High Precision Passive Components

(Attenuators, Couplers, Isolators, Filters, Adapters)

At a Glance

We provide high precision, high power passive waveguide components up to 500 GHz. Covering sizes from WR-22 down to WR-2.2, our portfolio focuses on fixed attenuators and directional couplers designed for millimeter-wave accuracy.

Our lineup features high-performance filtering solutions, including band-pass filters (26.5–330 GHz) and diplexers. We also offer compact Faraday isolators (50–220 GHz) to ensure essential source protection and signal isolation.

To complete your setup, we supply waveguide-to-coaxial adapters (up to 0.6mm connectors) and rugged hardware sections. With customizable attenuation and coupling values available, these components enable rapid integration for test benches and systems.

Fixed Attenuator Modules

Full Frequency Coverage

- Frequency up to 500 GHz
- Waveguide sizes WR-22 to WR-2.2
- Consistent performance across bands

Versatile Attenuation Options

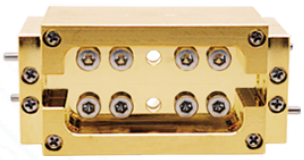
- Standard values: 3, 6, 10, 20, 30, 40 dB
- Comprehensive options for signal control
- Wide range of standard values available

High Power Handling

- Designed for high power applications
- Robust mechanical construction
- Suitable for test and measurement setups

Customization Available

- Values can be customized as requested
- Tailored to specific rejection requirements
- Optimized for system integration



Part Number	Band	Frequency (GHz)	Attenuation Value (dB)	Power (W)	Waveguide
FATXX-19HPV	U	40–60	3/6/10/20/30/40	10	WR-19
FATXX-15HPV	V	50–75	3/6/10/20/30/40	10	WR-15
FATXX-12HPV	E	60–90	3/6/10/20/30/40	10	WR-12
FATXX-10HPV	W	75–110	3/6/10/20/30/40	10	WR-10
FATXX-08HPV	F	90–140	3/6/10/20/30/40	5	WR-08
FATXX-06HPV	D	90–140	3/6/10/20/30/40	2	WR-06
FATXX-05HPV	G	140–220	3/6/10/20/30	1	WR-05
FATXX-04HPV	H	170–260	3/6/10/20/30	0.5	WR-04
FATXX-03HPV	J	220–330	6/10/20/30	0.2	WR-03
FATXX-2.8HPV	-	260–400	10/20	0.1	WR-2.8
FATXX-2.2HPV	-	330–500	10/20	0.1	WR-2.2

Directional Couplers

Full Frequency Coverage

- 40 GHz to 500 GHz
- WR-19 down to WR-2.2
- All standard waveguide bands

High Power Handling

- Up to 10 W in lower bands
- High-power test and measurement ready
- Robust waveguide construction

Versatile Coupling Options

- Standard values: 3/6/10/20/30/40 dB
- Dual-directional: 10/16/20/26/30 dB
- Single and dual port monitoring

Customization Available

- Coupling values on request
- Directional and dual-directional options
- Rapid system integration

Directional Couplers

Part Number	Band	Frequency (GHz)	Coupling Value (dB)	Power (W)	Waveguide
CXX-19A	U	40–60	3/6/10/20/30/40	10	WR-19
CXX-15A	V	50–75	3/6/10/20/30/40	10	WR-15
CXX-12A	E	60–90	3/6/10/20/30/40	10	WR-12
CXX-10A	W	75–110	3/6/10/20/30/40	10	WR-10
CXX-08A	F	90–140	3/6/10/20/30/40	5	WR-08
CXX-06A	D	90–140	3/6/10/20/30/40	2	WR-06
CXX-05A	G	140–220	3/6/10/20/30	1	WR-05
CXX-04A	H	170–260	3/6/10/20/30	0.5	WR-04
CXX-03A	J	220–330	6/10/20/30	0.2	WR-03
CXX-2.8V	-	260–400	10/20	0.1	WR-2.8
CXX-2.2V	-	330–500	10/20	0.1	WR-2.2

Dual-Directional Couplers

Part Number	Band	Frequency (GHz)	Coupling Value (dB)	Power (W)	Waveguide
DCXXS-15V	V	50–75	10/16/20/26/30	10	WR-15
DCXXS-12V	E	60–90	10/16/20/26/30	10	WR-12
DCXXS-10V	W	75–110	10/16/20/26/30	10	WR-10
DCXXS-08V	F	90–140	10/16/20/26/30	5	WR-08
DCXXS-06A	D	90–140	10/16/20/26/30	2	WR-06
DCXXS-05V	G	140–220	10/16/20/26/30	1	WR-05
DCXXS-04A	H	170–260	10/16/20	0.5	WR-04
DCXX-03A	J	220–330	10/16	0.2	WR-03

Waveguide Filter

Wide Frequency Range

- Band-pass filters from 26.5 to 330 GHz
- Custom frequency bands on request
- Covers Ka through J waveguide bands

Multiple Filter Types

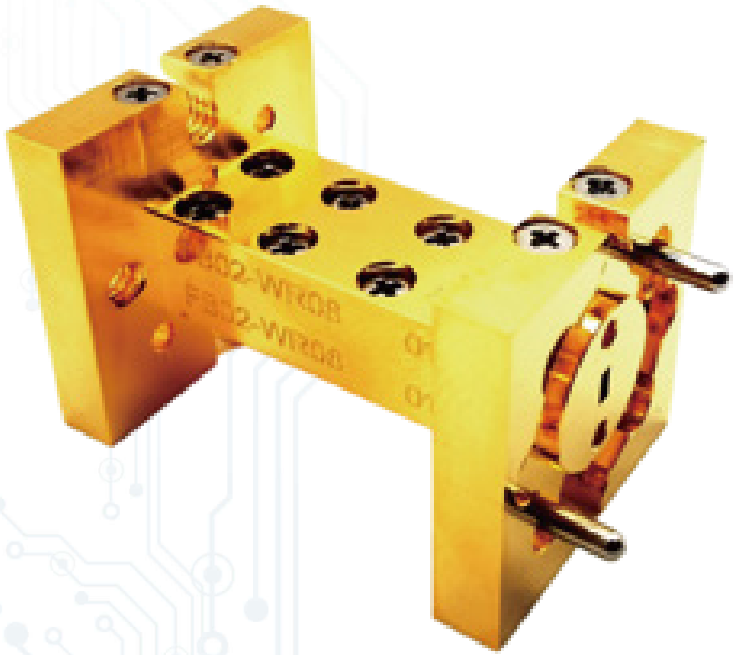
- BPF, LPF, HPF and BSF available
- Diplexer configurations supported
- Flexible passband and stopband design

High Performance

- Low insertion loss across the passband
- Sharp out-of-band rejection
- Designed for mmWave test systems

Customization Available

- Custom center frequency and bandwidth
- Custom rejection and ripple on request
- Rapid turnaround for system integration



Compact Faraday Isolator

Compact Form Factor

- Standard waveguide package design
- Covers V to G bands (50–220 GHz)
- Consistent interface across bands

Essential Source Protection

- Prevents reflections reaching the source
- Reduces oscillation and frequency pulling
- Protects mmWave sources and amplifiers

Low Insertion Loss

- As low as –1.0 dB in V, E and W bands
- Minimal signal chain impact
- Optimized for front-end integration

High Isolation Performance

- Unidirectional via Faraday rotation
- Stable isolation across full bandwidth
- Suitable for test and system deployment

Part Number	Band	Frequency (GHz)	Insertion (dB)	Power (W)	Waveguide
ISO-15C1	V	50–75	–1.0	1.0	WR-15
ISO-12C1	E	60–90	–1.0	1.0	WR-12
ISO-10C1	W	75–110	–1.0	1.0	WR-10
ISO-08C1	F	90–140	–1.5	0.5	WR-08
ISO-06C1	D	110–170	–2.0	0.5	WR-06
ISO-05C1	G	140–220	–3.0	0.1	WR-05

Waveguide Section to 500GHz

Full Coverage to 500 GHz

- WR-22 down to WR-2.2
- All standard mmWave bands covered
- Standard flange interfaces

Multiple Section Types

- RSW and SSW straight sections
- WT taper between waveguide sizes
- TW twist and HB/EB bend available

Rugged Construction

- Gold-plated brass, low loss
- Precision machined flanges
- Built for repeated mating cycles

Flexible Routing

- H/E-plane bends for layout flexibility
- Twist for polarization rotation
- Taper for multi-band chain assembly

Waveguide to Coaxial Adapter

Wide Waveguide Coverage

- WR-28 down to WR-06
- Coaxial connectors to 0.6 mm
- Covers U through D bands

Multiple Connector Options

- WR-19 to 1.85 mm
- WR-15 to 1.85/1.0 mm
- WR-12 to 1.0/1.35/1.85 mm
- WR-10/08 to 1.0/0.8 mm
- WR-06 to 0.8/0.6 mm

Flexible Launch Configurations

- End launch and right-angle available
- Consistent impedance matching
- Low VSWR across full bandwidth

Customization Available

- Custom waveguide/connector pairs
- Tailored to system interface needs
- Rapid test bench integration

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Specifications subject to change without notice. Per AS/NZS standards.