

High-Performance Microwave Plug-In Switch Card

- ◆ **Ideal for Switching Cellular, PCS, and Military Communications Signals**
- ◆ **Self-Cleaning Relays for High Repeatability and Accurate System Calibration**
- ◆ **18 GHz Bandwidth (26 GHz typical)**
- ◆ **Relays Replaceable in Under 5 Minutes**
- ◆ **High-Reliability Relays: $>10^6$ Operations**

Racal Instruments 1260-167A/B is a 2-slot microwave switch card for use in either the 1260-100 VXI Carrier or the Model 1256 GPIB/RS-232 Switching Mainframe. It's optimized for high-performance, high-density, microwave switching applications. The 1260-167A/B uses high quality sealed Narda relays for the ultimate in signal integrity.

The microwave plug-in is designed to switch signals used in modern communications systems including Cellular, PCS, and Satcom applications. It is also ideal for ATE systems designed for testing military telecommunications, surveillance, and related equipment.

The 1260-167A/B provides highly reliable and repeatable operation over a conservatively specified lifetime of $>1,000,000$ operations. Narda's special microwave relay design includes a self-cleaning wiper that cleans the contacts every time the relay closes, which ensures the specifications are met over the lifetime of the switch.

If replacement is required, relays are replaceable in under 5 minutes. This maximizes system uptime and facilitates field upgrades. For the part number of the spare Single-Pole 6-Throw (SP6T) microwave relay, see the Ordering Information included on this data sheet.

User connections are made directly to the relay SMA connectors at the front panel of the plug-in, eliminating cumulative losses and induced noise. A specially designed, deep-slotted socket for a $\frac{1}{4}$ " drive socket is available to connect/disconnect the SMA interface connectors quickly and easily.

The 1260-167A/B is available in two standard configurations with either one or two relays, each being 1-pole, 6-throw. Custom configurations are available; contact the factory for details.

The 1260-167A/B occupies two slots; therefore, when using it in an Adapt-a-Switch® carrier, the inter-module shield must be removed to allow room for the switch card.

If the 1260-167A/B is used with the 1260-100 Adapt-a-Switch platform, an Option 01T is required to communicate with the switch cards, and to provide message-based operation for ease of use and register-based operation for maximum speeds. If the switch card is used with the 1256 mainframe, no additional controller is required.

Racal's Adapt-a-Switch line includes drivers for LabWindows/CVI and LabView for VXI applications. It also includes VXIplug&play compliant support for WIN95/98/NT/2000 platforms.

1260-167A/B PRODUCT SPECIFICATIONS

MICROWAVE PERFORMANCE

Bandwidth (-3 dB)

> 18 GHz

Impedance

50 Ω

Maximum Power

100 MHz: 490 W

1 GHz: 180W

10 GHz: 60W

18 GHz: 50W

Frequency Range (GHz)	DC-3	3-8	8-12.4	12.4-18	18-26*
Insertion Loss (MAX dB)	0.2	0.3	0.4	0.5	1.0
Isolation (MIN dB)	85	75	60	60	45

Switching Sequence

Break Before Make

Operating Mode

Normally Open

VXIBUS INTERFACE DATA

Cooling (in 1260-100 Adapt-a Switch carrier)

Airflow: 4.75 liter/sec

Backpressure: 0.5 mm H₂O

Power Requirements

+5 VDC at 0.4 A

Plus 1 A per energized relay

ENVIRONMENTAL DATA

Temperature

Operating: -20o C to 60o C

Storage: -40o C to 75o C

Relative Humidity

90% non-condensing at < 30° C

Altitude

Operating: 10,000 ft.

Non-Operating: 15,000 ft.

Shock

30 g, 11 ms, ½ sine wave

Vibration

0.013 in.: (p-p), 5-55 Hz

Bench Handling

4-inch drop at 45°

EMC

Emissions

EN61326, Class A, Table 3

Immunity

EN61326, Class A, Table 1

Safety

CE, EN61010-1

RELIABILITY

Switching Time

<15 ms (includes settling time)

Rated Switch Operations

Electrical: 1,000,000 operation at full rated load

MTBF

1260-167A: 860,000 hrs

1260-167B: 560,000 hrs

MTTR

< 5 min.

MECHANICAL

Weight

1260-167A: 7.4 ounces

1260-167B: 10.6 ounces


Dimensions

4.5" H x 1.5" W x 9.5" D

(Dual-Slot Plug-In)

Front Panel I/O Interface Connector

SMA male (not supplied)

 The CE Mark indicates that the product has completed and passed rigorous testing in the area of RF Emissions, Immunity to Electromagnetic Disturbances and complies with European electrical safety standards.

ORDERING INFORMATION

MODEL/DESCRIPTION

Racal Instruments 1260-167A, 1 SP6T Microwave Switch, 18 GHz

Racal Instruments 1260-167B, 2 SP6T Microwave Switches, 18 GHz

Spare SP6T Microwave Switch

Deep-Slotted Socket, 5/16"

PART NUMBER

407773-001

407713-002

310284

456890

The EADS North America Defense Test and Services policy is one of continuous development, consequently the equipment may vary in detail from the description and specification in this publication.



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