



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**

Description

The Agilent Technologies 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 42 volts if more power is needed.

Refer to the Agilent Technologies Website for instrument driver availability and downloading instructions.

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.

General Specifications

VXI Characteristics

VXI device type	Register based, A16, Slave only
Size	B
Slots	1
Connectors	P1
Shared memory	n/a
VXI buses	n/a
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	Yes
VXI plug&play Win 95/NT Framework	Yes
VXI plug&play HP-UX Framework	No

Module Current	I_{PM}	I_{OM}
+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 H ₂ O	0.08
Air Flow liter/s	0.50



Agilent Technologies

Ordering Information

Description	Product No.	Description	Product No.
Microwave Switch Driver	E1369A	Switch, Coaxial, Transfer Switch, 4 Port	8763C
Coaxial SPDT Switch, dc-18 GHz	8762B	5 Volt Solenoids	8763C 011
5 V Solenoids instead of 24 V Solenoids	8762B 011	Commercial Cal. Certificate w/Test Data	8763C UK6
Commercial Cal. Certificate w/Test Data	8762B UK6	Certificate of Calibration	8763C UKS
Certificate of Calibration	8762B UKS	Switch, Coaxial, Signal Reversal, 5 Port	8764B
Coaxial SPDT Switch, dc-26.5 GHz; 50 Ω	8762C	5 Volt Solenoids	8764B 011
5 V Solenoids instead of 24 V Solenoids	8762C 011	Commercial Cal. Certificate w/Test Data	8764B UK6
Commercial Cal. Certificate w/Test Data	8762C UK6	Certificate of Calibration	8764B UKS
Certificate of Calibration	8762C UKS	Switch, Coaxial, Signal Reversal, 5 Port	8764C
Switch, Coaxial, Transfer Switch, 4 Port	8763B	5 Volt Solenoids	8764C 011
5 Volt Solenoids	8763B 011	Commercial Cal. Certificate w/Test Data	8764C UK6
Commercial Cal. Certificate w/Test Data	8763B UK6	Certificate of Calibration	8764C UKS
Certificate of Calibration	8763B UKS		

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 8761C
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	42 V	42 V	42 V	42 V	42 V	42 V



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

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