Keysight Technologies
N5262BWxx and N5262BRxx

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Product Note

Safety Notices

CAUTION

A **CAUTION** notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a CAUTION notice until the indicated conditions are fully understood and met.

WARNING

A **WARNING** notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a WARNING notice until the indicated conditions are fully understood and met.

Keysight Technologies
N5262BWxx and N5262BRxx
Mini VNA Extension Modules

The Keysight VNA Mini Extension Transceiver Modules (Tx/Rx) and the Mini Receiver Modules (Rx) are manufactured by Virginia Diodes, Inc. (VDI). These modules may be used with the Keysight N5222/24/25/27A PNA or N5242/44/45/47A PNA-X, or the Keysight N5261/62A Controller to configure a banded millimeter-wave network analyzer system. Refer to the VDI User's Guide (VDI-707.1) included on the USB drive or at: http://vadiodes.com/images/products/VNA/VDI-707.1VNAxProductManual.pdf

For information on system solutions, refer to the Keysight technical document 5989-7620EN. For information on the controller, refer to N5261A and N5262A User's and Service Guide (N5262-90001) at: http://www.keysight.com.

Both TxRx and Rx modules are available with 1.2 or 5 meter cable sets. The TxRx modules are available with internal micrometer adjustable (0-30 dB) attenuators. The Rx modules are available with external attenuators for high sensitivity.

The cable set can be ordered with the module, or individually (N5262AKCBL).

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Figure 1

Cable Set

Transport Case

Power Supply

USB Drive

VDI Module

AC Power Cable
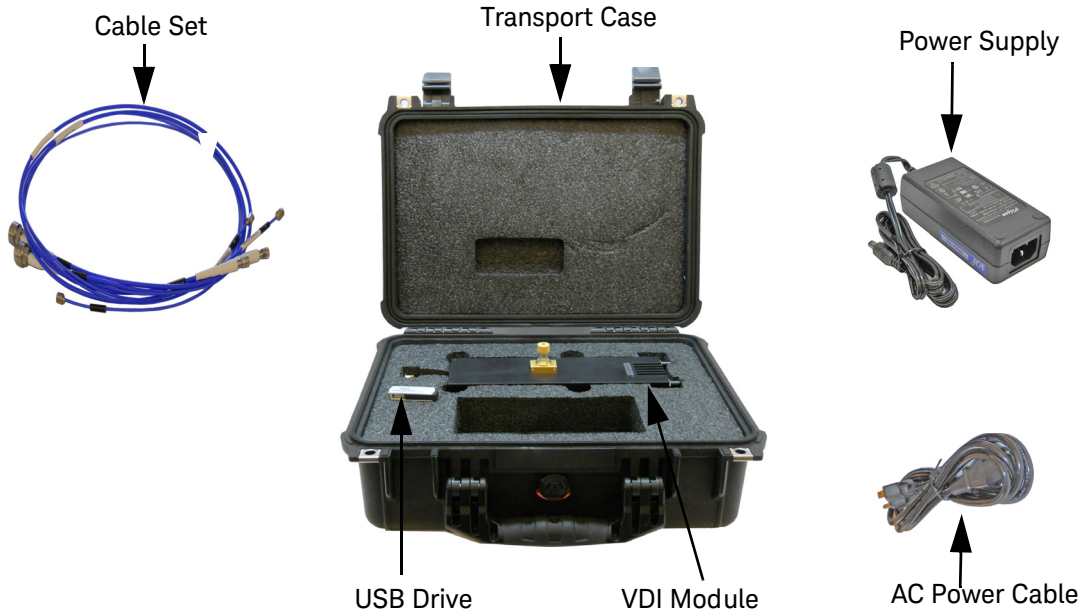
Inspect the shipping container. If the container or packing material is damaged, it should be kept until the contents of the shipment have been checked mechanically and electrically. If there is any physical damage, refer to "Contacting Keysight" on page 6. Keep the damaged shipping materials (if any) for inspection by the carrier and a Keysight Technologies representative.

NOTE	All Models include a 9 V power supply

NOTE	5 m modules can be used with 1.2 cable sets when power is reduced. Refer to VDI Users Guide recommendations.

NOTE	·Refer to Table 1 thru Table 4 (XXX) to identify VDI part number of cable set supplied with module: C40 - direct connect to PNA › 43.5 GHz C24 - direct connect to PNA › 26.5 GHz CTS - connect to controller Cable set is included when Option 201, 205, 401, 405, 501 or 505 is ordered, see Table 5 and Table 6. When Option NOC is ordered, no cable set is supplied, XXX will be blank

Table 1   TxRx Receiver Mini Modules (STD)

Waveguide Flange	Extended Frequency (GHz)	Keysight Model	VDI P/N (1.2 m Cable Set)	VDI P/N (5 m Cable Set)
WR15	47 to 77	N5262BW15-STD	VNAX-WR15TxRx-M-TST-XXX-1.2	VNAX-WR15TxRx-M-TST-XXX-5
WR12	55 to 95	N5262BW12-STD	VNAX-WR12TxRx-M-TST-XXX-1.2	VNAX-WR12TxRx-M-TST-XXX-5
WR10	67 to 115	N5262BW10-STD	VNAX-WR10TxRx-M-TST-XXX-1.2	VNAX-WR10TxRx-M-TST-XXX-5
WR8.0	90 to 140	N5262BW08-STD	VNAX-WR8.0TxRx-M-TST-XXX-1.2	VNAX-WR8.0TxRx-M-TST-XXX-5
WR6.5	110 to 170	N5262BW06-STD	VNAX-WR6.5TxRx-M-TST-XXX-1.2	VNAX-WR6.5TxRx-M-TST-XXX-5
WR5.1	140 to 220	N5262BW05-STD	VNAX-WR5.1TxRx-M-TST-XXX-1.2	VNAX-WR5.1TxRx-M-TST-XXX-5
WR3.4	220 to 330	N5262BW03-STD	VNAX-WR3.4TxRx-M-TST-XXX-1.2	VNAX-WR3.4TxRx-M-TST-XXX-5

Table 2   TxRx Receiver Mini Modules with Attenuators (001)

Waveguide Flange	Extended Frequency (GHz)	Keysight Model	VDI P/N (1.2 m Cable Set)	VDI P/N (5 m Cable Set)
WR15	47 to 77	N5262BW15-001	VNAX-WR15TxRx-M-TST-A-XXX-1.2	VNAX-WR15TxRx-M-TST-A-XXX-5
WR12	55 to 95	N5262BW12-001	VNAX-WR12TxRx-M-TST-A-XXX-1.2	VNAX-WR12TxRx-M-TST-A-XXX-5
WR10	67 to 115	N5262BW10-001	VNAX-WR10TxRx-M-TST-A-XXX-1.2	VNAX-WR10TxRx-M-TST-A-XXX-5
WR8.0	90 to 140	N5262BW08-001	VNAX-WR8.0TxRx-M-TST-A-XXX-1.2	VNAX-WR8.0TxRx-M-TST-A-XXX-5
WR6.5	110 to 170	N5262BW06-001	VNAX-WR6.5TxRx-M-TST-A-XXX-1.2	VNAX-WR6.5TxRx-M-TST-A-XXX-5
WR5.1	140 to 220	N5262BW05-001	VNAX-WR5.1TxRx-M-TST-A-XXX-1.2	VNAX-WR5.1TxRx-M-TST-A-XXX-5
WR3.4	220 to 330	N5262BW03-001	VNAX-WR3.4TxRx-M-TST-A-XXX-1.2	VNAX-WR3.4TxRx-M-TST-A-XXX-5

Table 3   Rx Receiver Mini Modules

Waveguide Flange	Extended Frequency (GHz)	Keysight Model	VDI P/N (1.2 m Cable Set)	VDI P/N (5 m Cable Set)
WR15	47 to 77	N5262BR15-STD	WR15Rx-M-TST-XXX-1.2	WR15Rx-M-TST-XXX-5
WR12	55 to 95	N5262BR12-STD	WR12Rx-M-TST-XXX-1.2	WR12Rx-M-TST-XXX-5
WR10	67 to 115	N5262BR10-STD	WR10Rx-M-TST-XXX-1.2	WR10Rx-M-TST-XXX-5
WR8.0	90 to 140	N5262BR08-STD	WR8.0Rx-M-TST-XXX-1.2	WR8.0Rx-M-TST-XXX-5
WR6.5	110 to 170	N5262BR06-STD	WR6.5Rx-M-TST-XXX-1.2	WR6.5Rx-M-TST-XXX-5
WR5.1	140 to 220	N5262BR05-STD	WR5.1Rx-M-TST-XXX-1.2	WR5.1Rx-M-TST-XXX-5
WR3.4	220 to 330	N5262BR03-STD	WR3.4Rx-M-TST-XXX-1.2	WR3.4Rx-M-TST-XXX-5

Table 4   Rx Receiver Mini Modules with High Sensitivity external Attenuators (001)

Waveguide Flange	Extended Frequency (GHz)	Keysight Model	VDI P/N (1.2 m Cable Set)	VDI P/N (5 m Cable Set)
WR15	47 to 77	N5262BR15-001	WR15Rx-M-HS-TST-XXX-1.2	WR15Rx-M-HS-TST-XXX-5
WR12	55 to 95	N5262BR12-001	WR12Rx-M-HS-TST-XXX-1.2	WR12Rx-M-HS-TST-XXX-5
WR10	67 to 115	N5262BR10-001	WR10Rx-M-HS-TST-XXX-1.2	WR10Rx-M-HS-TST-XXX-5
WR8.0	90 to 140	N5262BR08-001	WR8.0Rx-M-HS-TST-XXX-1.2	WR8.0Rx-M-HS-TST-XXX-5
WR6.5	110 to 170	N5262BR06-001	WR6.5Rx-M-HS-TST-XXX-1.2	WR6.5Rx-M-HS-TST-XXX-5
WR5.1	140 to 220	N5262BR05-001	WR5.1Rx-M-HS-TST-XXX-1.2	WR5.1Rx-M-HS-TST-XXX-5
WR3.4	220 to 330	N5262BR03-001	WR3.4Rx-M-HS-TST-XXX-1.2	WR3.4Rx-M-HS-TST-XXX-5

NOTE	If ordering a cable set separately, use model number to determine the appropriate set.

Table 5   Available TxRx Cable Sets

Keysight Cable Option[a]	VDI Part Number	Description
501	CS-TST-TxRx-1.2	1.2 m cable set for controller
505	CS-TST-TxRx-5	5 m cable set for controller
201	CS-24-TxRx-1.2	1.2 m cable set for 26.5 GHz PNA or PNA-X
205	CS-24-TxRx-5	5 m cable set for 26.5 GHz PNA or PNA-X
401	CS-40-TxRx-1.2	1.2 m LF cable set for > 43 GHz PNA or PNA-X
405	CS-40-TxRx-5	5 m dual cable set for > 43 GHz PNA or PNA-X

     a. TxRx cable sets include IF (2x), LO and RF cables.

Table 6   Available Rx Cable Sets

Keysight Cable Option[a]	VDI Part Number	Description
501	CS-TST-Rx-1.2	1.2 m cable set for controller
505	CS-TST-Rx-5	5 m cable set for controller
201	CS-24-Rx-1.2	1.2 m cable set for 26.5 GHz PNA or PNA-X
205	CS-24-Rx-5	5 m cable set for 26.5 GHz PNA or PNA-X
401	CS-40-Rx-1.2	1.2 m LF cable set for > 43 GHz PNA or PNA-X
405	CS-40-Rx-5	5 m dual cable set for > 43 GHz PNA or PNA-X

     a. Rx cable sets include IF and LO cables,

Regulatory Information

Instrument Markings

This section contains information that is required by various government regulatory agencies.

⚠	The instruction documentation symbol. The product is marked with this symbol when it is necessary for the user to refer to the instructions in the documentation.
∼	The AC symbol indicates the required nature of the line module input power.
🗑	This symbol indicates separate collection for electrical and electronic equipment, mandated under EU law as of August 13, 2005. All electric and electronic equipment are required to be separated from normal waste for disposal (Reference WEEE Directive, 2002/96/EC).
I	This symbol indicates that the power line switch is ON.
O	This symbol indicates that the power line switch is in the OFF position.
CE	The CE mark is a registered trademark of the European Community. (If accompanied by a year, it is when the design was proven.)
IP 2 0	The instrument has been designed to meet the requirements of IP 2 0 for egress and operational environment.
RCM	The RCM mark is a registered trademark of the Australian Communications and Media Authority
40	Indicates the time period during which no hazardous or toxic substance elements are expected to leak or deteriorate during normal use. Forty years is the expected useful life of the product.
KC	South Korean Certification (KC) mark; includes the marking's identifier code which follows the format: MSIP-REM-YYY-ZZZZZZZZZZZZZZ.

EMI and EMC Compliance

Complies with European EMC Directive 2004/108/EC

- IEC/EN 61326-1

- CISPR Pub 11 Group 1, class A

- AS/NZS CISPR 11

- ICES/NMB-001
  This ISM device complies with Canadian ICES-001.
  Cet appareil ISM est conforme a la norme NMB du Canada.

- South Korean Class A EMC declaration: This equipment is Class A suitable for professional use and is for use in electromagnetic environments outside of the home

A 급 기기 (업무용 방송통신기자재) 이 기기는 업무용 (A 급) 전자파적합기기로서 판 매자 또는 사용자는 이 점을 주 의하시기 바라 며 , 가정외의 지역에서 사용하는 것을 목적으 로 합니다 .

Contacting Keysight

Assistance with test and measurement needs, and information on finding a local Keysight office are available on the Internet at:
http://www.keysight.com/find/assist

You can also purchase accessories or documentation items on the Internet at:
http://www.keysight.com/find

If you do not have access to the Internet, contact your field engineer.

NOTE

In any correspondence or telephone conversation, refer to the Keysight product by its model number and full serial number. With this information, the Keysight representative can determine the warranty status of your unit.

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N5262-90002