

# Agilent E2273A 8-Channel Form C Switch M-Module

## Data Sheet

- Single wide, register based
- 8 SPDT armature relays for general purpose switching
- Can be used to drive microwave switches



Agilent E2273A

### Description

The Agilent E2273A 8-Channel Form C Switch is a **single-wide, register-based M-Module**. It provides eight individual Form C (SPDT) channels for general purpose switching and control of external devices. Using an external power supply, you can use the module to drive programmable attenuators and microwave switches. In critical applications where signal integrity is important, use the module to drive microwave relays at the test setup instead of extending your test signal cables to the switch driver.

Logic on the card provides for maskable interrupts (INTC type) once the requested relay movements complete.

With each M-Module having its own address within the E2250A and E2251A M-Module carriers, you have the flexibility to use the M-Modules in many combinations. This flexibility allows you to get the amount of functionality you need in smaller blocks, lowering your overall system costs. Please see the E2250A or E2251A Technical Specifications for M-Module slot requirements.

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

## Product Specifications

### Input

**Maximum voltage (C to NC or NO or any terminal-to-chassis):**

**Note:** *These limits apply only if the product is installed in a humidity-controlled (<60% RH) environment where airborne contaminants and transients are controlled, and no relay connection is made to power mains. If these conditions cannot be maintained, then 60 Vdc, 48 Vac rms or 68 Vac-peak voltage limit applies.*

<b>DC:</b>	60 V/200 V (see note)
<b>AC rms:</b>	48 V/141 V (see note)
<b>AC peak:</b>	68 V/200 V (see note)

**Maximum current (noninductive, per switch):**

<b>DC:</b>	1 A
<b>AC rms:</b>	0.7 A
<b>AC peak:</b>	1 A

**Maximum power:**

**Per switch:**

<b>DC:</b>	40 W
<b>AC:</b>	40 VA

**Per module:**

<b>DC:</b>	100 W
<b>AC:</b>	100 VA

### DC

**Maximum thermal offset:** <20  $\mu$ V (typical)

**Closed channel resistance:**

<b>Initial:</b>	n/a
<b>End of life:</b>	<3.5 $\Omega$

**Insulation resistance (between any two points):**

<b><math>\leq 40</math> °C, <math>\leq 65</math>% RH:</b>	10E7 $\Omega$
<b><math>\leq 40</math> °C, <math>\leq 95</math>% RH:</b>	n/a
<b><math>\leq 25</math> °C, <math>\leq 40</math>% RH:</b>	10E7 $\Omega$

### AC

**Typical bandwidth (-3 dB):** >10 MHz (typical)

**Crosstalk (dB, channel-to-channel):**

<b>&lt;20 <math>\mu</math>V (typical)</b>	<-80 dB (typical)
<b>&lt;100 kHz:</b>	<-70 dB (typical)
<b>&lt;1 MHz:</b>	<-50 dB (typical)
<b>&lt;10 MHz:</b>	n/a

**Closed channel capacitance:**

<b>Ch-to-ch:</b>	<30 pF (typical)
<b>Ch-to-com:</b>	<40 pF (typical)

## General Characteristics

**Typical relay life (number of operations):**

<b>No load:</b>	5x10E6
<b>Rated load:</b>	10E5

**Time to close or open a channel (register programming):** 13 msec

**Connector type, wire size:**

<b>Standard:</b>	44-pin D-shell
<b>Screw:</b>	n/a
<b>Power up/down states:</b>	Non-latching

## M-Module Characteristics

**Output connector type:** 44-pin D-Sub (female)

**Standard compliance:** IDENT, A08, D16, INTC

**Accessory:** 44-pin D-Sub (male) with plastic housing

## General Specifications

### VXI Characteristics

VXI device type:	Register based
Data transfer bus:	n/a
Size:	n/a
Slots:	n/a
Connectors:	n/a
Shared memory:	n/a
VXI busses:	n/a
C-size compatibility:	Yes with E2251A

### 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.

Command module firmware:	Downloadable
Command module firmware rev:	A.08
I-SCPI Win 3.1:	No
I-SCPI Series 700:	No
C-SCPI LynxOS:	No
C-SCPI Series 700:	No
Panel Drivers:	No
VXIplug&play Win Framework:	No
VXIplug&play Win 95/NT Framework:	Yes
VXIplug&play HP-UX Framework:	No

### Module Current

	I <sub>PM</sub> (A)	I <sub>DM</sub> (A)
+5 V:	0.020 A	0.010 A
+12 V:	0.130 A	0.130 A
-12 V:	0	0
+24 V:	0	0
-24 V:	0	0
-5.2 V:	0	0
-2 V:	0	0

### Ordering Information

Description	Product No.
8-Ch Form C Switch M-Module	E2273A

## 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](http://www.agilent.com/find/tmdir)

VXI product information  
[www.agilent.com/find/vxi](http://www.agilent.com/find/vxi)

Defense Electronics Applications  
[www.agilent.com/find/defense\\_ATE](http://www.agilent.com/find/defense_ATE)

Agilent Technologies VXI Channel Partners  
[www.agilent.com/find/vxichanpart](http://www.agilent.com/find/vxichanpart)

Agilent Technologies' HP VEE Application Website  
[www.agilent.com/find/vee](http://www.agilent.com/find/vee)

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