5 WAYS TO GAIN A COMPETITIVE EDGE

SUPERIOR PERFORMANCE FOR YOUR RF, POWER, AND PA DEVICE

Okmetic’s High Resistivity RFSi® silicon wafers aimed at the RF market are optimal for all types of Acoustic Wave Filters, IPD devices, Power Amplifiers, Integrated RFIC & PA and Silicon Interposers.
LOOKING FOR NEW WAYS TO IMPROVE YOUR RF DEVICE PERFORMANCE AND TCO?

Superior quality High Resistivity silicon wafers, with resistivities reaching >7,000 Ohm-cm, enhance your leading-edge RF designs and enable your products to outperform the competition. Here are 5 ways you can gain a competitive edge using Okmetic’s High Resistivity RFSi® silicon wafers.

1. IMPROVE ELECTRICAL PERFORMANCE AND REDUCE VARIATION

By using Okmetic’s superior High Resistivity RFSi® silicon wafers as substrates, you can improve the electrical performance of your RF applications. The cutting-edge wafer technology reduces RF losses and provides stable “effective resistivity” over frequency range, resulting in higher Q values. The technology also helps improve linearity, minimize intermodulation and second harmonics distortion, and reduce characteristic stress and bow. Okmetic’s Advanced MCz (Magnetic Czochralski) crystal growth recipes can customize oxygen content to increase resistivity and conductivity type stability, while still maintaining structural integrity.

2. UTILIZE ENHANCED ISOLATION THROUGH SUPPRESSION OF PARASITICS AND MAXIMIZE DIE DENSITY PER WAFER

Make integrated products utilizing superior High Resistivity silicon wafers as substrates and gain multiple functions and improved scalability. Inherent “low noise” properties and suppression of parasitic coupling can help simplify the design by eliminating the need for separate isolation structures or other treatments designed to prevent various energy losses. Eliminating process steps and maximizing die density per wafer or package reduces production costs.

3. SELECT THE OPTIMAL WAFER THICKNESS AND PROPERTIES FOR YOUR DEVICE FROM THE WIDEST SELECTION ON THE MARKET

Mastered in over 30 years wafer supply for MEMS, sensors, discrete semiconductors and analog devices, Okmetic provides the market’s widest range of wafer thicknesses ranging from 200 to 1500 µm. Customers find the thinner options very attractive in packaging designs whereas in mixed metal lattices like GaN epi layers, the customers enjoy the benefits of the thicker substrates to offset the extreme stresses. Okmetic can customize the Resistivity, Crystal Orientation, Oxygen, and Thickness to your product or package needs.
4. REPLACE FZ SUBSTRATES WITH A MORE ROBUST AND COST-EFFECTIVE OPTION

High Resistivity silicon wafers manufactured with the MCz (Magnetic Czochralski) method provide a superior alternative to High Resistivity silicon wafers manufactured with the FZ (Float Zone) method. Lower Total Cost of Ownership is achieved through lower purchase prices, higher production volume and availability, better performance, improved integration possibilities, and lower fab handling costs. The High Resistivity MCz wafers are mechanically stronger and less vulnerable to thermal stress, thereby reducing dislocations, warp, fractures, and the associated fab and assembly wafer yield losses.

5. ENHANCE YOUR PRODUCT DEVELOPMENT WITH AN AGILE R&D PARTNER

Having a partner who understands your needs and can customize your wafers through agile R&D is essential for improving the performance of your RF applications and reducing time-to-market. Agile substrate design and optimization in R&D, as well as responsiveness and support for smaller order quantities, provides you with a talent resource to compliment and complete your in-house expertise. When developing a new generation of communication devices, it is ideal to engage your partner as early as possible to ensure a highly optimized and process-tailored wafer solution.

With over three decades of crystal growth and wafer expertise, Okmetic is a proven, reliable partner who understands the unique material parameters, like the difference between measured and true resistivity behaviors in your product. Our Sales, Customer Support Engineers, and R&D Scientists work in seamless co-operation with you to understand your challenges, offer potential solutions, and secure the best solution.

INTERESTED? CONTACT OKMETIC TO DISCUSS YOUR SPECIFIC NEEDS.

Our sales and technical team is at your service.

Sales USA | Sales Europe | Sales Japan | Sales Asia
Okmetic, founded in 1985, is the seventh largest silicon wafer manufacturer in the world and a true pioneer in the field of specialized silicon wafers. Okmetic supplies tailor-made, high value-added silicon wafers for the manufacture of MEMS and Sensors as well as Discrete Semiconductors and Analog Circuits.

Okmetic’s decades-long crystal growth and wafer expertise, continuous development and extensive product portfolio coupled with efficient and flexible production create the prerequisites for its world-class products. Okmetic’s silicon wafers provide a highly functional and reliable platform for the manufacture of various everyday applications including smartphones, portable devices, automotive electronics, industrial process control and medical applications, the Internet of Things (IoT), and different power supply and efficiency improvement solutions.

Okmetic has worldwide sales organization and headquarters located in Finland, where the majority of its silicon wafers is produced. Okmetic’s operations rely on quality and environmental systems in line with the ISO 9001:2015, ISO 14001:2015, and IATF 16949:2016 standards.