

CONTACTS

To find out more about the power products at Siltronic,

visit our website:

www.siltronic.com

or contact us:

Siltronic AG

Hanns-Seidel-Platz 4
81737 München
Germany

Phone: +49 89 8564-3122

Fax: +49 89 8564-3219

Email: info@siltronic.com

Version 2008 © Siltronic, HiREF® is a registered trademark of Siltronic AG

OUR SITES



WE ACT GLOBALLY.

Siltronic produces wafers in the world's most important semiconductor markets, in a global value creation network that comprises five plants with numerous state-of-the-art manufacturing lines:

- Burghausen, Germany
- Portland, USA
- Freiberg, Germany
- Singapore
- Hikari, Japan

The headquarters are based in Munich.

Based on our global network of production facilities, we run a service network that consists of local sales organizations and application technology laboratories and which cultivates close partnership with our customers. In this way we are close to our customers and we can respond quickly at all times.

SOLUTIONS OFFERED BY SILTRONIC

Silicon wafer	Key parameter	Device/ Application examples
125, 150 mm		
CZ boron doped	misfit reduced	MOSFET, IGBT
CZ phosphorus doped	$\rho < 1 \text{ m}\Omega\text{cm}$	MOSFET
CZ arsenic doped	$\rho < 3 \text{ m}\Omega\text{cm}$	MOSFET, Diode
CZ antimony doped	$\rho < 18 \text{ m}\Omega\text{cm}$	High voltage MOSFET
CZ and epi	thin and thick epi $> 50 \mu\text{m}$	MOSFET, IGBT, PowerIC, Diode
FZ	$\rho \pm 12 \%$	IGBT, Diode, Thyristor
HiREF®, for all crystal types	Diameter, thickness range and $1 \mu\text{m}$ litho capability	Diode, Thyristor
all	thin wafers $< 375 \mu\text{m}$	various
all	multilayer epi	various
all	DSP	various
all	ultraflat wafers for $0.25 \mu\text{m}$ line width	various
200 mm		
CZ boron doped	$\rho \leq 3 \text{ m}\Omega\text{cm}$, w misfit reduced	IGBT, MOSFET
CZ red phosphorus doped	$\rho \leq 1.3 \text{ m}\Omega\text{cm}$,	MOSFET
CZ arsenic doped	$\rho < 3 \text{ m}\Omega\text{cm}$	MOSFET, Diode
CZ antimony doped	$\rho < 20 \text{ m}\Omega\text{cm}$	High voltage MOSFET
CZ and epi	thin and thick epi $> 50 \mu\text{m}$	MOSFET, IGBT, PowerIC, Diode
FZ	$\rho \pm 12 \%$	IGBT, Diode, Thyristor
all	asymmetric edge profiles	various
all	multilayer epi	various

SILICON FOR POWER DEVICE APPLICATIONS



COMPANY PROFILE

Siltronic is a global leader in the market for ultra-pure silicon wafers and the partner of numerous leading chip manufacturers. Siltronic develops and manufactures wafers with diameters of up to 300 mm at production sites in Europe, Asia, Japan and the United States.

Silicon wafers form the heart of modern micro- and nanoelectronics – for computers, mobile telephones, Internet, DVD players, flat-panel displays, navigation systems, airbags, computer tomography machines, aircraft control systems and many other applications.

POWER PRODUCTS

Siltronic offers a wide range of power products on the market. Our technology in areas of crystal growing, thick epi allows us to tailor the products to our customers needs.

FLOAT ZONE

The float zone growth process virtually eliminates oxygen contamination. In this way a silicon wafer with superior lifetime and thermal donor performance is created.



Shown above is the world's first 200 mm FZ ingot, grown at Siltronic AG in Burghausen / Germany. 200 mm FZ is now a standard product with both n- and p-type dopants available.

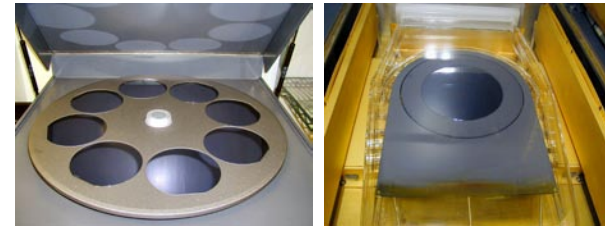
Can your power or RF BICMOS application move to 200 mm FZ and achieve better cost and performance metrics?

EPI

Siltronic offers a full range of reactor technologies to provide the appropriate solution for all technical requirements:

- From thick up to very thick epi
- Multiple layer epi
- Tight thickness tolerance
- Tight resistivity tolerance
- Transition profiles
- Nodule growth reduction

and a lot more.



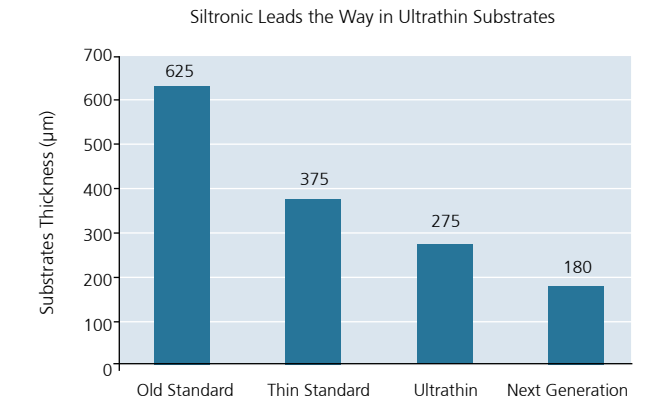
Our pancake, barrel, minibatch, and single wafer epi reactors can be optimally used for various sensitive applications including IGBTs. The result is a more accurate epi profile and better resistivity and thickness capability.

OPTIMAL EDGE PROFILE

Asymmetric edges offer optimal edge profiles after back-grinding, where breakage is the biggest issue, improving end of line yield.

ULTRATHIN SUBSTRATES

Siltronic's robust thin wafer processes reduce the amount of silicon consumed without increasing breakage. Less silicon means less background and lower costs.



HiREF®

HiREF® (high reflectivity) wafers are non polished wafers with high surface and tight geometry requirements for demanding discrete applications. As thin wafers they are also an alternative to diffused. Furthermore HiREF® wafers are a cost competitive alternative to very thin polished and double side polished wafers for discrete applications.