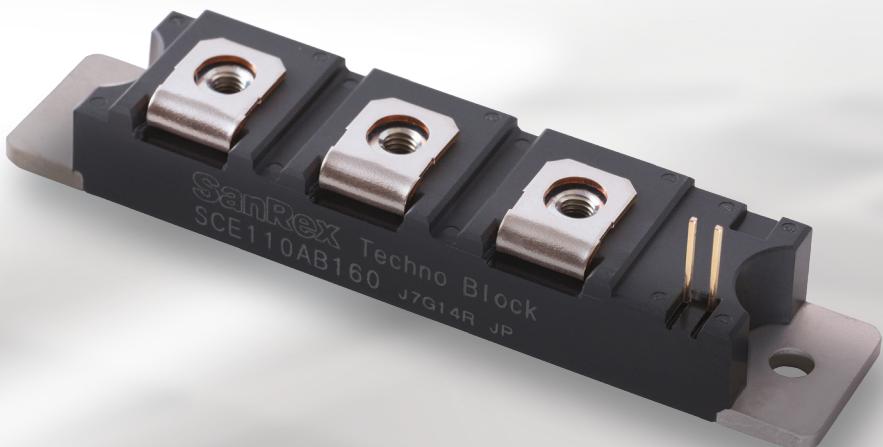
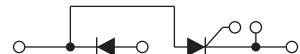


Diode Thyristor Module

Techno Block series
SCE110AB160 (110A/1600V)



Applications

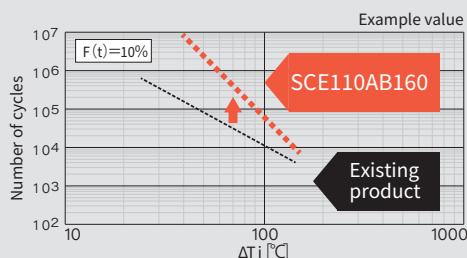
- ▶ Inverters
- ▶ Servo Controller
- ▶ Power Controller
- ▶ Rectifier
- ▶ Inrush Current Prevention Circuit

Features

■ The “Techno Block” series is our original semiconductor module featuring great heat dissipation and transfer molding packaging.

■ Power Cycle Reliability Data

SCE110AB160 vs. Existing product



Power cycle capability (Long-term reliability) is 3 times better than before thanks to the use of “Transfer Molding Package” (at $\Delta T_j=100^\circ\text{C}$)

■ Lightning Surge Resistance (example)

Original gate chip design
(SCE110AB160)



Conventional gate chip
(our product)



New and unique gate design for higher di/dt tolerance.
(comparison with our existing model)

■ Compact design: our new module is 50% smaller than our existing product (110A rating)

■ 14 mm height: isolated, low profile package

■ Both thyristor and diode can operate at $T_j=150^\circ\text{C}$



Maximum Ratings

T_j = 25°C unless otherwise specified

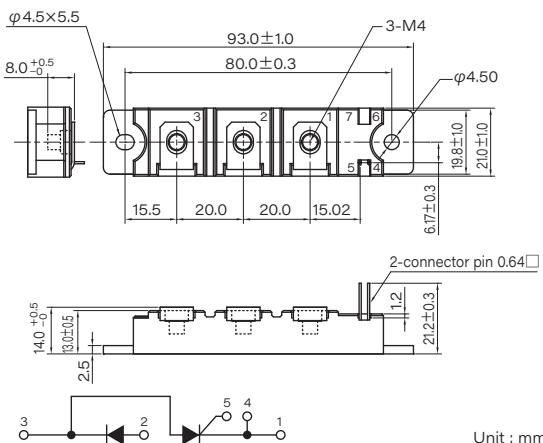
Item	Symbol	Unit	SCE110AB160	
Repetitive Peak Reverse Voltage	V _{RRM}	V	1600	
Repetitive Peak Off-state Voltage	V _{DRM}	V	1600	
Item	Symbol	Unit	Ratings	Conditions
*Average On-state Current	I _{T(AV)} I _{F(AV)}	A	110	Single phase, half wave, 180° conduction T _c =89°C
*Surge On-state Current	I _{TSM} I _{FSM}	A	2100/2300	1/2 cycle, 50/60Hz, Peak value, Non-repetitive
*I ² t (for fusing)	I ² t	A ² s	22000	Value for one cycle of surge current
Critical Rate of Rise of On-state Current	di/dt	A/μs	700	
*Isolation Voltage	V _{ISO}	V	2500	Terminals to Case, AC RMS 1 minute
*Operating Junction Temperature	T _j	°C	-40 to +150	

Electrical Characteristics

T_j = 25°C unless otherwise specified

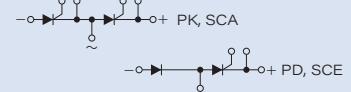
Item	Symbol	Unit	Ratings	Conditions
*On-state Voltage	V _{TM} V _{FM}	V	2	On-state Current 300A Inst. measurement
Gate Trigger Current	I _{GT}	mA	150	I _T =1A, V _D =6V
Gate Trigger Voltage	V _{GT}	V	3.2	I _T =1A, V _D =6V
Critical Rate of Rise of Off-state Voltage	dv/dt	V/μs	1000	T _j =150°C, V _D =2/3V _{DRM} , Exponential wave
*Thermal Resistance	R _{th} (j-c)	°C/W	0.28	Junction to Case (Per Chip)

*mark: Thyristor and Diode part. no mark: Thyristor part.



Other products

Thyristor/Diode /PK/PD/SCA/SCE SERIES



• SanRex and Techno Block are trademarks or registered trademarks of Sansha Electric Manufacturing Co., Ltd.

• Appearance and specifications of products are subject to change without notice for improvement reasons.

SANSHA ELECTRIC MFG. CO., LTD.



URL: <https://www.sansha.co.jp/>

Head Office
(International Sales Department)
Tokyo Branch
Chubu Sales Office
Kyushu Sales Office
Hokuriku Office

TEL: +81-6-6325-6621 FAX: +81-6-6325-0503
TEL: +81-3-3834-1700 FAX: +81-3-3834-1702
TEL: +81-52-955-5600 FAX: +81-52-955-5650
TEL: +81-92-431-7586 FAX: +81-92-474-9643
TEL: +81-76-293-1725 FAX: +81-76-293-1881

Helsinki Branch (Finland)
Atomittie 5, Helsinki, 00370, Finland
TEL: +358-40-1668580 E-mail: info@sanrex.fi
Seoul Branch (Korea)
#706, 6, Samseong-ro 96-gil, Gangnam-gu Seoul
06168 Korea
TEL: +82-2-552-2803 FAX: +82-2-552-8441
Taipei Branch (Taiwan)
8F-3, No.46, Chung Shan N. Road, Sec. 2, Taipei,
Taiwan, R.O.C.
TEL: +886-2-2543-5689 FAX: +886-2-2536-7876

SANSHA SOLUTION SERVICE CO., LTD. (Japan)
TEL: +81-6-6321-0616 FAX: +81-6-6321-0618
Service branches: Osaka, Tokyo, Nagoya, Fukuoka
SANSHA ELECTRIC EASTERN CO., LTD. (Japan)
TEL: +81-266-82-6600 FAX: +81-266-73-3322
<https://www.est.sansha.co.jp/>
SANREX CORPORATION (U.S.A.)
TEL: +1-516-625-1313 FAX: +1-516-625-8845
<https://www.sanrex.com/>
SANREX ASIA PACIFIC PTE. LTD. (Singapore)
TEL: +65-6457-8867 FAX: +65-6459-6425
<https://www.sanrex.sg/>

SANREX LIMITED (Hong Kong)
TEL: +852-2744-1310 FAX: +852-2785-6009
SANSHA ELECTRIC MFG. (SHANGHAI) CO., LTD. (China)
TEL: +86-21-5868-1058 FAX: +86-21-5868-1056
SANSHA ELECTRIC MFG. (GUANGDONG) CO., LTD. (China)
TEL: +86-757-2733-3688 FAX: +86-757-2783-3547
<http://www.sanrex.cn/>
DONGGUAN EASTERN ELECTRONICS CO., LTD. (China)
TEL: +86-769-8733-8301 FAX: +86-769-8733-8306