

1GHz RF Switch Module

- ◆ **Four 1x8 Coaxial Trees**
- ◆ **1 GHz Bandwidth**
- ◆ **Excellent Crosstalk and Isolation Characteristics**
- ◆ **Single-Slot, C-Size, VXIbus Module**
- ◆ **High-Quality 50 Ω SMB Coaxial Interface Connectors**
- ◆ **Ideal for Switching High-Frequency Signals in ATE Systems**

Racal Instruments™ 1260-58 is a high-density switch module with four 1x8 coaxial trees. It is designed for high-frequency, 50 Ω signals, making it ideal for switching source or measurement signals in an ATE environment or modern communication system.

The 1260-58 is intended for use with function/pulse generators, universal timer/counters, oscilloscopes, high-speed digital test units, and other instruments involving high-frequency or fast rise-times. The Option 01T interface controls the 1260-39, using both register-based and message-based operation. Refer to the applicable Option 01T data sheet for specifications and product features such as include, exclude, and scan lists, relay coil-current monitoring, and user-defined path names and reset states.

This switch module has excellent AC performance, with a bandwidth greater than 1 GHz. All relays are bi-directional, making inputs and outputs interchangeable to meet different test requirements.

Larger switching systems can be configured by using external jumpers with easy-to-interface SMB connectors. This method configures large multiplexers as well as large matrices.

The 1260-58 requires an Option 01T to communicate with 1260-series modules. This option provides message-based operation for ease-of-use and register-based operation for maximum speeds.

The 1260-series includes VXIplug&play support of Win95/98/2000/NT platforms including drivers for LabWindows/CVI and LabView.

1260-58 PRODUCT SPECIFICATIONS

INPUT

Maximum Switching Voltage

30 VDC or 30 VAC pk

Maximum Switching Current

0.5 ADC, 0.5 AAC pk

Maximum Switching Power

10 WDC, 10 VA, 10 WRF into 50 Ω

DC PERFORMANCE

Path Resistance

$\leq 1.0 \Omega$

Insulation Resistance

$> 10^9 \Omega$

Thermal EMF

$< 20 \mu V$

AC PERFORMANCE (INTO 50 Ω)

Bandwidth (-3 dB)

$> 1 \text{ GHz}$

Insertion Loss

100 MHz: $< 0.6 \text{ dB}$

500 MHz: $< 1.0 \text{ dB}$

1 GHz: $< 1.5 \text{ dB}$

Isolation

100 MHz: $> 70 \text{ dB}$

500 MHz: $> 55 \text{ dB}$

1 GHz: $> 35 \text{ dB}$

Crosstalk

100 MHz: $< -60 \text{ dB}$

500 MHz: $< -43 \text{ dB}$

1 GHz: $< -35 \text{ dB}$

VSWR

100 MHz: $< 1.1:1$

500 MHz: $< 1.3:1$

1 GHz: $< 1.9:1$

Capacitance

Closed Channel to Input Ground: $< 200 \text{ pF}$

Open Channel to Input Ground: $< 150 \text{ pF}$

VXIBUS INTERFACE DATA

Cooling Requirements

Airflow: 1.0 liters/sec

Backpressure:

0.05 mm H₂O

(Airflow: 2.0 liters/sec with Option 01T installed)

Backpressure:

0.2 mm H₂O

Power Requirements (I_{pm})

+5 V: 0.4 A

(+5 V: 2.5 A with Option 01T installed)

+12 V: 0.5 A

ENVIRONMENTAL DATA

Temperature

Operating: 0° C to 55° C

Storage: -40° C to 71° C

Relative Humidity

95% $\pm 5\%$,

non-condensing at $< 30^\circ \text{C}$

Altitude

Operating: 10,000 ft.

Non-operating: 15,000 ft.

Shock

30 g, 11 ms, 1/2 sine wave

Vibration

0.013 in.: double amplitude 5-55 Hz

Bench Handling

4-inch drop at 45°

EMC

Emissions

EN55011A with limits in accordance with EN50081-1

Immunity

IEC801-2, 3, 4 with limits in accordance with EN50082-1

Safety

EN61010-1

RELIABILITY

Switch Time

$< 10 \text{ ms}$ (includes settling time)

Rated Switch Operations

$> 100,000,000$ operations

MTBF (MIL-HDBK-217E, includes relays)

312,218 hrs.

MECHANICAL

Dimensions

C-Size, Single-Slot VXIbus Module


Weight

2.49 lb. (1.17 kg) w/o Option 01T

2.87 lb. (1.29 kg) w/ Option 01T

User Connector:

SMB (interface connectors not supplied, 36 maximum required)

 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 1260-58, 1 GHz RF Switch Module

*Option 01T, Message-Based and Register-Based Switch Controller (Installed)

*One Option 01T must be ordered with switch system. Please specify the card on which Option 01T will be installed.

PART NUMBER

407512

407900-002

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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