

Frequency Control Components

- **Topology**

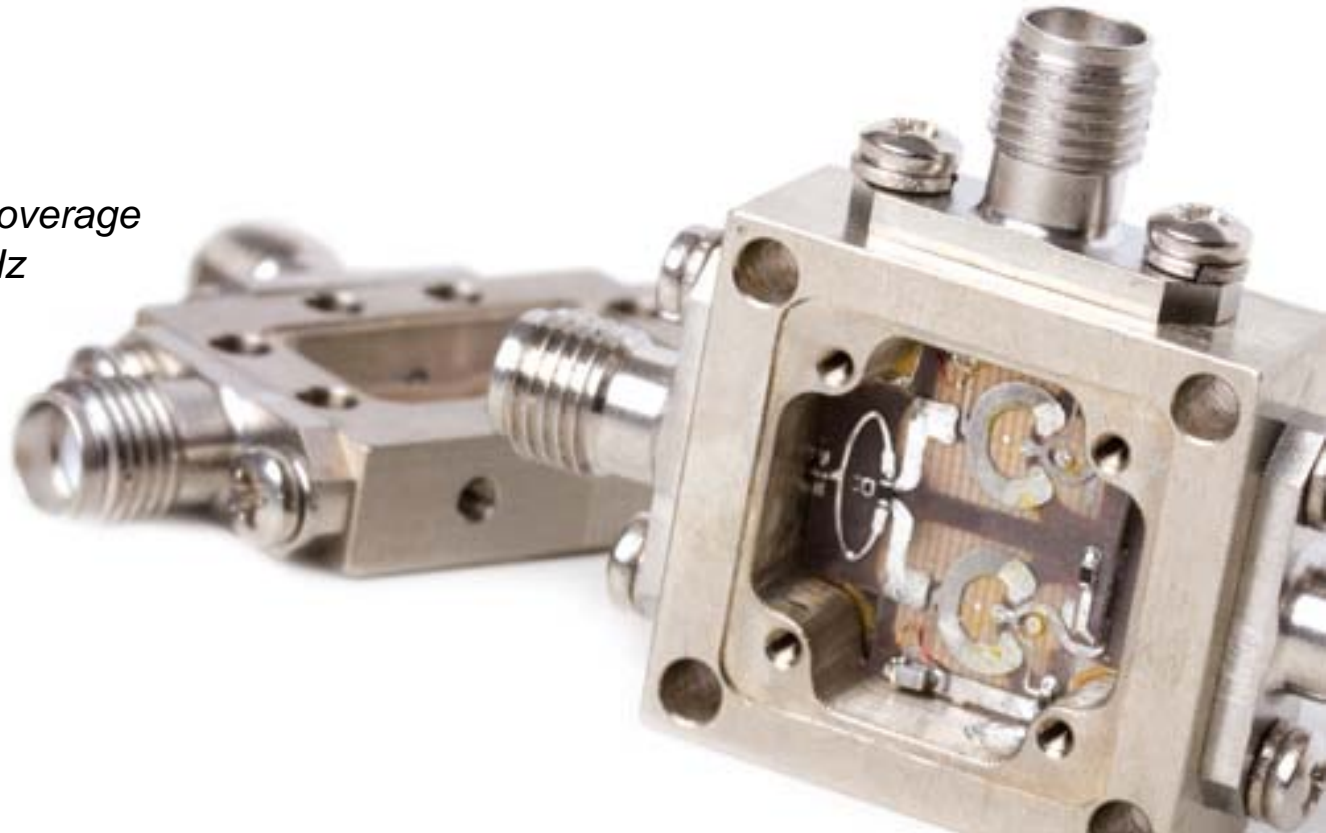
- *Double Balanced*
- *Triple Balanced*
- *Image Reject*
- *Frequency Doublers*
- *Diode Based Technology*

- **Frequency**

- *DC to 26 GHz frequency coverage*
- *IF frequencies up to 10 GHz*
- *Frequency Doublers*
- *Diode Based Technology*

- **Performance**

- *Low Conversion Loss*
- *Low Spurious*
- *High Isolation*
- *High Dynamic Range*
- *Broadband*



Engineering for Excellence

Using the expertise of our microwave mixer design engineers, our focus is not only on meeting the customers' requirements, but on exceeding their expectations

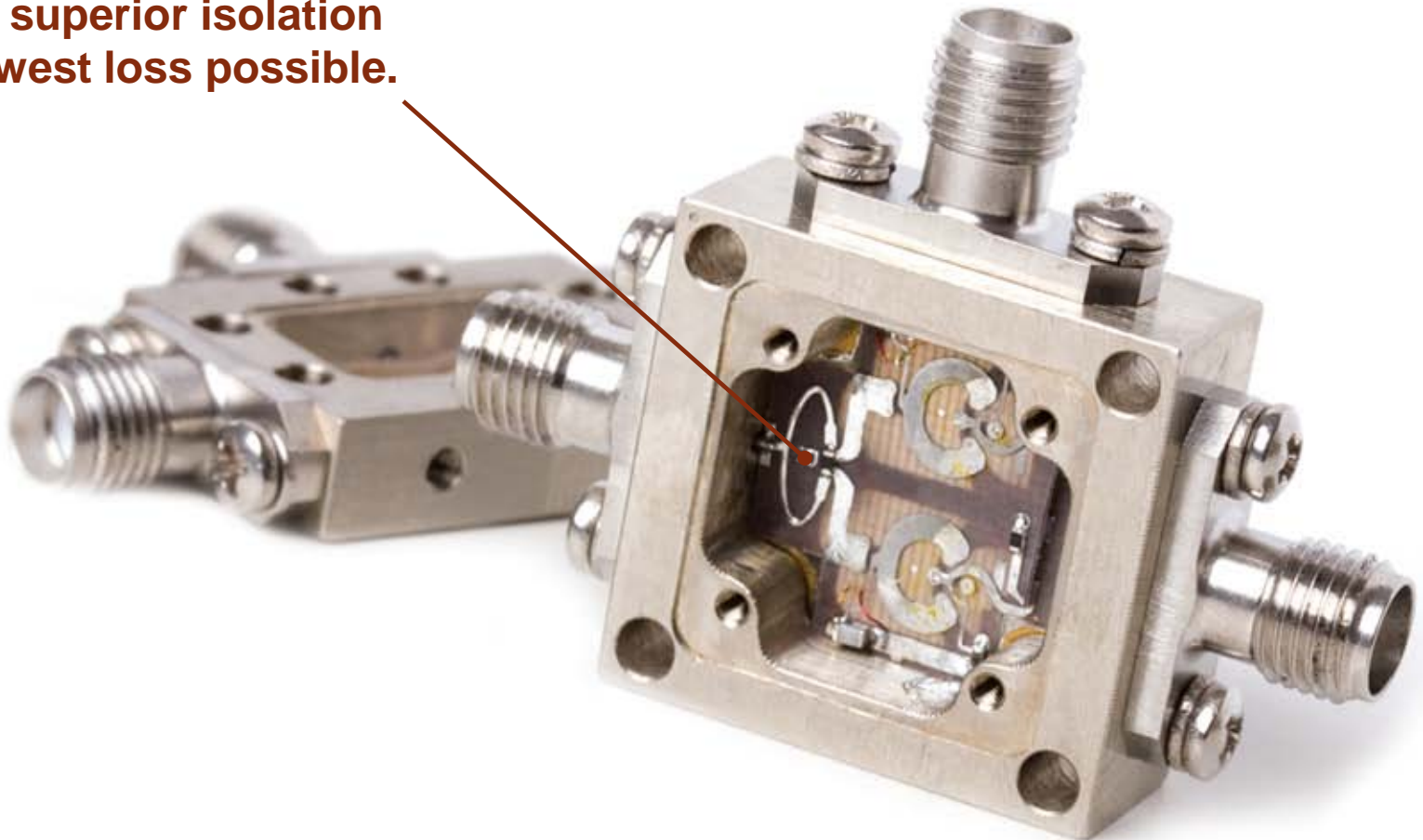


**Other companies talk
about technology**

**...we let our designs
speak for themselves.**

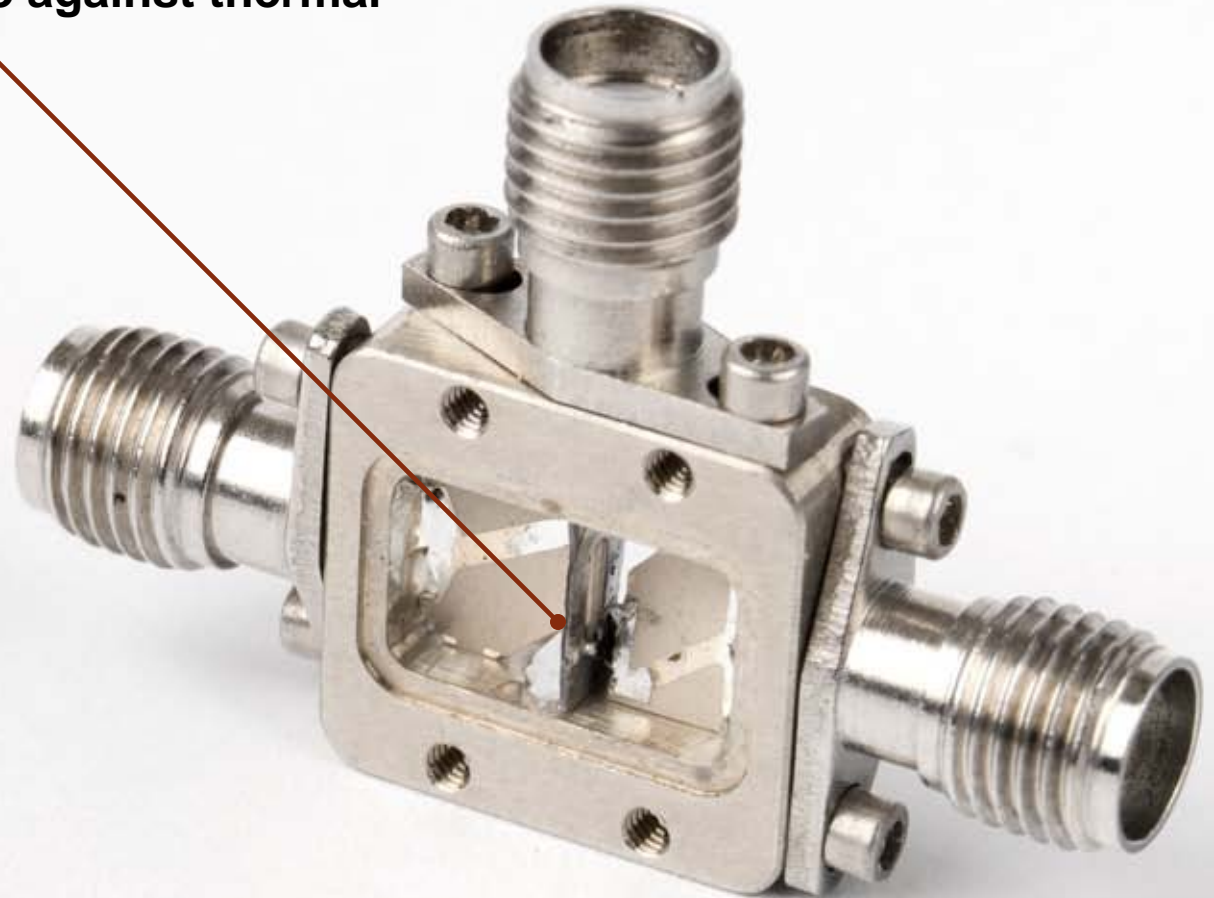
Highest Performance

Our mixers use high performance monolithic diodes for **superior isolation** and the **lowest loss possible**.



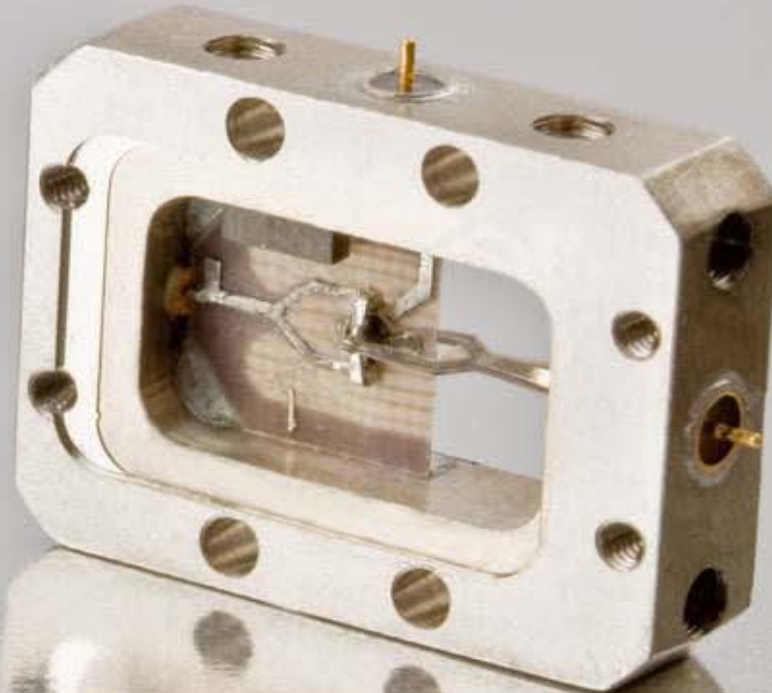
Rugged Construction

Our mixers use rugged duroid construction for proven performance against thermal dynamics and shock.



Hermetic Sealing

**In order to protect
Against corrosion and
oxidation in extreme
environments, hermetic
sealing in Nitrogen is
an option on select
Kovar packages.**



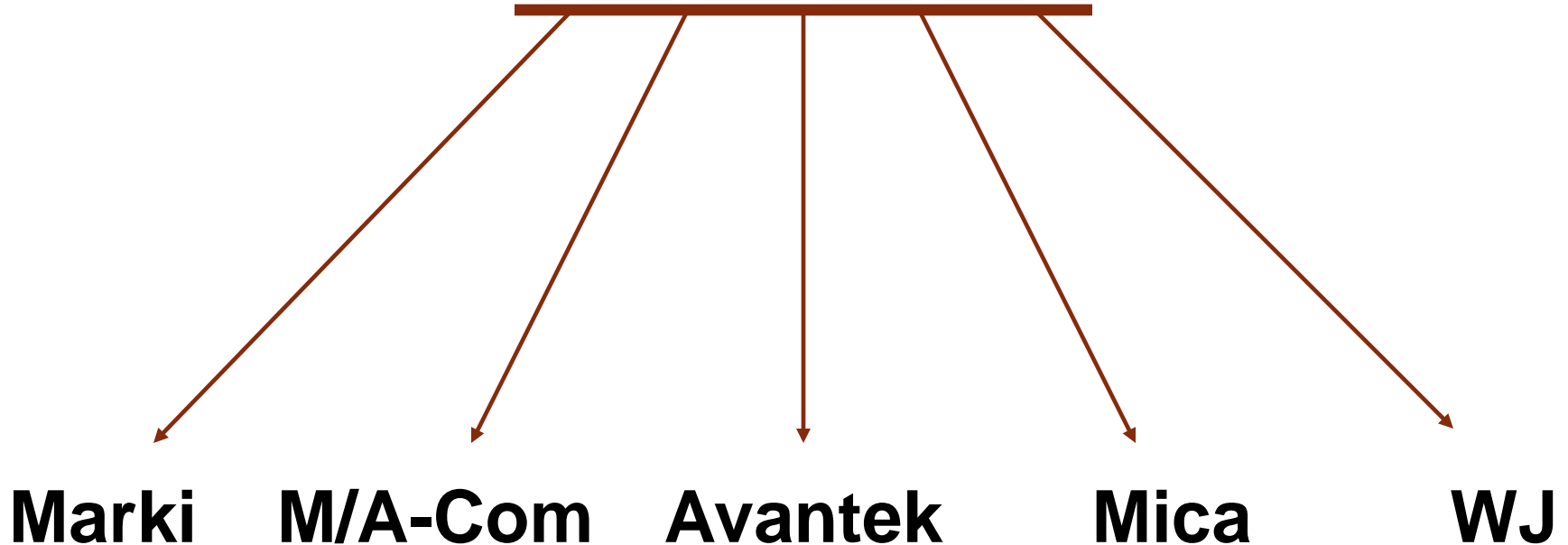
Automated Laser Sealing

Unlike other mixer companies, Spectrum Microwave routinely laser welds its mixers for **improved hermeticity and environmental integrity**



Replacement Options

We offer **drop-in-replacements** to many old, obsolete or hard-to-get components from other manufacturers.



We incorporate the latest design software in all our processes and procedures.

Design Tools:

- Ansoft Designer
- Agilent Eagleware Genesys Suite
- Orcad
- Cadence Allegro
- SolidWorks
- AutoCAD
- P-Spice
- Sonnet Professional EM Simulator



Quality & Reliability Programs

ISO 9001:2000 Quality Operating System

- **MIL-PRF-38534 Product Screening and qualification capability**
 - Device screening and groups A, B, C, and D qualification (when required by order)
 - Environment testing per MIL-STD-883 test methods
- **Other specifications guidelines**
 - J-STD-001 Class 3 and IPC-A-610, for eutectic attach and general soldering processes
 - IPC-7711 and IPC-7721, for rework and authorized repair operations
- **Quality assurance programs**
 - Calibration recall program for test and measurement equipment
 - Facility ESD program
 - Failure analysis and corrective action system
 - Internal ISO audit program
 - Operator training program

