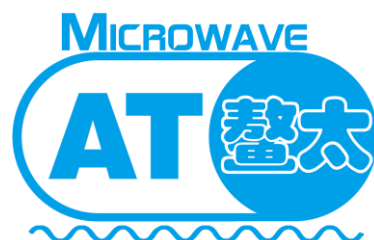




上海鳌太电子科技有限公司
Shanghai AT Microwave Limited



Waveguide
Highlight Products
2024



1. LNA Modules

AT Microwave provides LNA modules to 270GHz, with both low and high gain option. All modules are easy to use with single power supply.



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

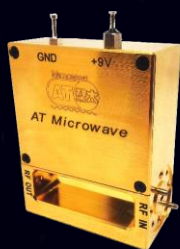
PN	Band	Frequency /GHz	Gain /dB	NF /dB	Waveguide
AT-LNA-4060-1803	U	40-60	18	3.0	WR-19
AT-LNA-4060-3803	U	40-60	38	3.0	WR-19
AT-LNA-5075-1825	V	50-75	18	2.5	WR-15
AT-LNA-5075-3825	V	50-75	38	2.5	WR-15
AT-LNA-6090-1805	E	60-90	18	5.0	WR-12
AT-LNA-6090-3805	E	60-90	38	5.0	WR-12
AT-LNA-75110-1804	W	75-110	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-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 (note)	J	310-340	18	10	WR-2.8

Note: Coming soon.



2. PA Modules

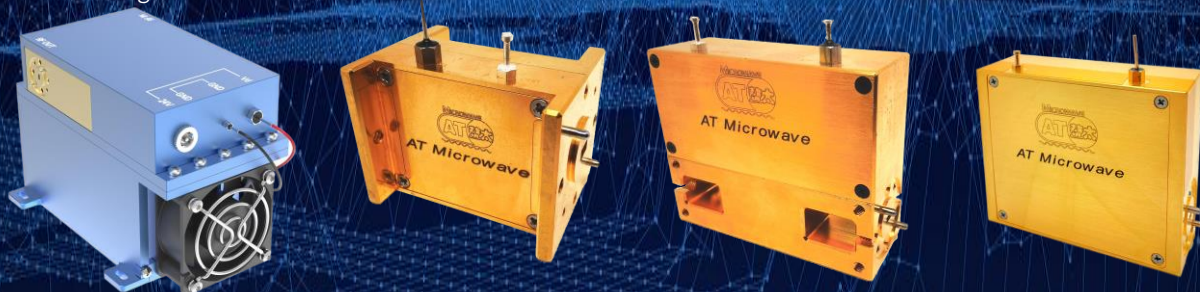
AT Microwave provides power amplifier modules to 280GHz.
Heatsink and bench-top option are available according to request.



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

PN	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	+22	WR-10
AT-PA-75110-2729	W	75-110	27	+29	WR-10
AT-PA-85135-1823	F	85-135	18	+23	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-185220-1515	G	185-220	15	+15	WR-05
AT-PA-195220-1810	G	195-220	18	+10	WR-4.3
AT-PA-180260-1810(note)	H	180-260	18	+10	WR-4.3
AT-PA-180280-1810(note)	H	180-280	18	+10	WR-3.4

Note: Coming soon.



3. Active Frequency Multiplier

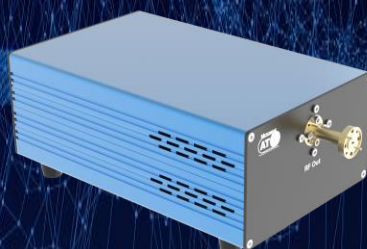
AT Microwave provide frequency multipliers to 400GHz, with waveguide to WR-2.8. Customers can have lots of COTS options from our website.

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

PN	Band	Multiplier Factor	Frequency /GHz	Psat /dBm	Waveguide
AT-AM4-4060-15	U	X2/X4	40-60	+15	WR-19
AT-AM4-5075L-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-AM12-110170L	D	X6/X8/X12	110-170	0 to +18	WR-06
AT-AM12-140220LM	G	X12/X24	140-220	+5	WR-05
AT-AM18-170260	H	X18	170-260	+5	WR-4.3
AT-AM18-220330	J	X18	220-330	+3	WR-3.4



4. Compact Tx/Rx Module

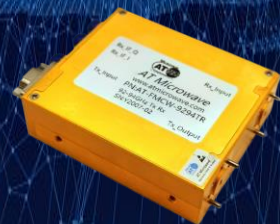
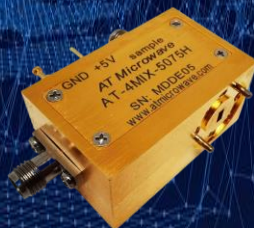
AT Microwave provides single function mixer and IQ Mixers.

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

PN	Band	Multiplier	Frequency /GHz	CL /dB	Waveguide
AT-4MIX-4060L	U	X4	40-60	-10	WR-19
AT-4MIX-5075H	V	X4	50-75	-10	WR-15
AT-4MIX-5075L	V	X4	45-80	-10	WR-15
AT-6MIX-6090L	E	X6	60-90	-10	WR-12
AT-6MIX-7186L	E	X6	71-86	-12	WR-12
AT-6MIX-75110TL	W	X6	75-110	-12	WR-10
AT-8MIX-75110L	W	X8	75-110	-12	WR-10
AT-8MIX-86100SIF	W	X8	86-100	-13	WR-10
AT-8MIX-90140D1	F	X8	90-140	-15	WR-08
AT-8MIX-110170D1	D	X8	110-170	-15	WR-06
AT-12MIX-110170D1	D	X12	110-170	-15	WR-06
AT-16MIX-190240D1	H	X16	190-240	-15	WR-4.3
AT-SHM-170260D	H	X2	170-260	-15	WR-4.3
AT-12MIX-220310D1	J	12	220-310	-15	WR-3.4
AT-24MIX-220310D1	J	12	220-310	-15	WR-3.4
AT-SHM-220330D	J	X2	220-330	-15	WR-3.4

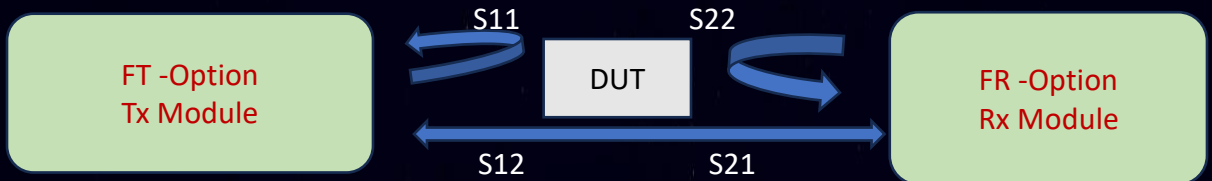


5. VNA Extenders

AT Microwave provides VNA frequency extension modules from 40-330GHz.

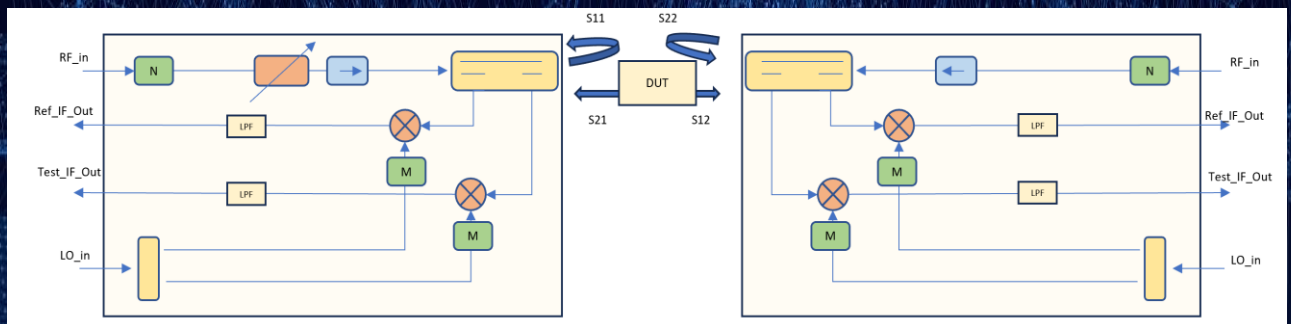
- FTFR option is for Full Two Port test;
- FTSR option is for Through-Reflect Test
- STSR option is for through test only.

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

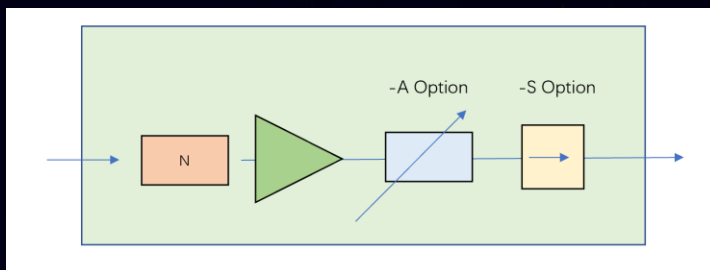


6. TEST EQUIPMENT to 330GHz

SGX: Signal Generator Extender

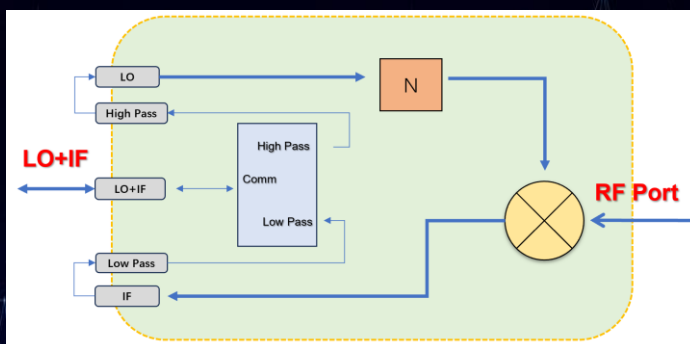
AT Microwave provides Signal Generator Extension from 40-330GHz.

Level Setting Attenuator(-A option) and Isolator (-S option) can be integrated to improve test function.



SAX: Spectrum Analyzer Extender

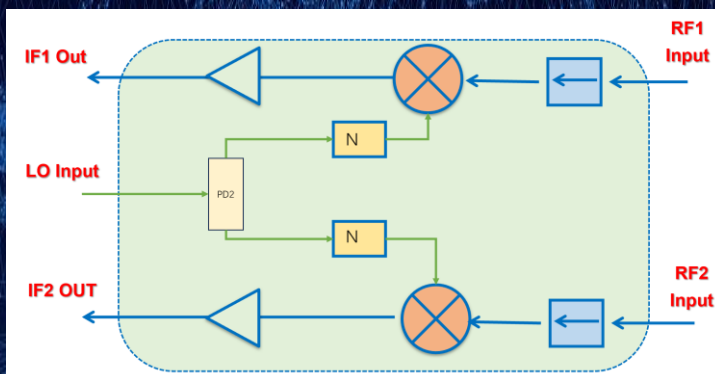
Besides spectrum analyzer application, this module can also be used as general up-converter and down-converter.



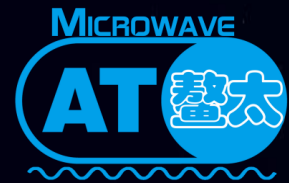
Up/Down Converters

AT Microwave provides up and down converters to 330GHz.

Dual down-converter can be available according to request.



7. Passive Products



Waveguide Filters to 300GHz



- ✓ BPF: Band-Pass Filter
- ✓ LPF: Low-Pass Filter
- ✓ HPF: High-Pass Filter
- ✓ BSF: Band-stop Filter

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



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