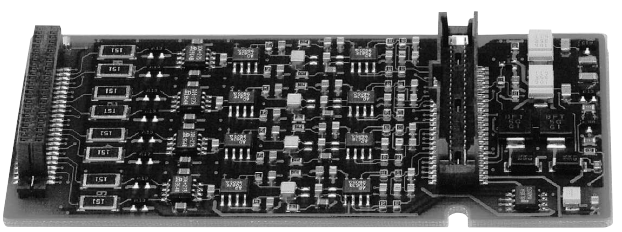
Agilent E1513A

8-Channel Fixed Attenuator/Fixed Filter SCP

Data Sheet

- **Use with Agilent E1413C/E1415A/E1419A**
- **Divide-by-16 input attenuator per channel**
- **Fixed 7 Hz filter per channel**
- **± 60 V input with over-voltage protection**



Agilent E1513A

Description

The Agilent E1513A 8-Channel Divide-by-16 Fixed Attenuator & 7 Hz Fixed Filter SCP provides eight fixed low-pass filters with a 3 dB cutoff frequency of 7 Hz and eight divide-by-16 attenuators. It also provides input over-voltage protection.

Use the E1513A with the following VXI modules:

Model	Description
E1413C	64-Channel Scanning A/D Converter
E1415A	Algorithmic Closed Loop Controller
E1419A	Multifunction Measurement and Control Module

Refer to the Agilent Technologies Website for recent product updates, if applicable.

Agilent Technologies
Innovating the HP Way

Product Specifications

These specifications for the E1513A reflect the combined performance of the scanning A/D and the E1513A SCP.

Measurement Ranges

DC Volts: ± 1 V to ± 60 V Full Scale

Input Characteristics

Maximum input voltage (normal mode plus common mode):

Operating:	± 60 Vdc
Damage:	± 60 Vdc *
Maximum common mode voltage:	
Operating:	± 60 Vdc
Damage:	± 60 Vdc *
Common mode rejection:	
0 to 60 Hz:	–60 dB
Normal Mode Rejection:	
7 Hz:	–3 dB
50 Hz:	> –24 dB
60 Hz:	> –27 dB
Input impedance:	>1 MΩ differential

* 60 Vdc is the maximum voltage allowed by Agilent safety guidelines for the SCP connector pin spacing. This is determined at the maximum temperature and humidity operating point.

Maximum Tare Cal Offset

Maximum tare cal offset depends on A/D range and SCP gain.

A/D Range ±V F. Scale	Maximum Offset
16	49.95
4	13.13
1	3.689
0.25	1.212
0.0625	0.606

Measurement Accuracy DC Volts

If autoranging is ON, add ± .05% of reading for input voltages >± 4 Vdc.

A/D Range ±V F. Scale	Linearity % of Reading	Common Mode Error % of Vcm	Offset Error	Noise 3σ	Noise* 3σ
.0625** (1 V)	0.02%	0.1%	100 μV	700 μV	280 μV
.25** (4 V)	0.02%	0.1%	175 μV	860 μV	430 μV
1 (16 V)	0.02%	0.1%	500 μV	1.8 mV	1.4 mV
4 (60 V)	0.02%	0.1%	1.95 mV	7.0 mV	5.8 mV

** A/D filter ON (min sample period ≥145 μs: ≤100 Hz scan rate 64 ch).*

*** These ranges are not recommended.*

Temperature Coefficients

	Temp Range	Tempco
Gain:		0.001/°C
Offset:	0-40 °C	0.14 μV/°C
	40-55 °C	0.8 μV + 0.38 μV/°C

Current Requirements (Amps)

5 V max	24 V max	-24 V max
0.0054	0.02	0.02

Ordering Information

Description	Product No.
8-Channel Divide-by-16 Fixed Attenuator & 7 Hz Fixed Filter SCP	E1513A

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
www.agilent.com/go/manufacturing

Get assistance with all your test and measurement needs at
www.agilent.com/find/assist
or check your local phone book for the Agilent office near you.

Agilent Technologies' test and measurement service/support commitment

Agilent strives to maximize the value our test and measurement products give you, while minimizing your risk and service/support problems. We work to ensure that each product is realistically described in the literature, meets its stated performance and functionality, has a clearly stated global warranty, and is supported at least five years beyond its production life. Our extensive self-help tools include many online resources (www.agilent.com).

Experienced Agilent test engineers throughout the world offer practical recommendations for product evaluation and selection. After you purchase an Agilent product, they can provide no-charge assistance with operation verification and basic measurement setups for advertised capabilities. To enhance the features, performance, and flexibility of your test and measurement products—and to help you solve application challenges—Agilent offers free or extra-cost product options and upgrades, and sell expert engineering, calibration, and other consulting services.

Phone and fax
United States:
Agilent Technologies
(tel) 1 800 452 4844

Canada:
Agilent Technologies Canada Inc.
(tel) 1 877 894 4414

Europe:
Agilent Technologies
Test & Measurement
European Marketing Organisation
(tel) (31 20) 547 2000

Japan:
Agilent Technologies Japan Ltd.
(tel) (81) 426 56 7832
(fax) (81) 426 56 7840

Latin America:
Agilent Technologies
Latin American Region Headquarters, U.S.A.
(tel) (305) 267 4245
(fax) (305) 267 4286

Australia/New Zealand:
Agilent Technologies Australia Pty Ltd.
(tel) 1 800 629 485 (Australia)
(fax) (61 3) 9272 0749
(tel) 0 800 738 378 (New Zealand)
(fax) (64 4) 802 6881

Asia Pacific:
Agilent Technologies, Hong Kong
(tel) (852) 3197-7777
(fax) (852) 2506-9284

Data Subject to Change

Printed in the U.S.A. 04/2000
Publication No.: 5966-2395E

Agilent Technologies
Innovating the HP Way