

J2500A Series

Coaxial Switch Controller

J2501A – SP4T / SP6T x 2

J2502A – SP2T x 4

J2511A – SP4T x 2

J2512A – SP2T x 4

Datasheet



Key features

- High-performance multi-port switches for microwave and RF instrumentation and systems
- Dedicated switching application
- Easy access to RF input/output connections from front panel permits easy maintenance and reconfiguration
- Capable of millions cycles operating life, reduce cost of test
- Wide frequency range, DC to 18/26.5 GHz
- Panel buttons to set the RF path of switches manually
- LED indicators display the current RF path
- Remote controlled by PC program through RS232 interfaces
- Ideal for any test lab application
- Economical price minimizes budgetary constraints

Product Overview

J2500A 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.

High-performance Switches for RF Applications

- High isolation, low insertion loss and high repeatability (please refer to specifications below for details).
- Typical 5 million cycles operating life.

Flexible and Economic Configuration

- Economical price minimizes budgetary constraints
- Flexible configuration to meet various application demands (please refer to options of order information for details).

Manual Switching On-the-Fly with Panel Buttons

- Operator can use panel buttons to change path of individual coaxial switch quickly.
- LED indicators display the current path of individual coaxial switch.
- Panel buttons will be locked automatically while controlled by PC program.

Environmental Monitoring to Ensure Quality Measurement

- Continue to monitor chassis temperature to prevent from it is outside allowed range.
- Adjust fan speed automatically to ensure the coaxial switches are working under proper temperature.
- Chassis fan is controlled by PWM, in addition to suppress acoustic noise but also reduce power consumption.

Smart Counters to Monitor Switching Times

- With switching counters, they can be used to count switching times of all

coaxial switches.

- Counters can be set to trigger alarm or even stop operating as soon as the counter value exceeds maximum allowed value.

Remote Control through RS232

- Support RS232 interface for remote control applications.
- With J2500A maintenance utility, user can view switching counts or setup miscellaneous trigger events (please refer to user's guide for details).

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

	J2501A		J2502A	
Frequency range	DC to 20 GHz			
Operating life	5 million cycles min.			
Insertion Loss	0.3dB + 0.015 x freq.(GHz)		0.3dB + 0.015 x freq. (GHz)	
Isolation	DC to 12 GHz	90 dB min.	DC to 4 GHz	90 dB min.
	12 to 15 GHz	70 dB min.	4 to 12.4 GHz	85 dB min.
	15 to 20 GHz	65 dB min.	12.4 to 20 GHz	76 dB min.
SWR	DC to 4 GHz	1.2 max.	DC to 4 GHz	1.15 max.
	4 to 12.4 GHz	1.35 max.	4 to 12.4 GHz	1.25 max.
	12.4 to 18 GHz	1.45 max.	12.4 to 20 GHz	1.30 max.
	18 to 26.5 GHz	1.70 max.		
Maximum power rating	1 watt (CW) average into 50 Ω internal loads			
Connectors	SMA (f)			

	J2511A		J2512A	
Frequency range	DC to 18 GHz			
Operating life	5 million cycles min.			
Insertion Loss	DC-1 GHz	0.20 dB max.	DC-1 GHz	0.15 dB max.
	1 - 8 GHz	0.30 dB max.	1 - 8 GHz	0.30 dB max.
	8 - 12 GHz	0.40 dB max.	8 - 12 GHz	0.40 dB max.
	12 - 18 GHz	0.80 dB max.	12 - 18 GHz	0.50 dB max.
Isolation	DC to 1 GHz	85 dB min.	DC to 1 GHz	85 dB min.
	1 to 8 GHz	80 dB min.	1 to 8 GHz	75 dB min.
	8 to 12 GHz	75 dB min.	8 to 12 GHz	70 dB min.
	12 to 18 GHz	60 dB min.	12 to 18 GHz	60 dB min.
SWR	DC to 1 GHz	1.10 max.	DC to 1 GHz	1.10 max.
	1 to 8 GHz	1.40 max.	1 to 8 GHz	1.30 max.
	8 to 12 GHz	1.40 max.	8 to 12 GHz	1.35 max.
	12 to 18 GHz	1.60 max.	12 to 18 GHz	1.40 max.
Maximum power rating	1 watt (CW) average into 50 Ω internal loads			
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)
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General Specification

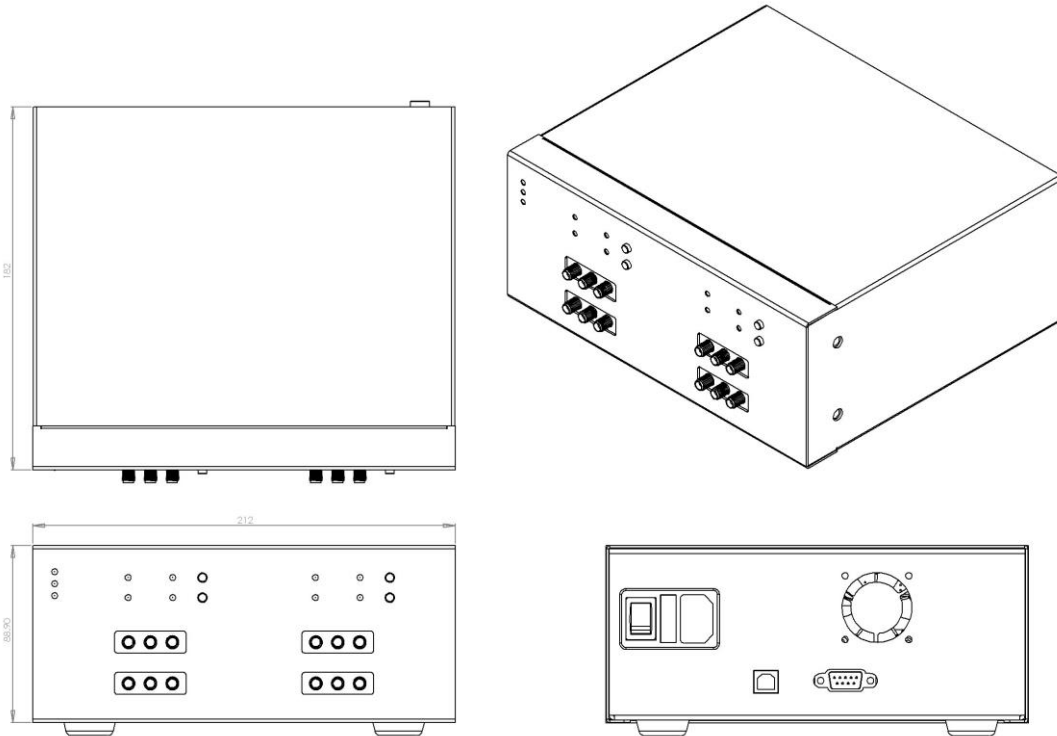
AC Power

AC power in	100V ~ 230V
Power consumption	35 watts (typ.)

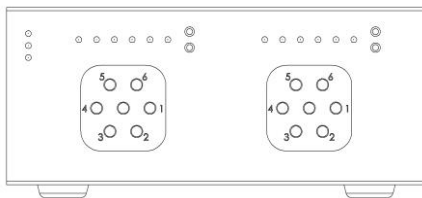
Host Interface Port

RS232	DB9 Male, DTE (115200 baud rate)
USB	USB 2.0 Compliant (Used By Technical Support)

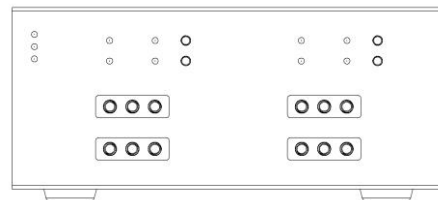
Mechanical Dimensions (unit=mm)



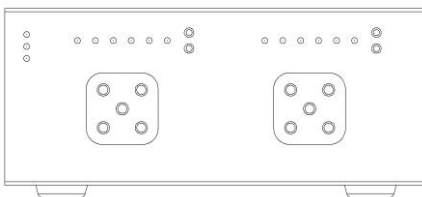
J2501A



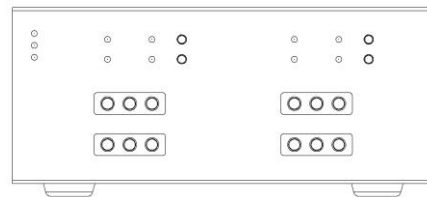
J2502A



J2511A



J2512A



Ordering Information

J2501A

Option 041T	4-port switch terminated, qty.=1
Option 042T	4-port switch terminated, qty.=2
Option 061T	6-port switch terminated, qty.=1
Option 062T	6-port switch terminated, qty.=2

J2502A

Option 021T	2-port switch terminated, qty.=1
Option 022T	2-port switch terminated, qty.=2
Option 023T	2-port switch terminated, qty.=3
Option 024T	2-port switch terminated, qty.=4

J2511A

Option 041T	4-port switch terminated, qty.=1
Option 042T	4-port switch terminated, qty.=2

J2512A

Option 021T	2-port switch terminated, qty.=1
Option 022T	2-port switch terminated, qty.=2
Option 023T	2-port switch terminated, qty.=3
Option 024T	2-port switch terminated, qty.=4

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



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