

# Agilent E8483A Microwave Switch/Step Attenuator Driver

## Data Sheet

- 2-Slot, C-size, register based
- Controls any Agilent 87104/87106 Series microwave switch (switching up to 26.5 GHz)
- Controls any Agilent 84904/06/07K/L programmable step attenuator (programmable in 1- or 10-dB steps up to 90 dB, up to 40 GHz)

## Description

The Agilent Technologies E8483A Switch/Step Attenuator Driver is a **C-size, 2-slot, register-based VXI module**. You can control up to six switches and/or attenuators. The module provides room for you to install up to three single-pole multithrow microwave switches in the module. Or you can mount the switches and/or attenuators external to the VXI module in a location closer to your DUT. The microwave switches and attenuators are not included with the E8483A and must be ordered separately.

The E8483A contains the control, drive, and power circuitry for controlling both microwave switches and step attenuators. Any combination of up to six devices (switches or attenuators) can be controlled by the E8483A. The module includes six 16-pin DIP sockets for connecting up to six microwave switches, and six 10-pin DIP sockets for connecting up to six step attenuators.

The E8483A provides +24 V drive signals to control the 87104/06 Series microwave switches and 84904/06/07K/L Series programmable step attenuators. Cables for connecting the E8483A to the drive circuitry of the switches and attenuators are included with the E8483A.

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



**Agilent E8483A shown with Agilent 87106 Series Switch and Agilent 84904 Series Attenuator**



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## For More Information

Please request the Agilent *RF & Microwave Test Accessories Catalog* for additional information, Pub No. 5968-4314.

## Product Specifications

### Single-Pole MultiThrow Microwave Switches\*

<b>Configuration:</b>	
<b>87104A/B/C:</b>	SP4T terminated
<b>87106A/B/C:</b>	SP6T terminated
<b>Connectors:</b>	SMA
<b>Impedance:</b>	50 $\Omega$
<b>Frequency range:</b>	DC to 26.5 GHz
<b>Life and repeatability:</b>	5x10E6
<b>Power average/peak:</b>	1 W/50 W

### Programmable Step Attenuators\*

Model	Frequency Range (GHz)	Atten/Steps	Insertion Loss @ 0 dB	SWR Maximum
<b>84904K</b>	DC to 26.5	0-11/1 dB steps	0.8 dB + 0.04 dB/GHz	1.3 to 1.8
<b>84904L</b>	DC to 40	0-11/1 dB steps	0.8 dB + 0.04 dB/GHz	1.3 to 1.8
<b>84906K</b>	DC to 26.5	0-90/10 dB steps	0.8 dB + 0.04 dB/GHz	1.3 to 1.8
<b>84906L</b>	DC to 40	0-90/10 dB steps	0.8 dB + 0.04 dB/GHz	1.3 to 1.8
<b>84907K</b>	DC to 26.5	0-70/10 dB steps	0.6 dB + 0.03 dB/GHz	1.25 to 1.7
<b>84907L</b>	DC to 40	0-70/10 dB steps	0.6 dB + 0.03 dB/GHz	1.25 to 1.7

\* Note: For more detailed information about microwave switches and step attenuators, please refer to the Agilent *RF & Microwave Test Accessories Catalog*, Pub No. 5968-4314.

## General Specifications

### VXI Characteristics

<b>VXI device type:</b>	Register-based, A16, slave only
<b>Size:</b>	C
<b>Slots:</b>	2
<b>Connectors:</b>	P1/P2
<b>Shared memory:</b>	None
<b>VXI buses:</b>	None

### Instrument Drivers

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

<b>Command module firmware:</b>	Downloadable
<b>Command module firmware rev:</b>	A.11.01
<b>I-SCPI Win 3.1:</b>	No
<b>I-SCPI Series 700:</b>	No
<b>C-SCPI LynxOS:</b>	No
<b>C-SCPI Series 700:</b>	No
<b>Panel Drivers:</b>	No
<b>VXIplug&amp;play Win Framework:</b>	No
<b>VXIplug&amp;play Win95/NT Framework:</b>	Yes
<b>VXIplug&amp;play HP-UX Framework:</b>	No

### Cooling/Slot

<b>Watts/slot:</b>	15
<b><math>\Delta P</math> mm H<sub>2</sub>O:</b>	0.08
<b>Air flow liter/s:</b>	1.2

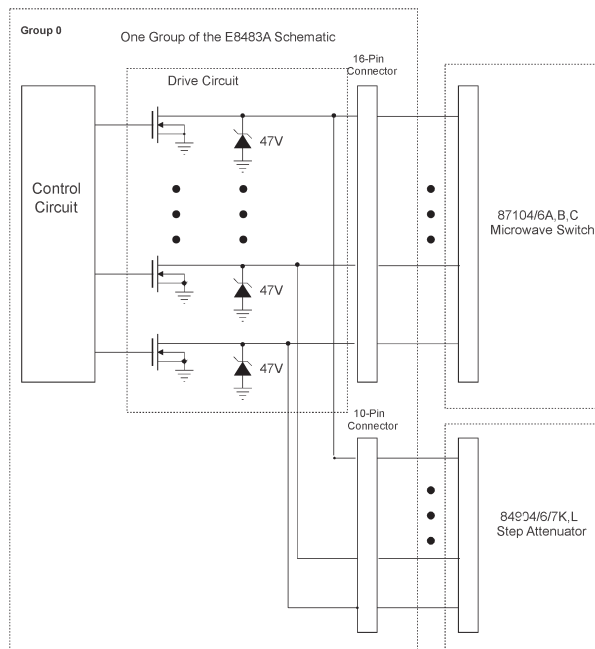
### Module Current

	<b>I<sub>PM</sub> (A)</b>	<b>I<sub>DM</sub> (A)</b>
+5 V:	0.1	0.1
+12 V:	0	0
-12 V:	0	0
+24 V:	1.2	0.1
-24 V:	0	0
-5.2 V:	0	0
-2 V:	0	0

## Ordering Information

<b>Description</b>	<b>Product No.</b>
Microwave Switch/Step Attenuator Driver	E8483A*
3 yr. retn. to Agilent to 1 yr. OnSite Warr.	E8483A W01
Microwave Switch	87104/87106 Series
Step Attenuator	84904/06/07K/L Series

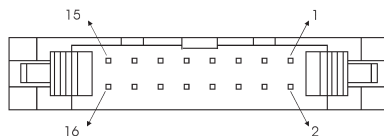
\* Note: The E8483A includes six ribbon cables for Agilent 87104/87106 Series switches and six ribbon cables for Agilent 84904/84906/84907K/L attenuators.



Note: Microwave switch connections are made to the 16-pin connectors.  
Attenuator connections are made to the 10-pin connectors.  
However, only one connector of the same group can be used at a time.

### Agilent E8483A Driver Circuit

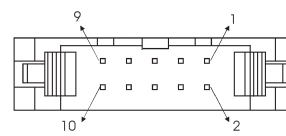
One of the Six Connectors for Microwave Switches



Pins	Function
1	+24 Vdc
2	Ind. Comm.
3	Path 1*
4	Ind. 1
5	Path 2
6	Ind. 2
7	Path 3
8	Ind. 3
9	Path 4*
10	Ind. 4
11	Path 5
12	Ind. 5
13	Path 6
14	Ind. 6
15	Common Ground
16	Open all paths

\* Paths 1 and 4 not connected for 87104A,B,C

One of the Six Connectors for Attenuators



Pins	Function
1	Section 1 Thru Line
2	Section 1 Attn Card
3	Common Ground
4	Section 3 Thru Line
5	Section 2 Thru Line
6	Section 4 Thru Line*
7	Section 4 Attn Card*
8	Section 2 Attn Card
9	Section 3 Attn Card
10	+24 Vdc

\* Section 4 not connected for 84907K/L

### 16-Pin and 10-Pin Connectors Pinout

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