

8 to 12GHz Waveguide Circulator

Industry Applications

- Radar Systems
- RF Test & Measurement
- Satellite Communication Equipment
- Electronic Warfare & Defense
- RF Test & Measurement
- Microwave Radio & Point-to-Point Links
- ISM & Industrial
- Full Customization Available (Band, Logo, Part Number, RF Power, Cavity Size)



Product Description

8 to 12GHz Waveguide Circulator is a passive RF component enabling one-way signal flow in a waveguide topology, offering high isolation and power handling to protect high-power transmitters within 8–12GHz.

- High-performance waveguide circulator operating across 8–12GHz (X-band) for high-power microwave unidirectional signal transmission.
- Utilizes microwave non-reciprocal principle to block reverse signal reflection and protect power amplifier and transceiver modules.
- Precision waveguide matching delivers low insertion loss, high isolation and stable electrical performance under high-power conditions.
- Robust waveguide structure with standard flange interfaces (e.g., WR-90), easy to integrate into radar, satellite and high-power communication systems.

RF Characteristics

Name	Unit	Performance Data
Frequency Range	GHz	8-12
Insertion loss	dB max	0.5
Isolation	dB min	18
VSWR	max	1.3
Average power	W	100
Connection method		WR90(BJ100)
Operating Temperature Range	°C	-40 ~ +85°C
Outline Drawing	mm	48*53*42mm

Quality Standards

- Standardized Production: Manufactured strictly in accordance with international RF microwave component specifications and industry unified quality standards.
- Full-item Parameter Testing: All core indicators including frequency band, VSWR, interface size and electrical performance are strictly calibrated and tested before delivery.
- Qualified Surface Treatment Process: Internal chromate conversion and external anti-corrosion paint processes meet industrial standards, guaranteeing long-term stable electrical performance and structural durability.
- Strict Environmental Reliability Test: Finished products pass high and low temperature cycling tests to verify extreme environment adaptability.
- Batch Quality Stability: 100% full-performance inspection for all finished products, meeting commercial, industrial and military-grade equipment matching requirements
- We provide a 12-month warranty for all products.

Mechanical Drawing

Unit: mm, General part tolerance is $\pm 2\%/0.02\text{mm}$ unless otherwise stated.

