



VISHAY SEMICONDUCTOR ITALIANA S.p.A.

VIA LIGURIA, 49
10071
BORGARO TORINESE (TO)
ITALY

January 2017





Site introduction

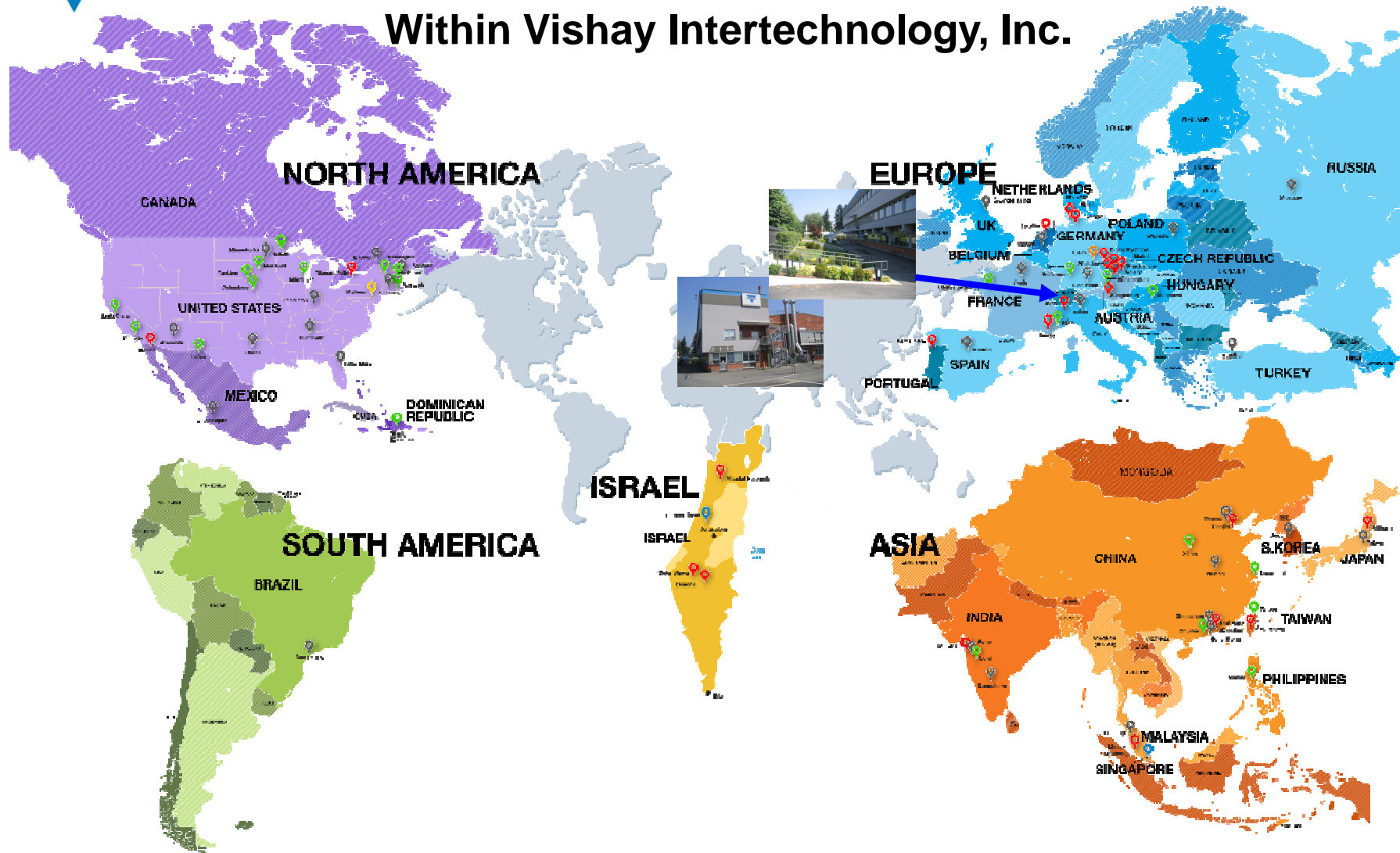
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- Site functions and activities
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Vishay Semiconductor Italiana

Within Vishay Intertechnology, Inc.



WORLDWIDE HEADQUARTERS



REGIONAL HEADQUARTERS



OPERATIONAL & REGIONAL HEADQUARTERS



MANUFACTURING



SALES & MANUFACTURING



SALES

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CAPACITORS • DIODES • INDUCTORS • MOSFETs • OPTOELECTRONICS • RESISTORS



Vishay Semiconductor Italiana

Within Vishay Intertechnology, Inc.

VISHAY INTERTECHNOLOGY INC.

SEMICONDUCTORS

PASSIVE COMPONENTS

Diodes

Mosfets

Opto

Capacitors

Resistors

Magnetics

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Front-End

Back-End

Vishay Taipei

Vishay Taipei

Vishay Semiconductor Italiana

Vishay Tianjin

Vishay Heilbronn

Vishay Budapest

Vishay Voeklabruck - Austria

Vishay Mumbai

(Vishay Itzehoe)

Vishay Shanghai

Vishay Xian

Vishay Semiconductor Italiana

In terms of manufacturing, the plants belonging to Diodes divisions are grouped in Front-End (wafer fabs) locations and Back-End (assembly) locations.

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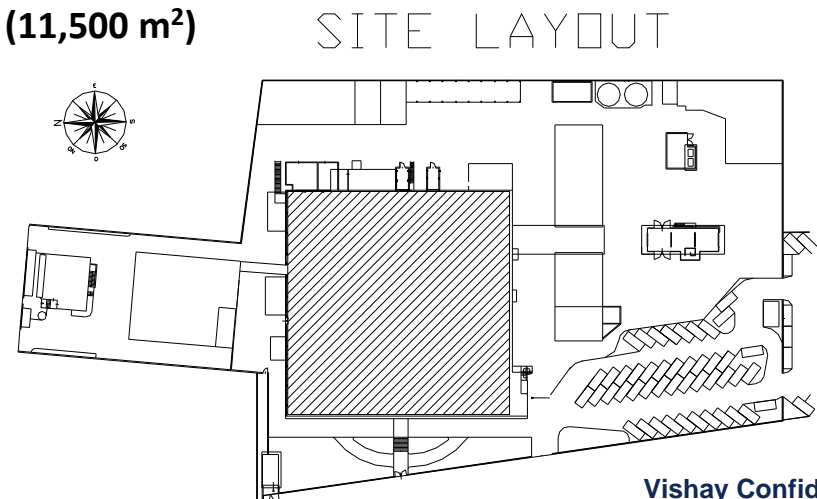


Vishay Semiconductor Italiana

Brief history and general information



- ❖ In this location since 1969 (International Rectifier)
- ❖ Started the Fab activities with Schottky planar products in 1995
- ❖ Started the ultrafast diodes Fred Pt production in 2001
- ❖ Started the IGBT modules assembly in 2003
- ❖ Started the Trench (submicron) fab in 2005
- ❖ Started the ultrafast diodes Hexfred production in 2006
- ❖ Vishay site (Vishay Semiconductor Italiana) since 2007
- ❖ Land size: 124,000 sq ft (11,500 m²)
- ❖ Employees: 236



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Vishay Semiconductor Italiana

Site Functions and activities



❖ OPERATION

- Rectifiers wafer fab manufacturing
- High Power Modules manufacturing

❖ DIVISION QUALITY

- Customer Failure analysis laboratory
- Reliability Evaluation Laboratory

❖ RESEARCH AND DEVELOPMENT

- Ultrafast high voltage rectifiers
- High Power Modules & Discretes

❖ PRODUCT ENGINEERING

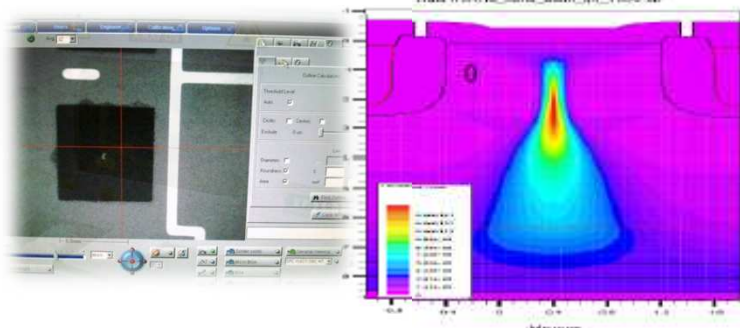
- Ultrafast high voltage rectifiers
- High Power Modules & Discretes
- Characterization laboratory at Turin Politecnico

❖ DIVISION MARKETING

- Ultrafast high voltage rectifiers
- High Power Modules & Discretes
- Small Signal products

❖ DIVISION PLANNING

- Turin rectifiers (Ultrafast and Schottky)
- High Power Modules & Discretes
- Small Signal Products



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Vishay Semiconductor Italiana

Certifications

- **OHSAS 18001** certification for the site
- **ISO14001** certification for the site;
- **ISO TS 16949** certification for the Wafer FAB activities;
- **ISO TS 16949** certification for the Modules activities;
- **JANS** certification for the Wafer FAB activities (US Military and Aerospace applications).
- *In process for **ISO50001** certification (2017)*

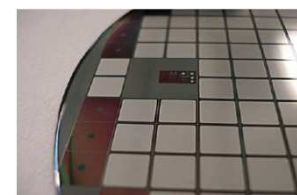




Vishay Semiconductor Italiana

Products: Wafer Fab

PRODUCT FAMILY	TECHNOLOGY	VOLTAGE RANGE	WAFER DIAMETER
Fred Pt®	Gen 1 planar	200-1200 V	6"
	Gen 2 planar		6"
	Gen 2 solderable		6"
	Gen 4 submicron		6"
Hexfred	Gen 2 planar	400-1200 V	6"
	Gen 3 planar		6"
Schottky	Trench TMBS	100 V	6"
	Gen 2 planar	15-150 V	6"



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Market Segment

Wafer Fab Products Applications:

➤ 200V-1200V Ultrafast Rectifiers FRED Pt® & Hexfred

PFC circuits for High efficiency power supplies

Anti-parallel diode for IGBTs in major consumer, industrial and automotive applications

Output rectification for HF welding/Plasma

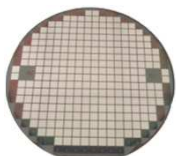
AC-DC, DC-DC conversion for fast charging stations

➤ 15V – 150V Schottky Diodes (Planar & Trench)

Flyback diodes for adapters & chargers

Bypass diode for Solar Panels

Output diodes for Telecom Power Supplies





Market Segment

Modules Product Applications:

- **Standard Modules for industrial applications**

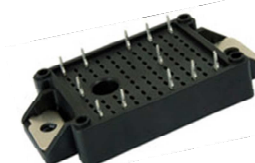
Diodes/SCR for AC Mains Rectification & Alternators

FRED Pt® High Frequency Output Diodes for Welding Applications

Standard IGBT Modules for UPS and industrial Power Supplies

- **Application specific Power Modules for:**

HF Welders/Plasma, UPS, Solar inverters, On Board Chargers for EV/HEV





THANK YOU