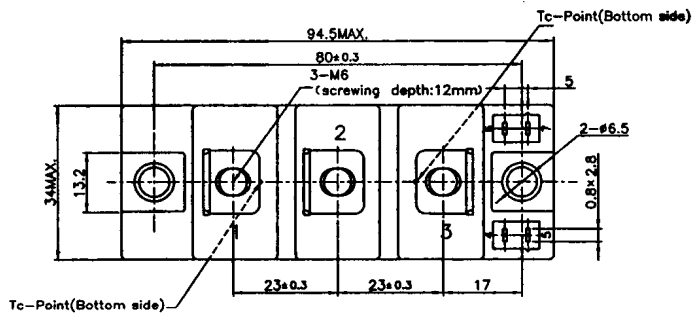
Symbol	Item	Ratings		Unit
			SCE200BA160 SCA200BA160	
V_{RRM}	Repetitive Peak Reverse Voltage		1600	V
V_{RSM}	Non-Repetitive Peak Reverse Voltage		1700	V
V_{DRM}	Repetitive Peak Off-state Voltage		1600	V
$I_{T(AV)}$	Average On-state Current	$T_C = 95^{\circ}C$	200	A
$I_{T(RMS)}$	R.M.S. On-state Current	$T_C = 95^{\circ}C$	314	A
I_{TSM}	Surge On-state Current	1/2 cycle, 50Hz/60Hz, Peak value, Non-repetitive	5000/5500	A
$I^2 t$	$I^2 t$ (for fusing)	Value for one cycle surge current	126000	$A^2 s$
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	$I_G=100mA, V_D=1/2V_{DRM}, dig/dt=0.1A/F s$	200	A/F s
V_{ISO}	Isolation Breakdown Voltage	A.C. 1 minute	2500	V
T_j	Operating Junction Temperature		-40 to +150	$^{\circ}C$
T_{stg}	Storage Temperature		-40 to +125	$^{\circ}C$
	Mounting Torque	Mounting M6	Recommended Value 2.5 to 3.9	N*m
		Terminals M6	Recommended Value 2.5 to 3.9	
	Mass	Typical Value	210	g

Thyristor/Thyristor, Thyristor/Diode Module SCA200BA, SCE200BA 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	$T_j = 150^\circ\text{C}$, $V_D = V_{DRM}$	120	mA
I_{RRM}	Repetitive Peak Reverse Current	$T_j = 150^\circ\text{C}$, $V_R = V_{RRM}$	120	mA
V_{TM}	Peak On-State Voltage	$I_T = 600\text{A}$, $T_j = 150^\circ\text{C}$	1.75	V
$V_T(T_0)$	Threshold Voltage	$T_j = 25^\circ\text{C}$	1.26	V
		$T_j = 150^\circ\text{C}$	0.97	
rt	Slope Resistance	$T_j = 25^\circ\text{C}$	0.7	M Ohm
		$T_j = 150^\circ\text{C}$	1.3	
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_{GD}	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")