

# Wector® RSR14-100

## RSR SERIES HIGH-FREQUENCY MICROWAVE ABSORBING MATERIALS

Developed by Wave-Vector New Materials, the RSR14-100 microwave absorbing material adopts innovative silicone-based substrate technology, combined with self-developed soft magnetic particles and special additives to form an elastomer absorbing material with high loss characteristics.

Designed for an operating frequency range of 12 GHz to 18 GHz, it meets extensive requirements for noise/sidelobe suppression and resonance elimination in communications, millimeter-wave radar and other applications.

### Product Features & Advantages

- **Ultra-thin Design:** The ultra-thin thickness of the RSR14-100 series provides space-efficient solutions for modern electronic devices.
- **Excellent Flexibility:** Enables adaptation to various complex surfaces and shapes for easy installation and application.
- **High-loss Performance:** Outstanding electromagnetic wave suppression and absorption effectively reduce signal interference.
- **Electrical Insulation & Safety:** Ensures safe and stable performance during service.
- **High-temperature Resistance & Low Volatility:** Maintains performance under extreme environments to extend service life.
- **Halogen-free & Eco-friendly:** Compliant with EU RoHS, REACH and other regulatory requirements.

### Typical Applications

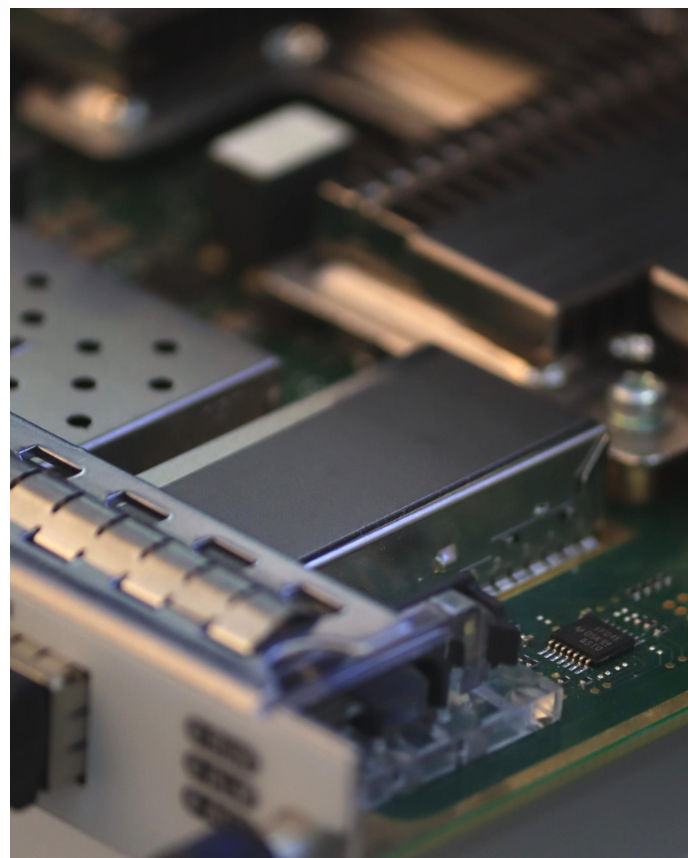
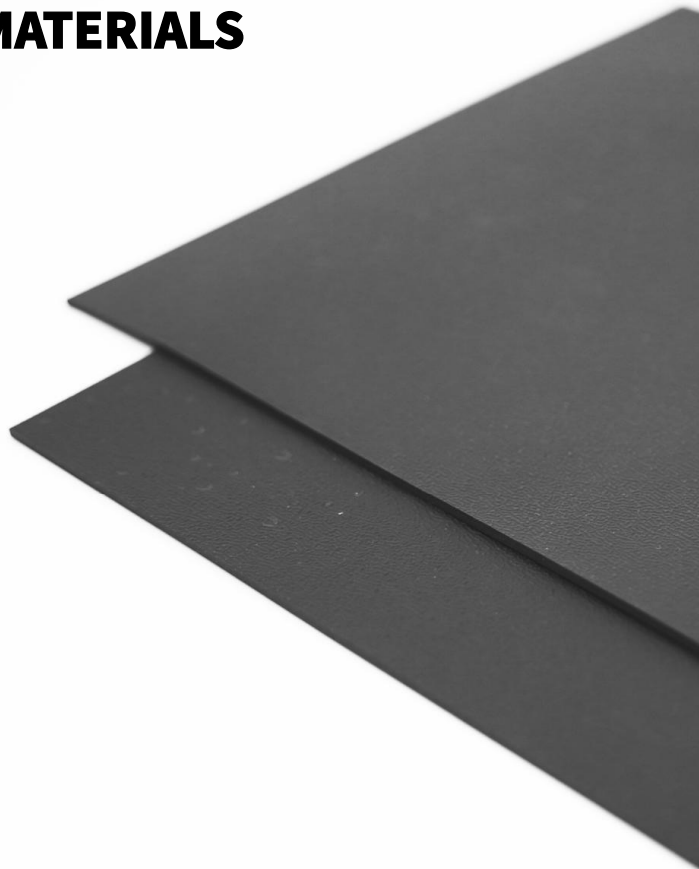
- **Free-space Reflection Reduction:** When applied to metal surfaces, RSR14-100 significantly attenuates electromagnetic wave reflections caused by metal objects or structures, optimizing electromagnetic environments and improving signal transmission quality.
- **Cavity Resonance Suppression:** Attached inside conductive cavities, it effectively suppresses resonance induced by higher-order harmonics to ensure stable circuit operation under various working conditions.
- **Surface Traveling-wave Reduction:** Delivers high-efficiency absorption of surface traveling waves propagating along transmission lines, equivalent transmission lines or conductor surfaces, reducing signal loss and enhancing transmission efficiency.

### Transportation & Storage

- Store in a well-ventilated, cool and dry area away from open flames. Storage temperature: 24–27 °C; relative humidity: 40–60%.
- Non-toxic product, stored and transported as non-hazardous goods.

### Product Specifications

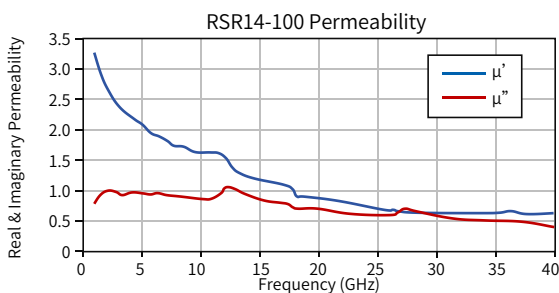
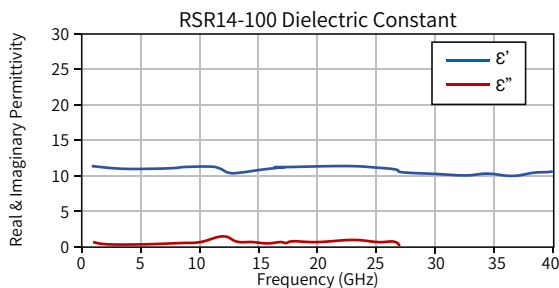
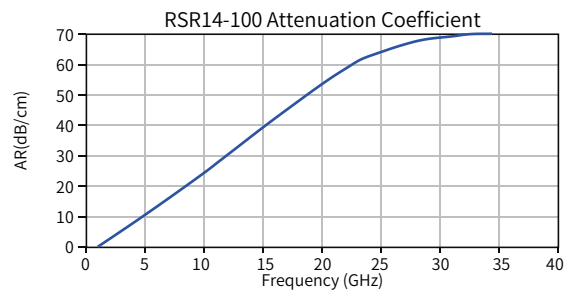
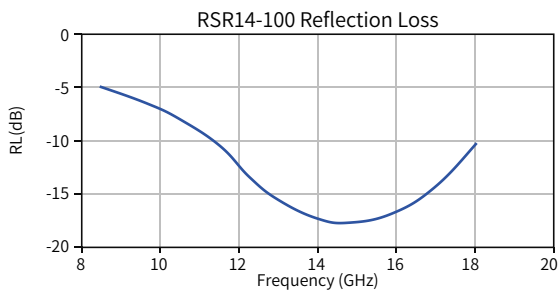
- Standard dimension: 300 mm × 300 mm
- Die-cut shapes customizable per customer requirements



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| Item                        | Unit               | Testing Standard | Parameter       |
|-----------------------------|--------------------|------------------|-----------------|
| Operating frequency         | GHz                | GJB2038A         | 12-18GHz        |
| Appearance                  | /                  | Visual           | Grey            |
| Thickness                   | mm                 | Thickness Gauge  | 1.0             |
| Hardness                    | Shore A            | ASTM D2240       | 70              |
| Density                     | g.cm <sup>-3</sup> | ASTM D 297       | 3.4             |
| Volume resistance           | Ω.cm               | ASTM D257        | 10 <sup>9</sup> |
| Tensile strength            | MPa                | ASTM D412        | ≥3              |
| Elongation at break         | %                  | ASTM D412        | ≥80             |
| Flame retardancy            | /                  | UL94             | V0              |
| Volatility (TML)            | %                  | ASTM E595-07     | <0.5            |
| Volatility (CVCM)           | %                  | ASTM E595-07     | <0.1            |
| Operating temperature range | °C                 | Internal testing | -40~170         |



### Selection Guide

#### RSR 14 - 100 00N - 300

- ① ② ③ ④ ⑤

- ① RSR: Silicone rubber absorbing material;
- ② Center frequency: 14=14GHz;
- ③ Thickness: 100=1mm;
- ④ Adhesive: 00N=No adhesive, 01P=0.01 film;
- ⑤ Width: 150=150mm, 300=300mm.