VDI Mini Spectrum Analyzer Extension Module Specifications

Product Name	WR28SAX-M	WR19SAX-M	WR15SAX-M	WR12SAX-M	WR10SAX-M	WR8.0SAX-M	WR6.5SAX-M	WR5.1SAX-M
RF Frequency Band (GHz)	26-40	40-60	50-75	60-90	75-110	90-140	110-170	140-220
RF Flange (UG-387/U-M)	WR-28	WR-19	WR-15	WR-12	WR-10	WR-8.0	WR-6.5	WR-5.1
Multiplication Factor (Low / High)†	4 / 2	8 / 2	12 / 6	12 / 6	12 / 6	12 / 6	24 / 6	24 / 6
Low Frequency LO Input (GHz)	6.5-10	5-7.5	4.17-6.25	5-7.5	6.25-9.17	7.5-11.67	4.58-7.08	5.83-9.17
High Frequency LO Input (GHz)	13-20	20-30	8.33-12.5	10-15	12.5-18.33	15-23.33	18.33-28.33	23.33-36.67
RF Power Limits: Compression / Damage (dBm)	-4 / 6	-10 / 0	-10 / 0	-10 / 0	-10 / 0	-10 / 0	-10 / 0	-10 / 0
Intrinsic Mixer SSB Conversion Loss (Typical) (dB)‡	9	9	9	10	10	10	10	11
Maximum Available IF Bandwidth (GHz)*	4	6	7.5	9	11	14	17	22
Displayed Average Noise Level (dBm/Hz)**	-150	-150	-150	-150	-150	-150	-150	-150

Product Name	WR4.3SAX-M	WR3.4SAX-M	WR2.8SAX-M	WR2.2SAX-M	WR1.5SAX-M	WR1.0SAX-M	WR0.65SAX-M	
RF Frequency Band (GHz)	170-260	220-330	260-400	330-500	500-750	750-1100	1100-1500	
RF Flange (UG-387/U-M)	WR-4.3	WR-3.4	WR-2.8	WR-2.2	WR-1.5	WR-1.0	WR-0.65	
Multiplication Factor (Low / High)†	24 / 12	48 / 12	48 / 12	72 / 18	72 / 18	144 / 36	108 / 36	
Low Frequency LO Input (GHz)	7.08-10.83	4.58-6.88	5.42-8.33	4.58-6.94	6.94-10.42	5.21-7.64	10.19-13.89	
High Frequency LO Input (GHz)	14.17-21.67	18.33-27.5	21.67-33.33	18.33-27.78	27.78-41.67	20.83-30.56	30.56-41.67	
RF Power Limits: Compression / Damage (dBm)	-10 / 0	-10 / 0	-10 / 0	-20 / -10	-20 / -10	-20 / -10	-20 / -10	
Intrinsic Mixer SSB Conversion Loss (Typical) (dB)‡	11	12	13	13	18	25	33	
Maximum Available IF Bandwidth (GHz)*	26	40	40	40	40	40	40	
Displayed Average Noise Level (dBm/Hz)**	-150	-150	-150	-150	-150	-135	-135	

†See Figure 1 for dual LO input mode configuration.

‡Intrinsic Mixer conversion loss is measured before any IF amplification.

*For block-downconversion mode only. The maximum IF bandwidth is limited to 20 GHz when up-conversion option is added.

**Displayed Average Noise Level (DANL) measurements taken on Keysight PXA.

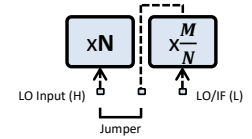

Figure 1: Block diagram of dual LO input mode is shown. M is the multiplication factor for Low Frequency Mode. N is the multiplication factor for High Frequency Mode.

SAX-M Options:

- IF Input Port for Block Up-Conversion
- Amplifiers and filters for use with up-conversion option
- External Micrometer Driven Variable Attenuator (~0-30dB)
- Output Horn Antenna for free space coupling
- Waveguide Test Port Extensions (1" and 2" available)

General Notes:

- VDI Fullband SAX-Ms include a single-volt DC Power Supply.
- Conversion loss is measured at IF of 400 MHz, loss increases at a rate of about 2dB/10GHz up to the specified maximum IF.
- WR28 to WR6.5 models include a ~100kHz-20 GHz IF amplifier. All other models include a ~100kHz-40 GHz IF amplifier.

Rev 20200519