LAB105

J2451B

4 to 64 Ports Test Set

Datasheet

Key features

- Expand VNA ports to increase test throughput

- Flexible configuration to expand VNA ports to 16x ports

- Wide frequency range, DC to 40 GHz

- Easy access to RF input/output connections from front panel permits easy maintenance and reconfiguration

- All RF ports are 50Ω terminated

- Standard calibration method and performance check to allow operator to perform accurate test

- Capable of millions cycles operating life, reduce cost of test

- Smart counters to monitor switching times

- Remote controlled by PC program through RS232 interfaces

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Product Overview

J2451B series allows switching of multiple signals without physically changing the connections. It provides the life and reliability required for automated test and measurement, signal monitoring, and routing applications.

With a standard 19-inch enclosure, J2451B can be mounted in 19-inch cabinet and/or underneath of a VNA (vector network analyzer) such as Keysight E5071C.

Flexible Configuration to Expand VNA Ports

- Expand VNA ports to increase test throughput.
- Flexible configuration to expand VNA ports to 16x ports.
- 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.

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 (typical 10 million cycles).
- 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.

Remote Control through RS232

● Support RS232 interface for remote control applications.

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 Characteristic Specifications

Frequency range	DC to 40 GHz	
RF ports	50Ω termination	
Operating life	5 million cycles min.	
Insertion loss	0.3 dB + 0.015 x frequency (GHz), DC to 26.5 GHz	
	0.030 x frequency (GHz) – 0.1 dB, 26.5 to 40 GHz	
Isolation	DC to 12 GHz	100 dB min.
	12 to 15 GHz	80 dB min.
	15 to 20 GHz	70 dB min.
	20 to 40 GHz	65 dB min.
SWR	DC to 4 GHz	1.30 max.
	4 to 12.4 GHz	1.35 max.
	12.4 to 18 GHz	1.50 max.
	18 to 26.5 GHz	1.70 max.
	26.5 to 40GHz	1.95 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	2.92 (f)	

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Note: The above information is the RF characteristic specifications of ports of coaxial switches used by J2451B.

Environmental Specifications

Temperature

Operating	0°C to 45 °C
Storage	$-$ 40 °C to 70 °C

Humidity

Operating / Storage	15 to 95% Relative Humidity (RH)

General Specification

AC Power

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AC power in	100V ~ 230V
Power consumption	100 watts (max.)

Host Interface Port

RS232	DB9 Male, DTE (115200 baud rate)

Mechanical Dimensions (unit=mm)
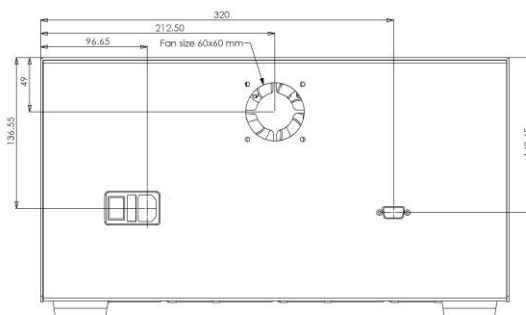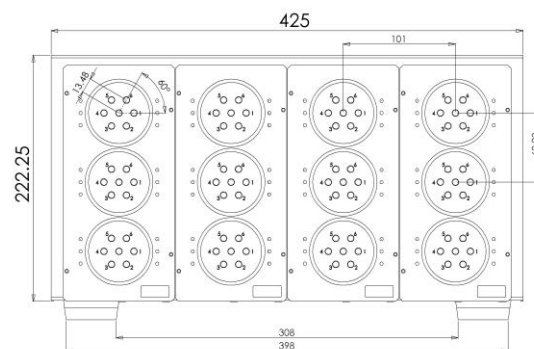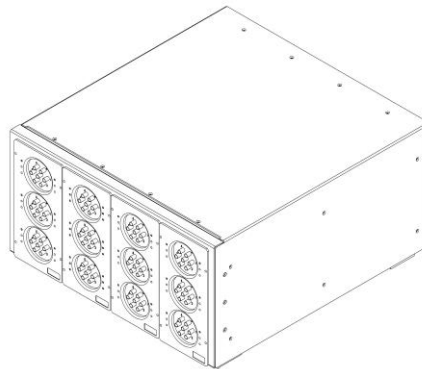
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D: 453mm
H: 238mm
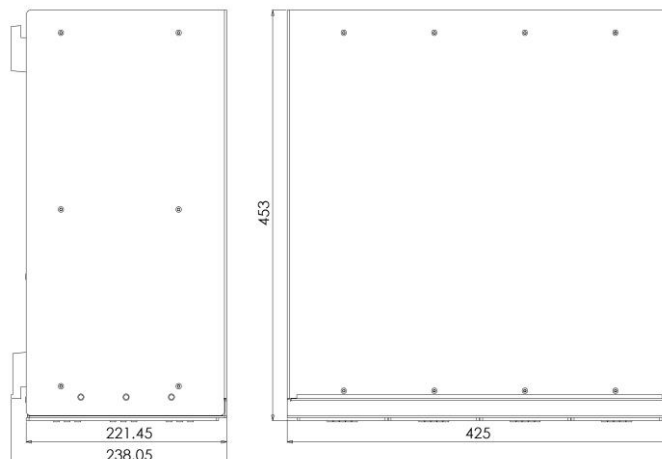
Ordering Information

J2451B	4 to 64 Ports Test Set
Option JK015	2.92 jumper cable set M-M L=15cm, Qty=8
Option CK100	2.92 cable M-M L=100cm
Option CK150	2.92 cable M-M L=150cm
Option CK200	2.92 cable M-M L=200cm
Option A501	Rack mount kit

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

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