



M12MPS Series
WR12 Frequency Extension Module
60 to 90 GHz

WR15 WR12 WR10 WR08 WR06 WR05 WR03 WR02.2

DESCRIPTION

The S12MPS Series will expand your existing microwave Signal Generator capabilities to conduct measurements in WR-12 (60-90 GHz) frequency range. This frequency extension module is designed for portability and field applications and is well suited for lab environments. It connects to the output of your signal generator so you have a high performance source for your DUT characterization activities. Characterize your DUT with the confidence that the superior performance in terms of output power, spurious, and harmonics will produce accurate results.



HIGHLIGHTS

- Modular design
- High Output Power of >+5 dBm
- Microwave synthesizer determines frequency accuracy and resolution
- Phase noise adheres to 20 log (n) degradation
- Key sight FieldFox “Direct-Connect” configuration
- USB 2.0 Power supply configuration
- Full continuous waveguide band coverage
- RoHS compliant

APPLICATIONS

- Portable field 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 S12MPS module will satisfy the following specifications.

Electrical Characteristics ¹	MIN	TYP	MAX
System Operating Frequency	60	--	90
RF out (dBm) typ.	0	5	13
Higher order output harmonics (dBc) typ. ²	--	-15	--
In-Band Spurious (dBc) typ. ³	--	-15	--
RF in VSWR (nominal)	--	1.5:1	--
RF out VSWR (nominal)	--	3.0:1	--
Operating Temperature Range	+20° C	+25° C	+30° C
Storage Temperature Range	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 ⁴	WR-12
RF System Input	SMA(f)
RF Input Frequency	10.0 to 15.0 GHz
RF Input Power	0 dBm ± 1.5 dB
RF Input Damage Level	+20 dBm
RF Multiply Factor	x6
DC (+12 VDC) Power Requirements	<0.5 A, typ.
Size (L x W x H) ⁵	2.12”x3.72”x1.64” (53.8 mm x94.5 mm x 41.7 mm)
Weight	≤ 10 oz (283 g)

¹ Specifications are typical and subject to change without notice

² As relates to the desired output frequencies

³ In-band mixing products. Typically ≤-15 dBc in the lower 10% of the waveguide band.

⁴ Test Port Flange Configuration is compatible with MIL-DTL-3922/67E (UG387/U-M)

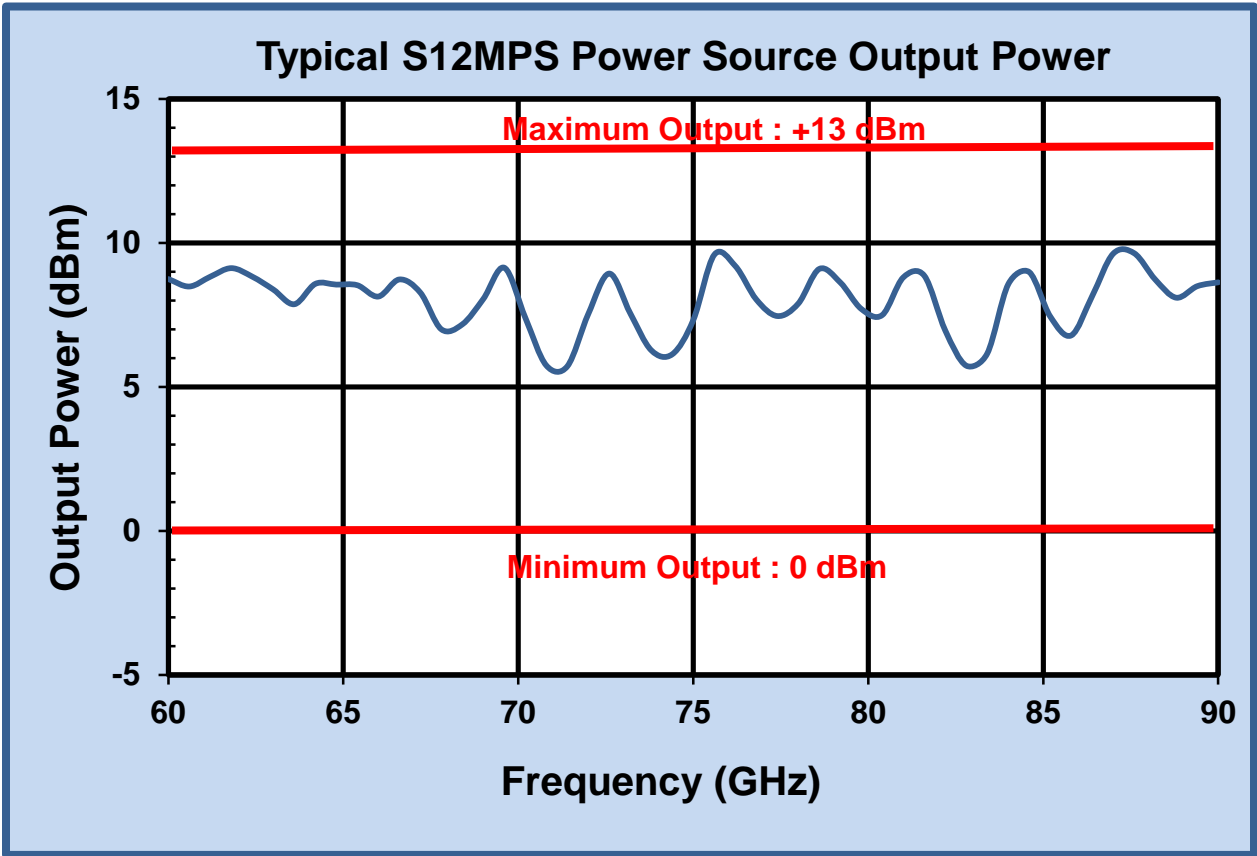
⁵ Height excludes the adjustable rubber feet length and depth dimension excludes the output waveguide length





TYPICAL PERFORMANCE

The following typical performance is possible with the S12MPS Series modules.



ORDER INFORMATION

Model	Description
S12MPS ¹	WR-12 Multiplier Signal Generator Module 60 to 90 GHz with DC Bias Cable & Carrying Case
Options	
S12MPS-100 ²	WR-12 Multiplier Signal Generator Module with 2 ea. N(m)/SMA(m) Adapter
S12MPS-100 ³	WR-12 Multiplier Signal Generator Module with 2 ea. SMA(m/f) Adapter
S12MPS-100 ⁴	WR-12 Multiplier Signal Generator Module with 2 ea. SMA(m) to 2.4mm(f) Adapter
Accessories	
V00DCUSBS1	DC Bias Cable, USB(m) to 90° SMB(f), 12” Lg
M00NMSM	Adapter, Type-N(m) to SMA(m)
M00SMSF	Adapter, SMA(m) to SMA(f)
M00Sm2.4F	Adapter, SMA(m) to 2.4mm(f)
M12RH	Horn Antenna, WR-12
MC2151	Carrying Case, Micro Converter, Clear

¹ Base model includes a DC bias cable (V00DCUSBS1) & Carrying Case (MC2151)

² Add accessories for “direct connect” between OML module & FieldFox with Type N(f) Test Ports

³ Add accessories for “direct connect” between OML module & FieldFox with 3.5 mm(m) Test Ports

⁴ Add accessories for “direct connect” between OML module & FieldFox with NMD 2.4 mm(m) Test Port



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

