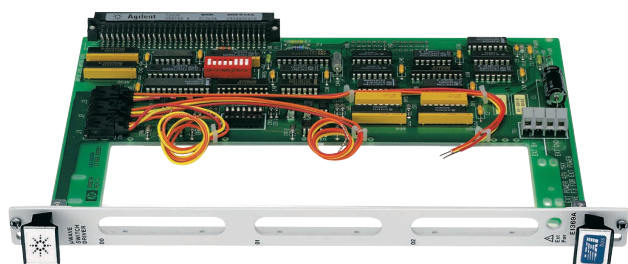


Agilent E1369A

Microwave Switch Driver

Data Sheet

- 1-Slot, B-size, register based
- Signal switching from dc to 26.5 GHz
- Drive three internal 50 Ω terminated switches
- Drive two additional external switches
- Select internal or use external energizing voltages
- Use equivalent switches of other manufacturers



Agilent E1369A

Description

The Agilent E1369A Microwave Switch Driver is a **B-size, 1-slot, register-based VXI module**. It provides room for you to install up to three 8762B/C, 8763B/C, and 8764B/C (3-port, 4-port, and 5-port) series of microwave switches to match your application needs up to 25.6 GHz. These switches must be ordered separately.

The E1369A can power and control a total of five switches, two of which must be mounted externally with ribbon cable and DIN connector. Additionally, you can select internal energizing voltages + 5 and + 12 Vdc, or supply your own external energizing voltage up to 45 Vdc if more power is needed.

Refer to the Agilent Technologies Website for instrument driver availability and downloading instructions, as well as for recent product updates, if applicable.

Other Manufacturers

These manufacturers supply equivalent switches that can be installed in the E1369A:

K&L Microwave Inc.
 Dynatech Microwave Tech Inc.
 RLC Electronics Inc.

Switches can be used if they require less than 42 V, draw less than 1 A per switch, and are of the split-coil (separate for each contact) design. Maximum current also depends on the mainframe or external supply capacity.

The following coaxial switch series will not function in the E1369A microwave switch module, because the switch coils are not split: Agilent 8761, 8766, 8767, 8768, and 8769.



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Product Specifications

Microwave Switches (+ 5 V, 50 Ω) for mounting in the E1368/69A Microwave Switch Modules

Switch:	33311B or 8762B	33311C or 8762C	33312B or 8763B	33312C or 8763C	33313B or 8764B	33313C or 8764C
Frequency:	dc to 18 GHz	dc to 26.5 GHz	dc to 18 GHz	dc to 26.5 GHz	dc to 18 GHz	dc to 26.5 GHz
Ports:	3	3	4	4	5	5
Internal termination:	Terminated	Terminated	Terminated (one port)	Terminated (one port)	Unterminated	Unterminated
Insertion loss (dB):	<0.20 to 2 GHz <0.25 to 4 GHz <0.50 to 18 GHz	<0.20 to 2 GHz <0.50 to 18 GHz <1.25 to 26.5 GHz	<0.20 to 2 GHz <0.50 to 18 GHz	<0.20 to 2 GHz <0.50 to 18 GHz	<0.20 to 2 GHz <0.50 to 18 GHz <1.25 to 26.5 GHz	<0.20 to 2 GHz <0.50 to 18 GHz <1.25 to 26.5 GHz
SWR (into termination or through line):	<1.1 to 2 GHz <1.2 to 4 GHz <1.3 to 18 GHz	<1.15 to 2 GHz <1.25 to 12.4 GHz <1.40 to 18 GHz <1.8 to 26.5 GHz	<1.1 to 2 GHz <1.2 to 4 GHz <1.3 to 18 GHz	<1.15 to 2 GHz <1.25 to 12.4 GHz <1.40 to 18 GHz <1.8 to 26.5 GHz	Into Termination: n/a Through Line: same as Agilent 8763B	Into Termination: n/a Through Line: same as Agilent 8763C
Isolation (dB):	>90 to 18 GHz	>90 to 18 GHz >50 to 26.5 GHz	>90 to 18 GHz	>90 to 18 GHz >50 to 26.5 GHz	>90 to 18 GHz	>90 to 18 GHz >50 to 26.5 GHz
Life and repeatability (typical):	10 ⁶ cycles 0.03 dB	10 ⁶ cycles 0.03 dB	10 ⁶ cycles 0.03 dB	10 ⁶ cycles 0.03 dB	10 ⁶ cycles 0.03 dB	10 ⁶ cycles 0.03 dB
Power (peak power is nonswitching):	1 Watt average 100 Watts peak (+ 7 Vdc)	1 Watt average 100 Watts peak (+ 7 Vdc)	1 Watt average 100 Watts peak (+ 7 Vdc)	1 Watt average 100 Watts peak (+ 7 Vdc)	1 Watt average 100 Watts peak (+ 7 Vdc)	1 Watt average 100 Watts peak (+ 7 Vdc)
Switching speed:	30 ms	30 ms	30 ms	30 ms	30 ms	30 ms
RF connectors:	SMA (female)	3.5 mm (female)	SMA (female)	3.5 mm (female)	SMA (female)	3.5 mm (female)
Switching dwell time:	35 ms	35 ms	35 ms	35 ms	35 ms	35 ms
Driver output voltage (1 A max per switch):	5 V or 12 V	5 V or 12 V	5 V or 12 V	5 V or 12 V	5 V or 12 V	5 V or 12 V
Maximum external energizing voltage:	30 V	30 V	30 V	30 V	30 V	30 V

General Specifications

VXI Characteristics

VXI device type:	Register based, A16, slave only
Size:	B
Slots:	1
Connectors:	P1
Shared memory:	None
VXI busses:	None
C-size compatibility:	Requires E1403C

Instrument Drivers

See the Agilent Technologies Website (http://www.agilent.com/find/inst_drivers) for driver availability and downloading.

Command module firmware:	Downloadable
Command module firmware rev:	A.01
I-SCPI Win 3.1:	Yes
I-SCPI Series 700:	Yes
C-SCPI LynxOS:	Yes
C-SCPI Series 700:	Yes
Panel Drivers:	Yes
VXI plug&play Win Framework:	No
VXI plug&play Win 95/NT Framework:	Yes
VXI plug&play HP-UX Framework:	No

Module Current

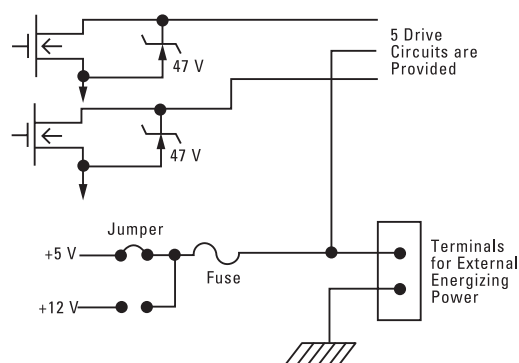
	I_{PM}	I_{DM}
+5 V:	0.1	0
+12 V:	0	0
-12 V:	0	0
+24 V:	0	0
-24 V:	0	0
-5.2 V:	0	0
-2 V:	0	0

Cooling/Slot

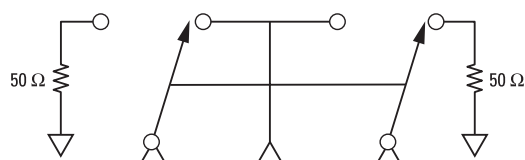
Watts/slot:	5.00
ΔP mm H₂O:	0.08
Air Flow liter/s:	0.50

Ordering Information

Description	Product No.
Microwave Switch Driver	E1369A
3 Yr. Retn. to Agilent to 1 Yr. OnSite Warr.	E1369A W01
Coaxial SPDT Switch, dc-18 GHz	8762B
5 V Solenoids Instead of 24 V Solenoids	8762B 011
Commercial Cal. Certificate w/Test Data	8762B UK6
Certificate of Calibration	8762B UKS
Coaxial SPDT Switch, dc-26.5 GHz; 50 Ω	8762C
5 V Solenoids Instead of 24 V Solenoids	8762C 011
Commercial Cal. Certificate w/Test Data	8762C UK6
Certificate of Calibration	8762C UKS
Switch, Coaxial, Transfer Switch, 4 Port	8763B
5 Volt Solenoids	8763B 011
Commercial Cal. Certificate w/Test Data	8763B UK6
Certificate of Calibration	8763B UKS
Switch, Coaxial, Transfer Switch, 4 Port	8763C
5 Volt Solenoids	8763C 011
Commercial Cal. Certificate w/Test Data	8763C UK6
Certificate of Calibration	8763C UKS
Switch, Coaxial, Signal Reversal, 5 Port	8764B
5 Volt Solenoids	8764B 011
Commercial Cal. Certificate w/Test Data	8764B UK6
Certificate of Calibration	8764B UKS
Switch, Coaxial, Signal Reversal, 5 Port	8764C
5 Volt Solenoids	8764C 011
Commercial Cal. Certificate w/Test Data	8764C UK6
Certificate of Calibration	8764C UKS
Drive Cable, 40GHz Attn 14pin DIP 16in	11764D



Agilent E1368A/E1369A/1370A Drive Circuits



Agilent E1369A Switch Configurations

Related Literature

2000 Test System and VXI Catalog CD-ROM,
Agilent Pub. No. 5980-0308E (detailed specifications for VXI products)

2000 Test System and VXI Catalog,
Agilent Pub. No. 5980-0307E (overview of VXI products)

1998 Test System and VXI Products Data Book,
Agilent Pub. No. 5966-2812E

Online

Internet access for Agilent product information, services and support
www.agilent.com/find/tmdir

VXI product information
www.agilent.com/find/vxi

Defense Electronics Applications
www.agilent.com/find/defense_ATE

Agilent Technologies VXI Channel Partners
www.agilent.com/find/vxichanpart

Agilent Technologies' HP VEE Application Website
www.agilent.com/find/vee

Agilent Technologies Data Acquisition and Control Website
www.agilent.com/find/data_acq

Agilent Technologies Instrument Driver Downloads
www.agilent.com/find/inst_drivers

Agilent Technologies Electronics Manufacturing Test Solutions
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Get assistance with all your test and measurement needs at
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