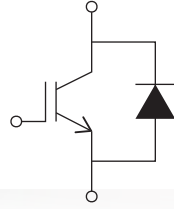



Insulated Gate Bipolar Transistor

GSA75AA120
(75A 1200V)



UL Compliant 
UL File No.E76102

Applications

- ▶ Welding/Cutting Equipment
- ▶ Induction Heating Power Supply
- ▶ Switching Mode Power Supply
- ▶ Uninterruptible Power Supply (UPS)

Features

■ Excellent high-speed performance (40~70 kHz)

The module embeds high-speed performance IGBT along with a high-speed diode optimally designed for it.

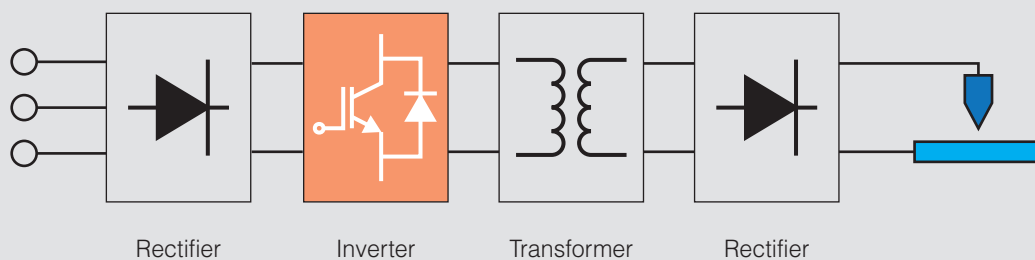
■ Compact and reliable package

- Compact and reliable SOT-227 standard package
- Can be directly attached to the heat sink
- Isolation voltage 2500V
- RoHS compliant

Example

Welding Equipment Configuration

The SOT 227 package contributes to the overall miniaturization of on-board equipment.



Maximum Ratings

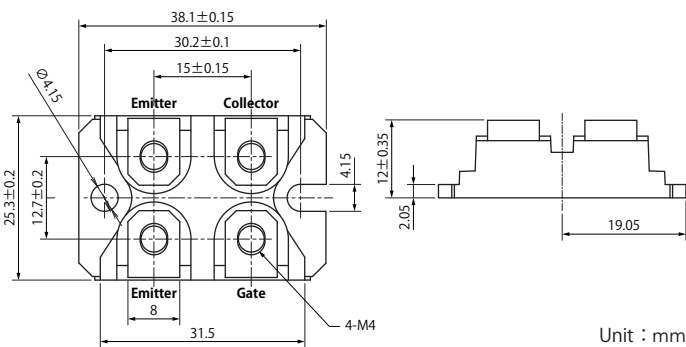
T_j=25°C unless otherwise specified

Item	Symbol	Unit	Rating	Conditions
Collector-Emitter Voltage	V _{CEs}	V	1200	V _{GE} = 0 V
Gate-Emitter Voltage	V _{GES}	V	±20	V _{CE} = 0 V
Collector Current	DC	I _c	75	V _{GE} = 15 V, D.C., T _c = 69 °C
	Pulse	I _{cP}	150	V _{GE} = 15 V, Pulse(1ms), T _c = 150 °C
Collector reverse current	-I _c	A	60	T _c = 67 °C
Total Power Dissipation	IGBT	P _T	W	T _c = 25 °C
	FRD		W	T _c = 25 °C
Operating Junction Temperature	T _j	°C	-40 ~ +150	
Storage Temperature	T _{stg}	°C	-40 ~ +125	
Isolation voltage	V _{ISO}	V	2500	AC RMS 1minute, Terminals to Case

Electrical Characteristics

T_j=25°C unless otherwise specified

Item	Symbol	Unit	Rating			Conditions
			Min.	Typ.	Max.	
Gate-Emitter leakage current	I _{GES}	μA			1.0	V _{GE} = ±20 V, V _{CE} = 0 V
Collector-Emitter Breaking Current	I _{CEs}	μA			100	V _{CE} = 1200 V, V _{GE} = 0 V
				300	2000	V _{CE} = 1200 V, V _{GE} = 0 V, T _j = 125 °C
Gate-Emitter Threshold Voltage	V _{GE(th)}	V	4.9	5.6	6.3	V _{CE} = 10V, I _c = 7.5 mA
Collector-Emitter Saturation Voltage	V _{CE(sat)}	V	2.7	3.3	3.9	I _c = 75 A, V _{GE} = 15 V
				4.2		I _c = 75 A, V _{GE} = 15 V, T _j = 125 °C
Emitter-Collector Voltage	V _{ECS}	V	3.5	4.4	5.1	-I _c = 75A, V _{GE} = 0 V
				2.9		-I _c = 75A, V _{GE} = 0 V, T _j = 125 °C
Input Capacity	C _{ies}	nF		5.5		
Output Capacity	C _{oes}	nF		0.8	V _{CE} = 10 V, V _{GE} = 0 V, f = 1 MHz	
Feedback Capacity	C _{res}	nF		0.3		
Thermal Resistance	IGBT-Case	R _{th(j-c)}	°C/W		0.25	
	FRD-Case				0.50	



SOT-227 Package Lineup

IGBT	Fast Recovery Diode	Soft Recovery Diode
GSA100AA60 100A 600V	DBA200YA40 200A 400V	DBA200WA40/60 DBA200UA40/60 200A 400V/600V

- SanRex is a trademark or a registered trademark of Sansha Electric Manufacturing Co., Ltd.
- Appearance and specifications of products are subject to change without notice for improvement reasons.

Sansha Electric Manufacturing Co., Ltd.
<https://www.sansha.co.jp/>



Headquarters / branches / sales offices

Headquarters (International Sales Department)
TEL: +81-6-6325-6621 FAX: +81-6-6325-0503
Tokyo Branch
TEL: +81-3-3834-1700 FAX: +81-3-3834-1702

Chubu Sales Office

TEL: +81-52-955-5600 FAX: +81-52-955-5650
Kyushu Sales Office
TEL: +81-92-431-7586 FAX: +81-92-474-9643
Hokuriku Office
TEL: +81-76-293-1725 FAX: +81-76-293-1881

Plants

Shiga Plant
TEL: +81-77-583-8632 FAX: +81-77-583-5395
Okayama Plant
TEL: +81-868-36-3111 FAX: +81-868-36-3065

Helsinki Branch (Finland)

Atomitie 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

SUWA SANSHA ELECTRIC CO., LTD. (Japan)

TEL: +81-266-82-6600 FAX: +81-266-73-3322
<https://www.suwa.sansha.co.jp/>

OSAKA DENSO INDUSTRY CO.,LTD. (Japan)

TEL: +81-6-6322-4116 FAX: +81-6-6322-3785
<https://osakadenso.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

If you have any questions, please contact the following or our branches or sales offices.