VDI Standard Spectrum Analyzer Extension Module Specifications

Product Name	WR28SAX	WR19SAX	WR15SAX	WR12SAX	WR10SAX	WR8.0SAX	WR6.5SAX	WR5.1SAX
RF Frequency Band (GHz)	26-40	40-60	50-75	60-90	75-110	90-140	110-170	140-220
RF Flange††	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	WR3.4SAX	WR2.8SAX	WR2.2SAX	WR1.5SAX	WR1.0SAX	WR0.65SAX	
RF Frequency Band (GHz)	170-260	220-330	260-400	330-500	500-750	750-1100	1100-1500	
RF Flange††	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)†	36 / 6	48 / 12	48 / 12	48 / 12	72 / 18	144 / 36	108 / 54	
Low Frequency LO Input (GHz)†	4.72-7.22	4.58-6.88	5.42-8.33	6.88-10.42	6.94-10.42	5.21-7.64	10.19-13.89	
High Frequency LO Input (GHz)†	28.33-43.33	18.33-27.5	21.67-33.33	27.5-41.67	27.78-41.67	20.83-30.56	20.37-27.78	
RF Power Limits: Compression / Damage (dBm)	-10 / 0	-20 / -10	-10 / 0	-20 / -10	-20 / -10	-20 / -10	-20 / -10	
Intrinsic Mixer SSB Conversion Loss (Typical) (dB)‡	11	14	13	16	18	30	33	
Maximum Available IF Bandwidth (GHz)*	26	40	40	40	40	40	40	
Displayed Average Noise Level (dBm/Hz)**	-150	-150	-145	-150	-150	-135	-130	

†See Figure 1 for dual LO input mode configuration. Multiplication factors are always subject to change to provide optimal performance.

††All bands are UG-387/U-M with the exception of the WR28 and WR19 bands, which are UG-599/U-M.

‡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.

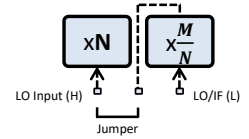

Figure 1: Block diagram of dual LO input mode is shown. M is the multiplication factor for Low Frequency Mode. N is the multiplication factor for High Frequency Mode.

SAX 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)
- High Sensitivity (For small signal levels the DANL can be enhanced by additional IF amplification. Contact VDI for more information)

General Notes:

- VDI Fullband SAXs include a single-volt DC Power Supply.
- Conversion loss is measured at IF of 322.5 MHz, loss increases at a rate of about 1.5dB/10GHz up to the specified maximum IF.
- WR15 to WR6.5 models include a ~100MHz-20 GHz IF amplifier. All other models include a ~50kHz-40 GHz IF amplifier.

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