

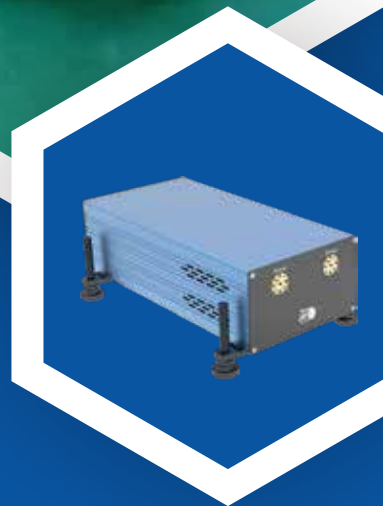


WAVEGUIDE HIGHLIGHT PRODUCTS



上海鳌太电子科技有限公司
Shanghai AT Microwave Limited

2025



01 LNA Modules

AT Microwave provides LNA modules to 340GHz, with both low and high gain option. All modules are easy to use with single power supply.

- Full Waveguide Band
- Low NF
- Low/High Option
- Single Power Supply

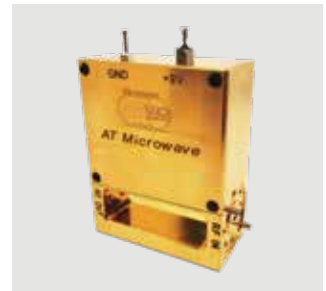


Part Number	Band	Frequency /GHz	Gain /dB	NF /dB	Waveguide
AT-LNA-3350-XX28	Q	33-50	23/38	2.8	WR-22
AT-LNA-4060-1803	U	40-60	18	3.0	WR-19
AT-LNA-4060-3803	U	40-60	38	3.0	WR-19
AT-LNA-5075-1825	V	50-75	18	2.5	WR-15
AT-LNA-5075-3825	V	50-75	38	2.5	WR-15
AT-LNA-6090-1805	E	60-90	18	5.0	WR-12
AT-LNA-6090-3805	E	60-90	38	5.0	WR-12
AT-LNA-75110-1804	W	75-110	18	4.0	WR-10
AT-LNA-75110-4204	W	75-110	42	4.0	WR-10
AT-LNA-90140-1605	F	90-140	16	5.0	WR-08
AT-LNA-110170-1806	D	110-170	18	6.0	WR-06
AT-LNA-110170-3306	D	110-170	33	6.0	WR-06
AT-LNA-140220LG	G	140-220	15	6.0	WR-05
AT-LNA-210260-1508	H	210-260	15	8.0	WR-4.3
AT-LNA-220270-1508	J	220-270	15	8.0	WR-3.4
★ AT-LNA-325G1(New)	-	310-340	15	10	WR-2.8

02 PA Modules

AT Microwave provides power amplifier modules to 260GHz.
Heatsink and bench-top option are available according to request.

- Full Waveguide Band
- Low/High Option
- High Pout
- Single Power Supply



Part Number	Band	Frequency /GHz	Gain /dB	Psat /dBm	Waveguide
AT-PA-4060-XX20	U	40-60	18/38	+20	WR-19
AT-PA-4060-3032	U	40-60	30	+32	WR-19
AT-PA-4060-3034	U	40-60	30	+34	WR-19
AT-PA-5075-XX20	V	50-75	18/38	+20	WR-15
AT-PA-5075-XX31	V	50-75	20/38	+31	WR-15
AT-PA-6090-XX18	E	60-90	18/35	+18	WR-12
AT-PA-6090-3027	E	60-90	30	+27	WR-12
AT-PA-75110-1513	W	75-110	15	+13	WR-10
AT-PA-75110-XX20	W	75-110	16/30	+20	WR-10
AT-PA-75110-2729	W	75-110	27	+29	WR-10
★ AT-PA-90140-1310(New)	F	90-140	13	+10	WR-08
★ AT-PA-90140-XX20(New)	F	90-140	15/28	+20	WR-08
AT-PA-110170-2018	D	110-170	20	+18	WR-06
AT-PA-126142-3320	D	126-142	33	+20	WR-06
AT-PA-195220-1810	H	195-220	18	+10	WR-04
★ AT-PA-170260-1608(New)	H	170-260	16	+8	WR-04

03 Active Frequency Multiplier

AT Microwave provide frequency multipliers to 500GHz, with waveguide to WR-2.2. Customers can have lots of COTS options from our website. If you still need some special spec, just call us. We can customized all kinds of frequency multipliers for you.

- Full Waveguide Band
- X4 to X24 Multiplier Factors
- Low/High Pout
- Customized Available

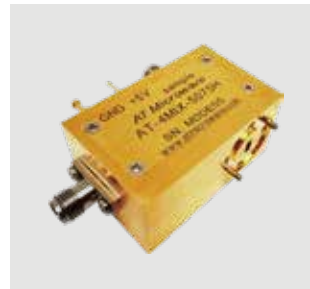


Part Number	Band	Multiplier Factor	Frequency /GHz	Psat /dBm	Waveguide
AT-AM4-3350-23L	Q	X4/X6	33-50	+23	WR-22
AT-AM4-4060-18	U	X2/X4	40-60	+18	WR-19
AT-AM4-5075-15L	V	X4	50-75	+15	WR-15
AT-AM6-5075-15L	V	X6	50-75	+15	WR-15
AT-AM6-6090-17L	E	X4/X6/X8	60-90	+12 to +22	WR-12
AT-AM6-5590-20L	E	X6	55-90	+20	WR-12
AT-AM6-75110-13L	W	X4/X6/X8	75-110	+13 to +20	WR-10
AT-AM6-70110-20L	W	X6	70-110	+20	WR-10
AT-AM8-90140L	F	X4/X8	90-140	0 to +23	WR-08
★ AT-AM8-85140E-10L(New)	F	X8	85-140	+10	WR-08
★ AT-AM8-85140-18L(New)	F	X8	85-140	+18	WR-08
AT-AM12-110170L	D	X6/X8/X12	110-170	0	WR-06
AT-AM12-110170-18L	D	X6/X8/X12	110-170	+18	WR-06
AT-AM12-140220DP	G	X12/X24	140-220	+5	WR-05
AT-AM18-170260DP	H	X18	170-260	+5	WR-4.3
AT-AM18-220330DP	J	X18	220-330	+3	WR-3.4

04 Compact Tx/Rx Module

AT Microwave provides single function mixer and IQ Mixers. We also provide converter modules integrated with LO Chain by compact size.

- Full Waveguide Band
- Integrated with LO Chain
- Both Tx/Rx application
- Customized Available



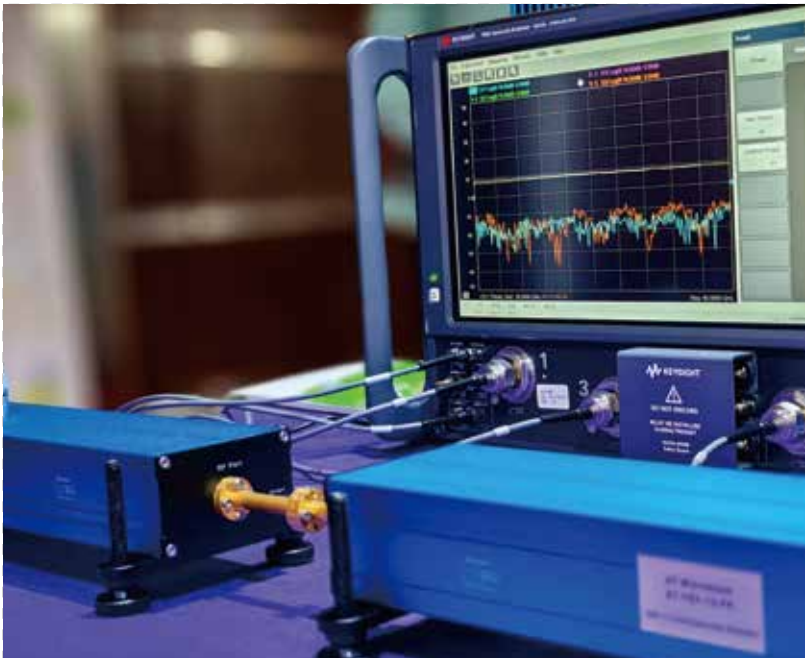
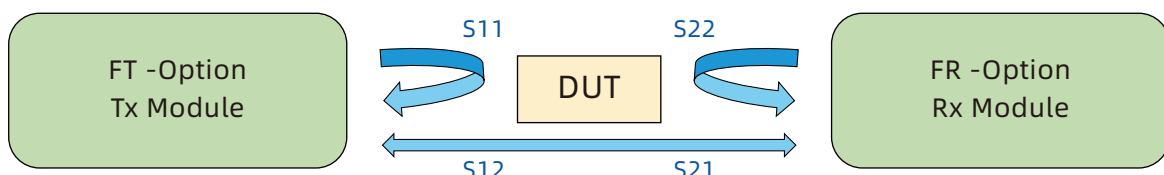
	Part Number	Band	Multiplier	Frequency /GHz	CL /dB	Waveguide
	AT-4MIX-3350L	Q	X4	33-50	-10	WR-22
	AT-4MIX-4060L	U	X4	40-60	-10	WR-19
	AT-4MIX-5075H	V	X4/X6	50-75	-10	WR-15
	AT-4MIX-4580L	V	X4/X6	45-80	-10	WR-15
	AT-6MIX-6090L	E	X/4X6	60-90	-10	WR-12
	AT-6MIX-7186L	E	X6	71-86	-10	WR-12
	AT-6MIX-75110L	W	X4/X6	75-110	-10	WR-10
	AT-8MIX-75110L	W	X8	75-110	-10	WR-10
★	AT-8MIX-90140BN(New)	F	X8	90-140	-12	WR-08
	AT-8MIX-110170D1	D	X8	110-170	-12	WR-06
★	AT-12MIX-110170BN(New)	D	X12	110-170	-12	WR-06
	AT-16MIX-190240D1	H	X16	190-240	-13	WR-4.3
★	AT-16MIX-170260D1(New)	H	X16	170-260	-13	WR-4.3
	AT-12MIX-220300D1	J	X12	220-300	-15	WR-3.4
	AT-24MIX-220300D1	J	X24	220-300	-15	WR-3.4
★	AT-24MIX-260400D1(New)	-	X24	260-400	-20	WR-2.8
★	AT-36MIX-330500D1(New)	-	X36	330-500	-20	WR-2.2

05 VNA Extenders

AT Microwave provides VNA frequency extension modules from 40-500GHz. Support with most of the Main VNA on the market.

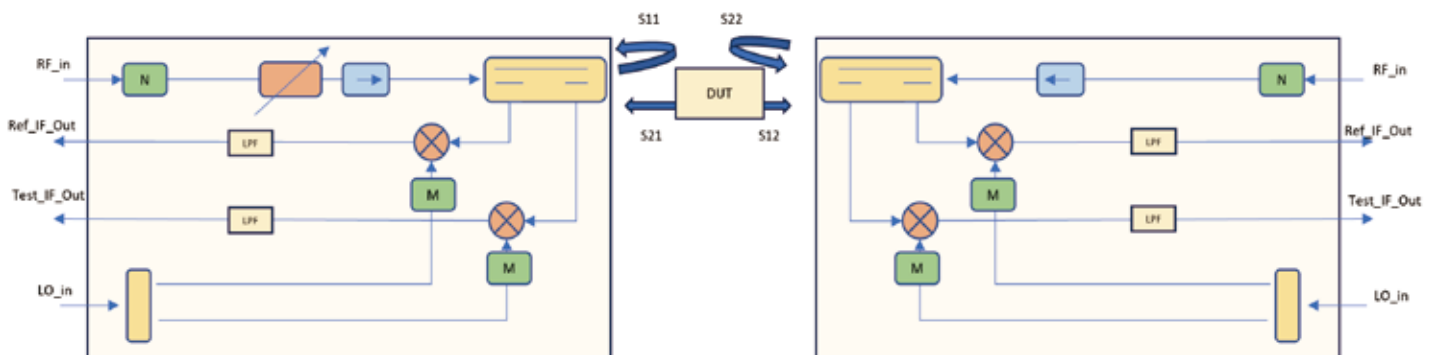
- FTFR option is for Full Two Port test;
- FTSR option is for Through-Reflect Test;
- STSR option is for through test only.

FTFR –Option: Full Two-Port



Frequency:

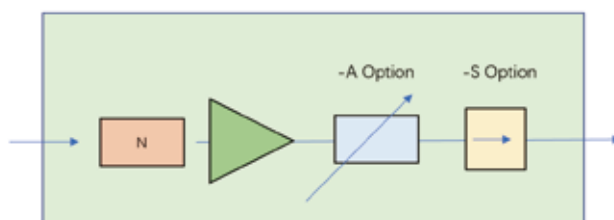
- U-Band: 40-60GHz
- V-Band: 50-75GHz
- E-Band: 60-90GHz
- W-Band: 75-110GHz
- F-Band: 90-140GHz
- D-Band: 110-170GHz
- G-Band: 140-220GHz
- H-Band: 170-260GHz
- J-Band: 220-330GHz
- WR-2.8: 260-400GHz
- WR-2.2: 330-500GHz



06 TEST EQUIPMENT to 500GHz

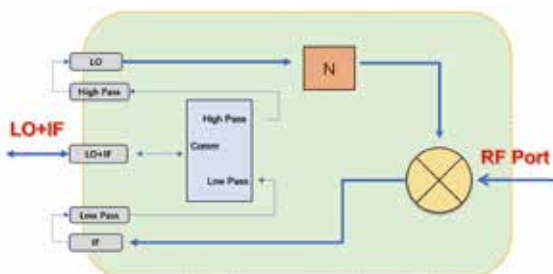
SGX: Signal Generator Extender

AT Microwave provides Signal Generator Extension from 40-330GHz. Level Setting Attenuator(-A option) and Isolator (-S option) can be integrated to improve test function.



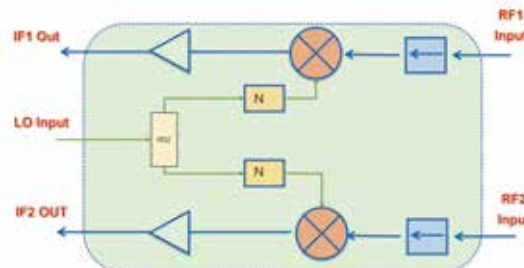
SAX: Spectrum Analyzer Extender

Besides spectrum analyzer application, this module can also be used as general up-converter and down-converter.



Up/Down Converter

AT Microwave provides up and down converters to 330GHz. Dual down-converter can be available according to request.



07 Fixed Attenuators-High Precision

AT Microwave provides high precision and high power fixed waveguide attenuators to 500GHz, with popular attenuation value 3/6/10/20/30.40dB. Other values can be customized as request.

- Frequency to 500GHz
- WR-22 to WR-2.2
- Attenuation 3/6/10/20/30/40dB
- Customized available
- High Precision, High Power



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

08 Directional Couplers



- Frequency to 500GHz
- WR-22 to WR-2.2
- Coupling Value 3/6/10/20/30/40dB
- Customized available
- High Precision, High Power

Directional Couplers

Part Number	Band	Frequency /GHz	Coupling Value/dB	Power /W	Waveguide
AT-CXX-19A	U	40-60	3/6/10/20/30/40	10	WR-19
AT-CXX-15A	V	50-75	3/6/10/20/30/40	10	WR-15
AT-CXX-12A	E	60-90	3/6/10/20/30/40	10	WR-12
AT-CXX-10A	W	75-110	3/6/10/20/30/40	10	WR-10
AT-CXX-08A	F	90-140	3/6/10/20/30/40	5	WR-08
AT-CXX-06A	D	90-140	3/6/10/20/30/40	2	WR-06
AT-CXX-05A	G	140-220	3/6/10/20/30	1	WR-05
AT-CXX-04A	H	170-260	3/6/10/20/30	0.5	WR-04
AT-CXX-03A	J	220-330	6/10/20/30	0.2	WR-03
AT-CXX-2.8V	-	260-400	10/20	0.1	WR-2.8
AT-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
AT-DCXXS-15V	V	50-75	10/16/20/26/30	10	WR-15
AT-DCXXS-12V	E	60-90	10/16/20/26/30	10	WR-12
AT-DCXXS-10V	W	75-110	10/16/20/26/30	10	WR-10
AT-DCXXS-08V	F	90-140	10/16/20/26/30	5	WR-08
AT-DCXXS-06A	D	90-140	10/16/20/26/30	2	WR-06
AT-DCXXS-05V	G	140-220	10/16/20/26/30	1	WR-05
AT-DCXXS-04A	H	170-260	10/16/20	0.5	WR-04
AT-DCXX-03A	J	220-330	10/16	0.2	WR-03

09 Waveguide Filter

AT Microwave offers high performance band waveguide band-pass filter from 26.5-330GHz. Other frequency bands and rejection requirement can provide according to request.



- BPF: Band-Pass Filter
- LPF: Low-Pass Filter
- HPF: High-Pass Filter
- BSF: Band-stop/Notch Filter
- Diplexer

✓ In stock for same day shipment

10 Compact Faraday Isolator

AT Microwave provides compact faraday isolators from 50-220GHz, covering V to G bands.



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

11 Waveguide Section to 500GHz

- RSW: Rugged Straight Waveguide
- SSW: Standard Straight Waveguide
- WT: Waveguide Taper Transition
- TW: Twist Waveguide
- HB/EB: H/E-Plane Bend



12 Waveguide to Coaxial Adapter

AT Microwave provides many kinds of waveguide to coaxial adapter, with waveguide from WR-28 to WR-06 and coaxial connector to 0.6mm. Both end launch and right angel adapters are available according to request.

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



ADVANTAGES

We specialize in the development and production of cutting-edge millimeter-wave and terahertz products, with a frequency range covering DC to 500 GHz. Our products stand out in the market due to the following key advantages:

HIGH FREQUENCY

Our products operate at extremely high frequencies, up to 500 GHz, enabling advanced applications in communication, imaging, and sensing technologies.

HIGH PERFORMANCE

Designed with precision and innovation, our products deliver exceptional performance, ensuring reliability and accuracy in all kinds of demanding environments. All products are 100% RF test before shipment.

COTS AND STOCK

We have thousands of COTS (Commercial off-the-Shelf) for customers to choose, and most of them are well-stocked, allowing us to offer quick turnaround times and meet the urgent needs of our customers.

CUSTOMIZED AVAILABLE

We have produced thousands of mmWave and THz modules with good experience, so we can easily customize according to customers request without MOQ requirement.



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