

Sirectifier

Company Presentation



About Sirectifier

Sirectifier Global Corp. (SGC), located in Delaware, U.S.A., is a leading designer and ODM/OEM service provider in the power semiconductor field. It was founded in 1987 and its major products include Power Discrete and Power Module Devices (Diodes, Schottky, MOSFETs, SCRs, Transistors, IGBTs, Thyristors and ESD Protection Devices) for the industrial, consumer, computer, telecommunication and automotive applications. It is a global joint venture group, with facilities located in America, Europe and Asia, which function as design centers, manufacturing plants, marketing and sales offices.

Based in Delaware, U.S.A., the research and design company partnered with several global semiconductor suppliers of semiconductor components with the aim of developing high-density and efficient power devices, and the team-up has generated a dynamic synergy that resulted in several new advancements in the assembly process, design, and packaging of power devices suitable for the advanced requirements of today's every-growing market. The main base of its manufacturing operations is in the Asian region, such as in Taiwan, China and the Philippines, with factories boasting of manufacturing and assembly facilities and wafer FAB lines. The plants have positioned themselves as engineering-driven, product-oriented manufacturers and have assembly and testing process capabilities for various microelectronic packages.

To-date, several new versions of TVS and ESD Protection Devices, Digital Transistors, Trench MOSFETs and Trench IGBT devices, to name a few, have already been designed or are currently under development in our U.S.-based design center. A new, compact surface mount package, called the Power-pak, has also been jointly developed. The Power-pak package design enables SGC to produce high-power, low thermal resistance, high-average forward rectified current Schottky and Fast Recovery devices in a low and thin outline ideal for miniaturized products such as mobile phones, portable GPS and PDA devices, portable audio, DC-to-DC converters, MP3 players and power management devices.



Sirectifier Semiconductors

PIONEER OF POWER SOLUTION

Recent design breakthroughs have also been achieved with our series of TVS and ESD Protection devices, with TVS array devices packaged into small-footprint surface mount and chip scale packages to give added flexibility to design engineers in miniaturizing devices and maximizing board space and design of portable applications such as mobile handsets, PC-/notebook USB ports, DVI interfaces, monitors and flat panel displays, video graphics cards, SIM ports, ATM interfaces, cordless telephones, wireless data (WAN/LAN) systems, PDAs and HDMI.

Not content in resting on its laurels, the partnership's research team is even now intent on coming out with more advanced ideas in the power device field to sustain us aggressive steps towards being one of the world's leaders in power device solutions.

We cordially invite you to contact us and let us help you to find the total solution for your needs.



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Sirectifier Global Corporation, Delaware, U.S.A.

History

1982 > The forerunner of Sirectifier Semiconductors formed by several local companies spread in Germany and France

1987 > Sirectifier Global Corp.(SGC) founded

1992 > Fabless design house and wafer sales

1994 > Develop Power Module

1997 > Sirectifier Semiconductors founded in Europe

> Develop Analog ICs

2000 > Cooperated with Action Integrated Asia Corp. (AIAC), manila Philippine in strategy for the wafer sales and assembly

> Develop power package TO-220 and TO-247 for Diode, SCR, MOSFETs and IGBTs



Sirectifier Semiconductor: 1982



Power Module: 1994



Analog ICs: 1997



AIAC, Philippines: 1998



TO-220 & TO-247: 2000

- 2001
 - > Marketing, Sirectifier Electronic Co., Ltd., founded in Taiwan
 - > Cooperated with PowerSilicon Inc.(PSI), Sterling, Virginia, U.S.A in strategy for development
 - > Registered the "SIRECT" brand as our trademark
- 2002
 - > Operated under ISO9002:2000 system
 - > Develop planar process Schottky devices
 - > Develop Platinum (Pt) Barrier extremely low IR Schottky
 - > Develop Non Punch Through (NPT) IGBTs
 - > Develop power MOSFETs
- 2003
 - > Assembly for Micro-semi of Schottky
 - > Cooperated with Chenmko Enterprise, Taiwan, to develop the "power-lite" micro-SMD package
 - > Develop Chromium (Cr) Barrier extremely low VF Schottky
 - > Develop SOT-227 Power Module for FRED and Schottky



Axial Lead: 2000



Sirectifier, Taipei, Taiwan: 2001



SMA/B/C: 2001



PSI, Virginia, U.S.A.: 2001



D-PAK: 2002



SOT-227: 2003

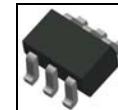
- 2004 > Develop breakthrough Power-Pak micro-SMD package
 - > Registered the "ISI" brand as our trademark of the SMD package
- 2005 > Sirectifier Global Corp.(SGC), Delaware, U.S.A. reorganized and become the global joint venture group of the power semiconductors Marketing, Silicon Technology Ltd. founde in Shenzhen, China
 - > Cooperated with Discrete & D&I Semiconductor Co., Ltd., Korea, for FRED, Schottky and MOSFETs.
 - > Served to Flextronics with power semiconductors
 - > Develop the patented package, "Free-wheel Diode"
- 2006 > Development ESD protection devices
 - > Develop reformed isolation TO-126 package
 - > Develop the QFN packages



SGC, Delaware, U.S.A.: 2005



SOT-23-6: 2004



SOT-363: 2005



TO-126: 2006

- 2007 > Develop EMI/ESD shielding device
- > Develop "ESD-PLUS" Schottkys from 6 up to 35KV
- > Develop PWM Controller
- > Develop Low Vf Schottkys for "80 to 90 PLUS" of CEC
- > Develop 200 - 400A, Schottkys & FRED module
- 2008 > Develop "BY-PASS" Diode for PV junction box of Solar Cell application
- 2009 > Develop MOSFET "75N75" for E-bike controller application.
- > Develop "Halogen-Free" Products
- > Develop Alloy Barrier 100V Low Vf Schottkys for CEC level V on the SMPS application.
- > All products conform to REACH requirement.



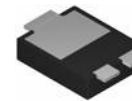
ESD Protection Device: 2007



PWM Controller: 2007



Halogen-Free: 2009



By-Pass Diode: 2008



MOSFET 75N75: 2009

- 2010 > Cooperated with POSKITZ Ltd., U.S.A. for the field of payment terminal.
- > Cooperated with Lingsen Precision Industrial, Taiwan, playing the role of one of our assembly in Asia.
- > Sirectifier Electronic Co., Ltd., Taiwan, moved to new address and expanded the business and service.



Sirectifier Electronic Co., Ltd.



Sirectifier Electronic Co., Ltd.

Organization



Headquaters

Sirectifier Global Corp., Delaware, U.S.A.



EMS

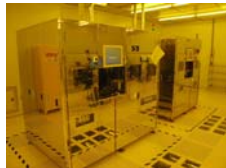
Amertron Inc. Manila, Philippine & U.S.A.



Marketing

Logistic

Sirectifier Electronic Co., Ltd., Taiwan



HsinChu, Taiwan



Virginia, U.S.A.

FAB



Taichung, Taiwan



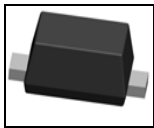
Shanghai, China



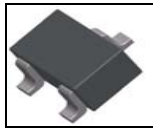
Manila, Philippines

Assembly

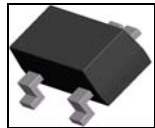
Package



SOD-523



SOT-23



SOT-323



SOT-363



SOT-563



SOT-23-6



SMA



SMB



SMC



DO-41



DO-201AD



TO-126



TO-92



D-PAK



D2-PAK



TO-220



ITO-220



TO-247/ TO-3P



Fig. 9



Fig. 10



Fig. 12



Fig. 14



Fig. 15



Fig. 16



Fig. 17



SOT-227

Capacity

Capacity of Assembly

NO	Item	Package Type															Axial Lead		Power Package					Power Module	
		Surface Mount Device															DO-15/27/41 & R-6	D- PAK	TO 126	D2 PAK	TO 220	TO 247	SOT 227	Mo- dule	
		SOD 723	SOD 523	SOD 323	SOD 123	SOD 87	SOT 563	SOT 457	SOT 416	SOT 363	SOT 346	SOT 343	SOT 323	SOT 223	SOT 89	SOT 23									SMA/ B/C
1	Assembly Molding Model	1	1	2	4	1	1	1	1	1	1	1	1	1	2	2	3	10	1	2	8	4	1	22	
2	Capacity of Assembly/ M	60KK-120KK															150KK	1.2KK	6KK	9.6KK	2.4KK	400K			
3	Capacity of Testing/ M	80KK															150KK	600K	4.2KK	12KK	400K				

Capacity of Wafer FAB

NO	Item	Capacity	Type
1	4" Wafer	50,000 pcs/ M	SBD, FRED, Zener, Switching Diode & TVS
2	6" Wafer	20,000 pcs/ M	SBD, FRED, SCR, Transistor, Triac, MOSFET, IGBT, TVS & Analog

Capacity/ 1 of 1

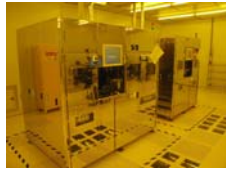
Customer



Customer



Facility



Photolithography



Diffusion



Sputtering



Etching



Thermal Evaporation



Die Preparation



Die Attach



F.O.L.



Wire Bond



Molding



Planting



Testing

Sales Representatives

Sales Representatives:

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Contact: Mr. Tim Scott

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