

J2901A

Dual 2-to-8 Crossbar Test Set

Datasheet



Key features

- Expand VNA ports to any combination
- Wide frequency range, DC to 20 GHz
- Easy access to RF input/output connections from front panel permits easy maintenance and reconfiguration
- Standard calibration method and performance check to allow operator to perform accurate test
- All RF ports are 50 Ω terminated
- Capable of millions cycles operating life, reduce cost of test
- Smart counters to monitor switching times
- Agent Port provide more methods to trigger testing
- With automation program to control all hardware and offer pass/fail result
- Remote controlled by PC program through RS232 interfaces

Product Overview

J2901A is a dual 2-to-8 cross-bar test set. This unit expands VNA ports to any combination. This not only increases the number of ports, but also dramatically reduces the time required for re-routing, re-cabling and re-configuring.

Associated with proper software, J2901A acts as a cross-connect in variety of automated applications. Since it's flexibility of signal routing capability, the NEXT (near end cross test) become feasible.

With a rigid meta standard 19-inch enclosure, J2901A can be mounted in 19-inch cabinet and/or underneath of a VNA (vector network analyzer) such as Keysight E5071C or E5063A

Flexible Configuration To Expand VNA Ports

- Flexible configuration to expand VNA ports to any combination.
- Easy access to RF input/output connections from front panel permits easy maintenance and reconfiguration.
- With auxiliary ports for VNA to bypass test set to increase flexibility.
- Standard calibration method and performance check to allow operator to perform accurate test.
- LED indicators display the port routing status

High-performance Switches for RF Applications

- High isolation, low insertion loss and high repeatability (please refer to specifications below for details).
- Guaranteed 5 million cycles operating life to reduce cost of test.
- All RF ports are 50Ω terminated.

Smart Counters to Monitor Switching Times

- With switching counters, they can be used to count switching times of all coaxial switches.
- PC program can monitor the switching counts of all RF coaxial switches to avoid measurement accuracy problem caused by switching counts exceed allowed life cycle.

Agent Port Provide More Methods To Trigger Testing

- With optional agent box, testing can be triggered by operator manually.
- Or testing can be triggered by barcode scanning to ease DUT management.

Remote control Through RS232

- Support RS232 interface for remote control applications.
- Provide PC program the ability to control RF signals routing and offer pass/fail test result.

Royalty-free API Library

- API can be used to develop customized ATS measurement system or laboratory test applications.
- Library includes programming reference, example source codes for VB and VC++.

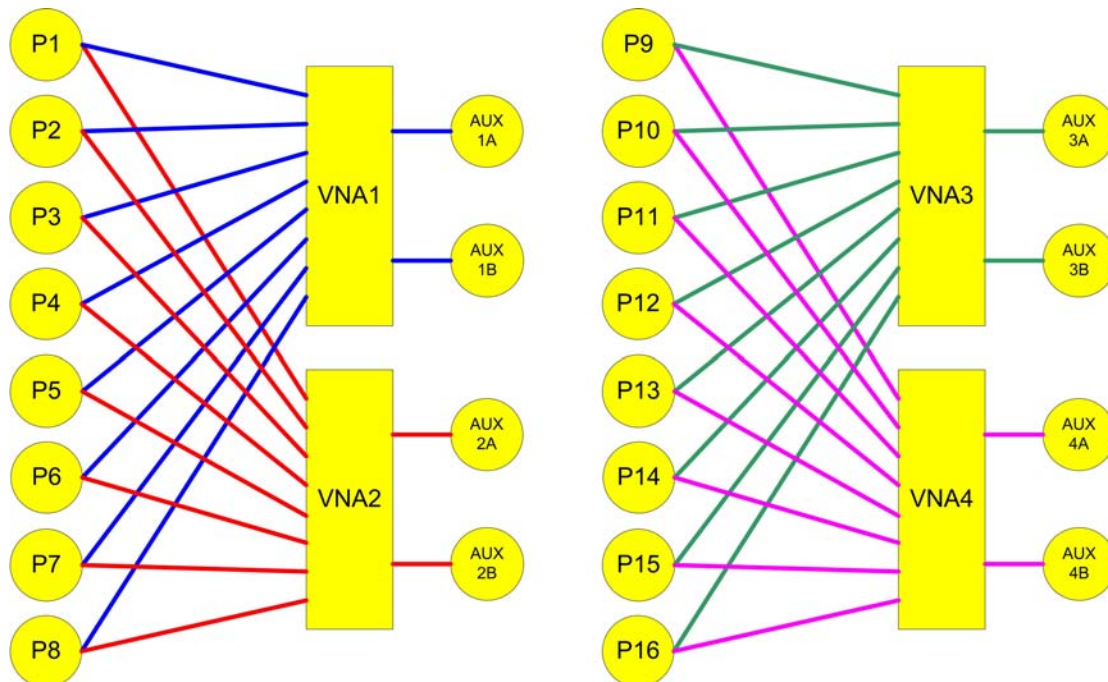
RF Signal Routing Diagram

Front Panel SMA Connector



VNA1~4:	VNA Port 1~4
AUX1A~ AUX4A:	Auxiliary Port Set A 1~4
AUX1B~ AUX4B:	Auxiliary Port Set B 1~4
P1~16	RF Port 1~16

RF Signal Routing Paths



RF characteristic Specifications

Frequency range	DC to 20 GHz	
RF ports	50Ω termination	
Operating life	5 million cycles min.	
Insertion loss	0.3dB + 0.015 x freq.(GHz)	
Isolation	DC to 12 GHz	80 dB min.
	12 to 15 GHz	60 dB min.
	15 to 20 GHz	50 dB min.
SWR	DC to 4 GHz	1.25 max.
	4 to 12.4 GHz	1.45 max.
	12.4 to 20 GHz	1.80 max.
Maximum power rating	1 watt (CW) average into 50 Ω internal loads	
Into internal termination	1W CW	
	50 W PK (not to exceed 1W average)	
Into thru path	2W CW	
	100W peak, 10us max. pulse width	
	(not exceed 2W average)	
Repeatability	0.1 dB maximum (5 million cycles, 25°C)	
Connectors	SMA (f)	

Environmental Specifications

Temperature	
Operating	0°C to 55 °C
Storage	- 40 °C to 70 °C
Humidity	
Operating / Storage	15 to 95% Relative Humidity (RH)

General Specifications

AC Power

AC power in	Full range, 100 ~ 230V
Power consumption	130 watts (typ.)

Agent Port

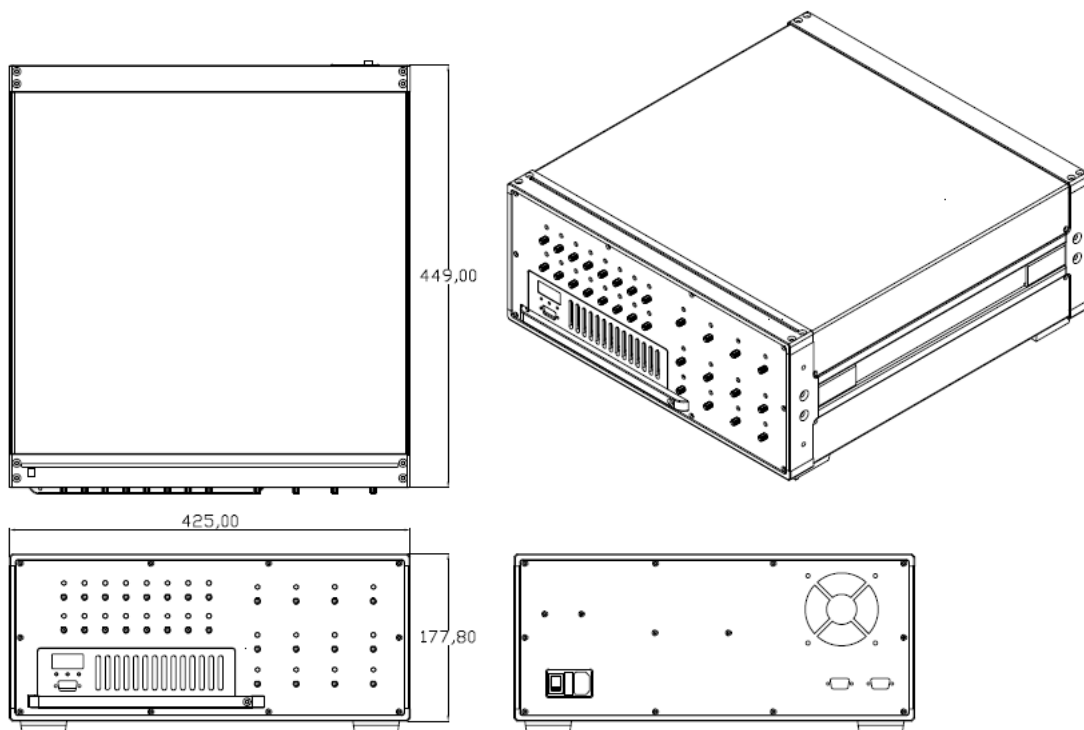
RS485 (*Note 1)	DB9 Female
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Host Interface Port

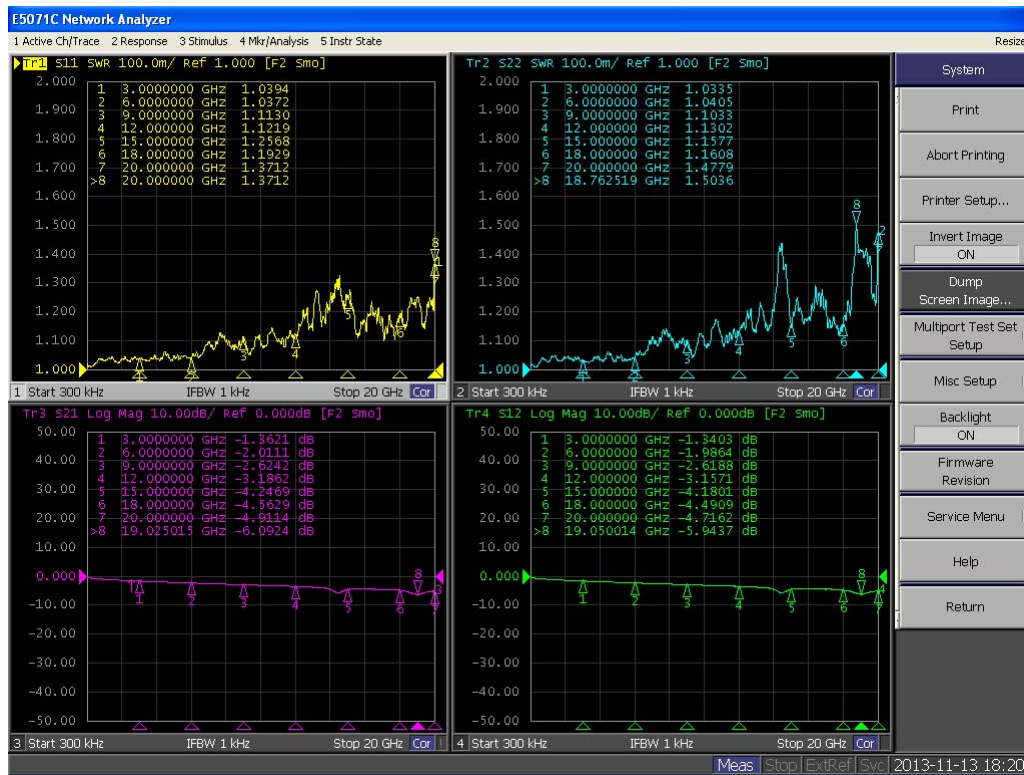
RS232	DB9 Male, DTE (115200 baud rate)
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Note 1: Agent port 's RS485 is a proprietary interface used by J2901A only, please does not connect any device that not supported by J2901A, it may damage J2901A or connected device.

Mechanical Dimensions (unit=mm)



Typical RF Port Performance



Ordering Information

J2901A	Dual 2-to-8 Crossbar Test Set
Option PG01	CableWorks Plus Test Program
Option D201	J2201A Agent Box
Option A001	Rack mount kit

Product specifications and descriptions in this document subject to change without notice.



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