S19MS-L Series
WR19 Frequency Extension Modules
40 to 60 GHz

DESCRIPTION

The S19MS Series will expand your existing microwave Signal Generator capabilities to conduct measurements in WR-19 (40-60 GHz). These frequency extension modules easily connect to the output of a signal generator providing a high performance source for DUT characterization activities. Characterize the DUT with the confidence that it will produce accurate results with superior performance of output power, spurious and harmonics. Specialized part numbers are available to avoid using an external power supply.

HIGHLIGHTS

- Modular design
- Output Power of +5 dBm
- Microwave synthesizer determines frequency accuracy and resolution
- Phase noise adheres to 20 log (n) degradation
- Adjustable Height Control
- Optional power supply configuration for PSG
- Full continuous waveguide band coverage

APPLICATIONS

- Maximum power with close proximity connections
- Ample power for most test conditions
- Precise setting of mm-wave frequencies
- Spectral purity enables phase noise measurements
- Convenient connections to DUT on test benches
- Simplify setup by using synthesizer as power supply
- Flexibility to handle multiple applications
- Environmentally friendly

ELECTRICAL AND PERFORMANCE SPECIFICATIONS (+25°C)

After a 0.5 hour warm-up period, the S19MS-L module will satisfy the following specifications.

Electrical Characteristics[1]	MIN	TYP	MAX
System Operating Frequency	40	--	60
RF out (dBm) typ.	+1	+5	+10
Higher order output harmonics (dBc) typ.[2]	--	< -20	--
In-Band Spurious (dBc) typ.[3]	--	≤ -20	--
RF in VSWR	--	≤ 2.0	--
RF out VSWR	--	≤ 1.7	--
Manual Adjustable Attenuator [4] (db)	25		
Operating Temperature Range	+20° C	+25° C	+30° C
Storage Temperature (°C)	0		+50°C
Relative Humidity Operating	45-80% (non-condensing)		
Altitude Operating (ft [m])	<10,000 [3048]		

Module Characteristics[1]	Description
Test Port, System Output Interface[5]	WR-19
RF System Input	SMA(f)
RF Input Frequency	13.3 to 20.0 GHz
RF Input Power	+10 dBm ± 1.5 dB
RF Input Damage Level	+20 dBm
RF Multiply Factor	X3
DC (+12 VDC) Power Requirements	0.5 A, typ.
Size (L x W x H)[6]	
S19MS-L	4.41" x 4.25" x 2.71" (112.0 mm x 108.0 mm x 68.7 mm)
S19MS-AL	6.49" x 4.25" x 2.93" (164.8 mm x 108.0 mm x 74.4 mm)
Weight	
S19MS-L	≤ 1.5 lbs (.7 kg)
S19MS-AL	≤ 2 lbs (.9 kg)

[1] Specifications are typical and subject to change without notice
[2] As relates to the desired output frequencies. Applicable only with Keysight PSG & 8360 series synthesizers and Anritsu MG36xx, 68xxx/69xxx & 67xx series synthesizers.

OML Inc.
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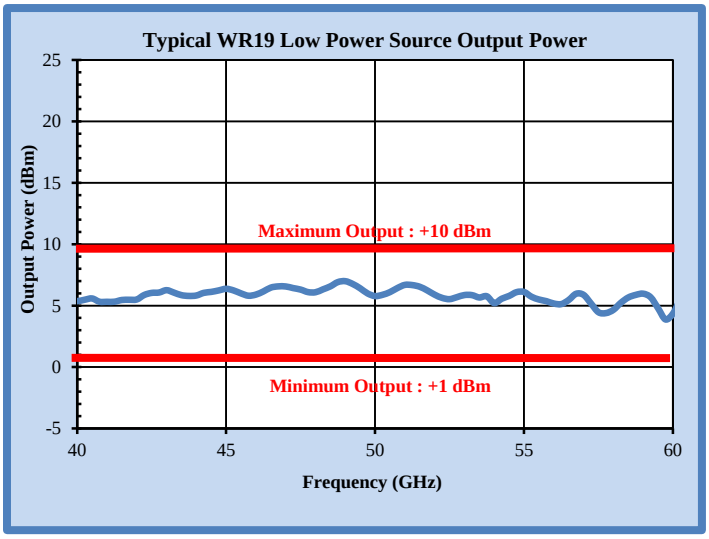
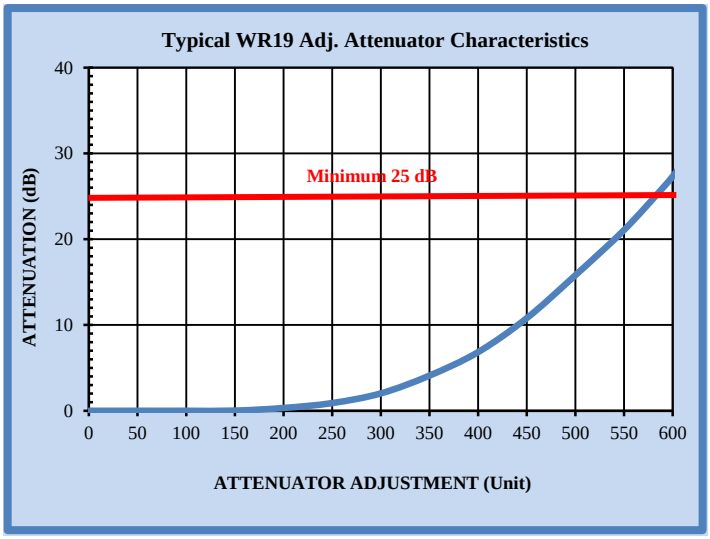
[3] In-band mixing products. Typically ≤-15 dBc in the lower 10% of the waveguide band. Applicable only with Keysight PSG & 8360 series synthesizers and Anritsu MG36xx, 68xxx/69xxx & 67xx series synthesizers.
[4] In-band mixing products. Typically ≤-15 dBc in the lower 10% of the waveguide band. Applicable only with Keysight PSG & 8360 series synthesizers and Anritsu MG36xx, 68xxx/69xxx & 67xx series synthesizers.
[5] Test Port Flange Configuration is compatible with MIL-DTL-3922/67D (UG387/U-M)
[6] Height excludes the adjustable rubber feet length and depth dimension excludes the output waveguide length

TYPICAL PERFORMANCE

The following typical performance is possible with the S19MS-L Series modules.





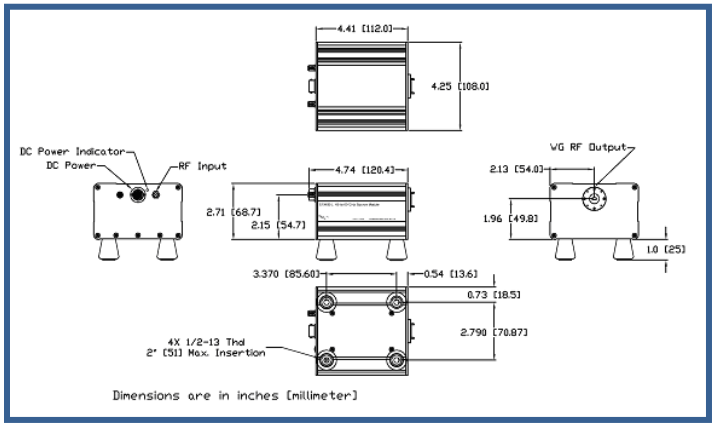
ORDER INFORMATION

Model	Description
S19MS-L	WR-19 Source Module Accessories: DC power cable, Dual Banana Plug to 7 Pin Circular Bayonet Plug (V00DCBC1)
Option	
S19MS-AL	WR-19 Source Module, Adds 0 to 25 dB Manual Adjustable Attenuation to the RF Path. Accessories: DC power cable (V00DCDC2), RF Cable SMA (m/m) (V00LOIF)

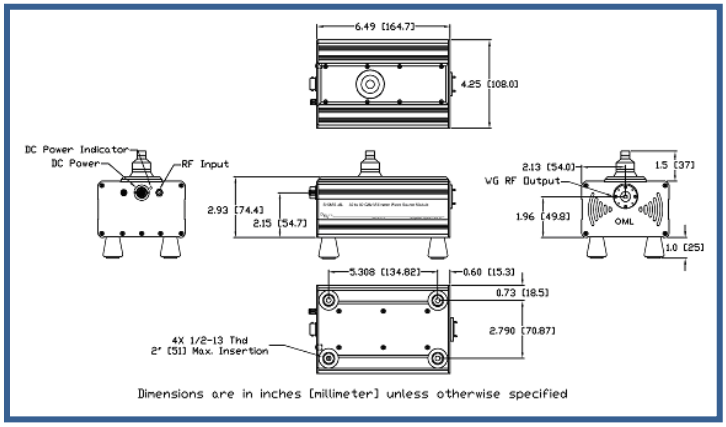
[1] Contact Factory for Mechanical Dimensions

MECHANICAL DIMENSIONS (If necessary, contact OML for more detailed drawings)

S19MS-L



S19MS-AL



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