VNAX-DS (Dual Source Option) Datasheet

Virginia Diodes' (VDI) Vector Network Analyzer Extension Modules (VNAXs) are used to extend the performance of modern vector network analyzers in the frequency range from 26 GHz through 1.5 THz, in frequency bands from WR28 (26-40 GHz) to WR0.65 (1,100-1,500 GHz). These modules combine high test port power and exceptional dynamic range to deliver industry leading performance.

Dual Source Option:

The Dual Source (DS) option for VDI VNAX modules adds a second source module and a directional coupler into the standard TxRx Module (see block diagram below). This enables two-tone measurements to allow users to characterize device linearity. VNAX-DS modules have slightly reduced test port power and dynamic range compared to standard VNAX modules. VNAX-DS modules conform to all other standard S-parameter performance specifications. Specifications listed below are specific for the DS option. For setup instructions or other information about our VNAX-DS Modules, please contact VDI. For more information on VDI VNAX Modules, please refer to VDI-707.1 (VNAX Product Manual).

Waveguide Band (GHz)	Frequency Band (GHz)		Dynamic Range (BW=10Hz,dB)		Test Port Power (dBm, typ.)	
	Standard	Extended*	Typical	Minimum	Source 1	Source 2
WR15	50-75	47-77	115	105	10	5
WR12	60-90	55-95	115	105	14	9
WR10	75-110	67-115	115	105	13	7
WR8.0	90-140	-	110	100	12	7
WR6.5	110-170	-	110	100	12 (est.)	7 (est.)
WR5.1	140-220	-	110	100	3 (est.)	-2 (est.)

*See VDI-707.1 (VNAX Product Manual) for Extended Band Performance.
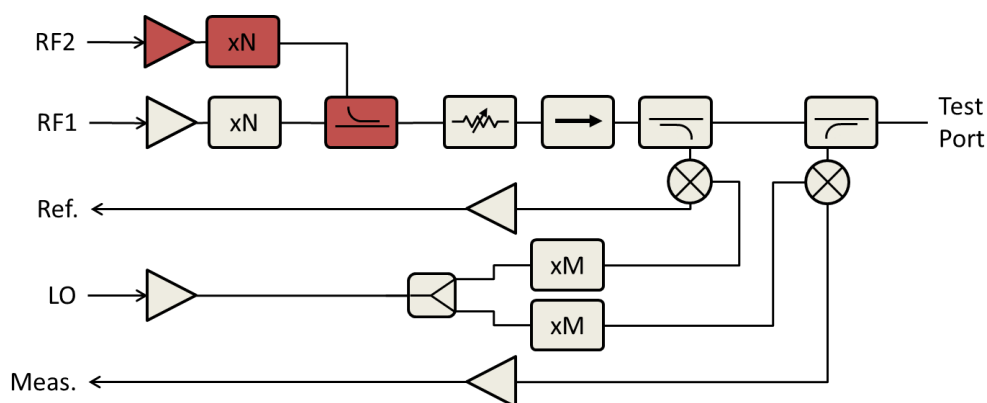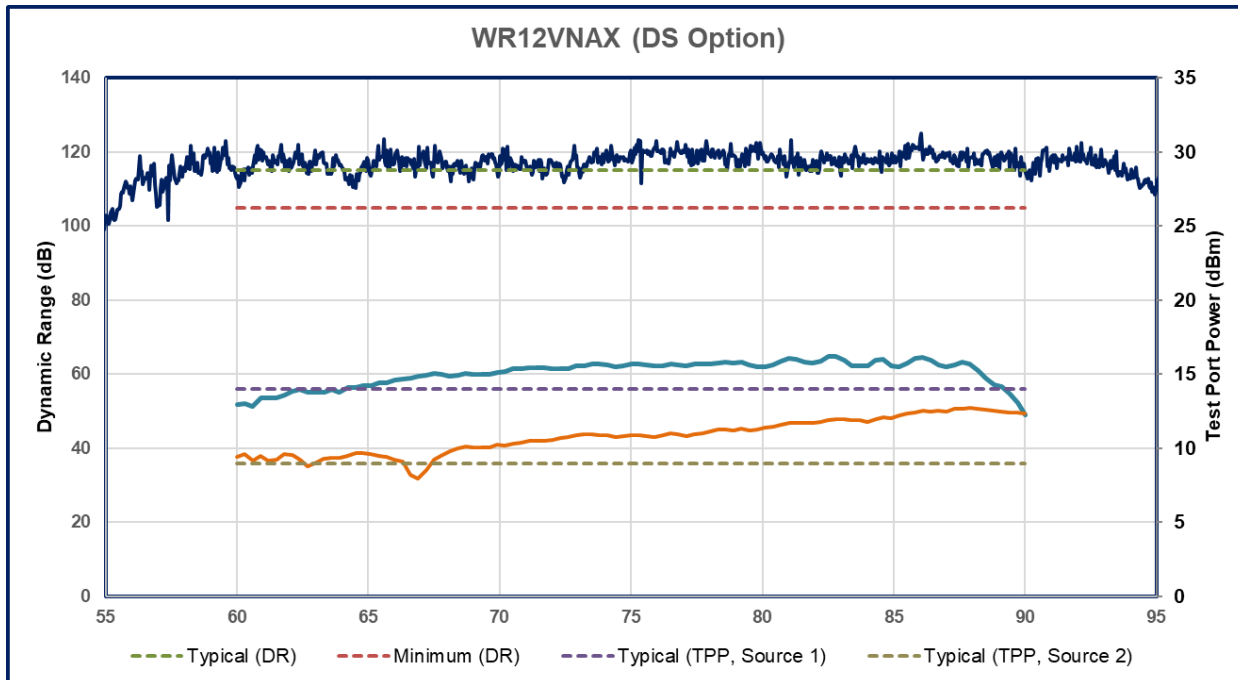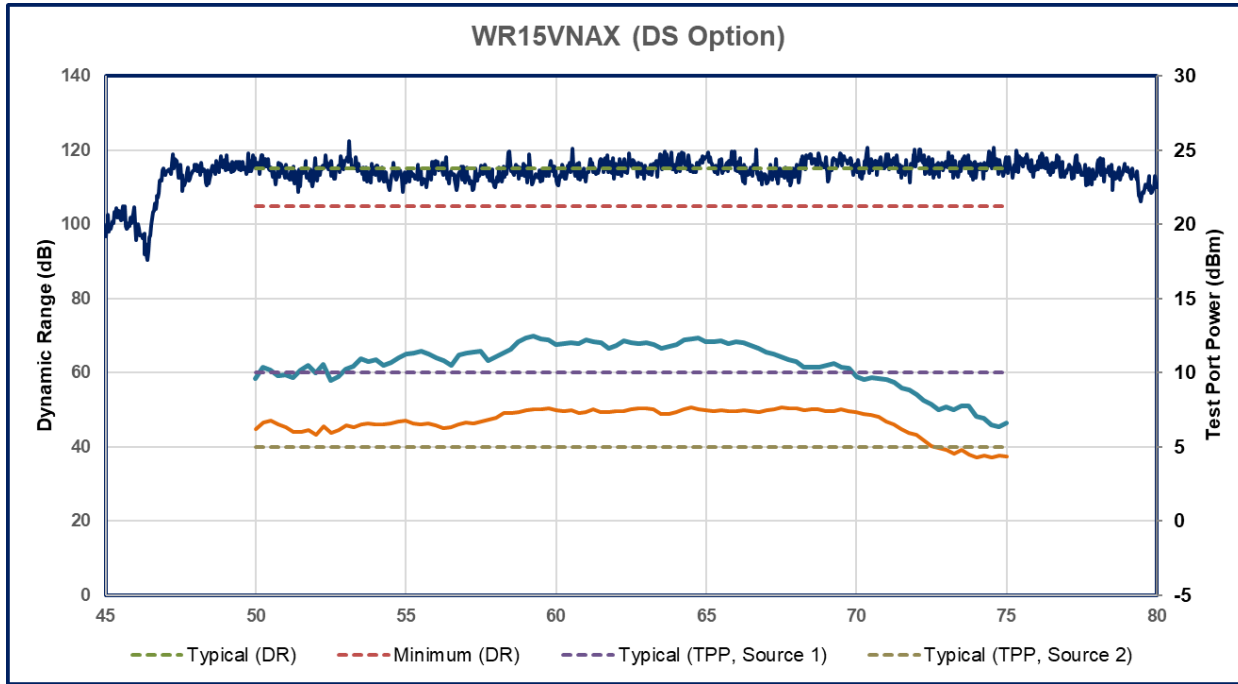

Figure 1: Simplified block diagram of the VNAX-DS module. Components in red are specific to the VNAX-DS module and not included in standard VNAX modules (without DS option).

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VNAX-DS Performance

WR15VNAX (DS Option)

Legend: Typical (DR) — Minimum (DR) — Typical (TPP, Source 1) — Typical (TPP, Source 2)

WR12VNAX (DS Option)

Legend: Typical (DR) — Minimum (DR) — Typical (TPP, Source 1) — Typical (TPP, Source 2)

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VNAX-DS Performance

WR10VNAX (DS Option)

WR8.0VNAX (DS Option)