

# PXI RF Switching Modules

## 14F3S-1/2x5

DC-18 GHz

PXI Bi-directional 2x5 MUX

### Description

The 14F3S-1/2x5 PXI Module is designed to provide solutions to complex broadband signal routing and switching applications. With performance up to 18 GHz and normally open actuator, it is configured as a 2x5 bidirectional, non-blocking Switch Matrix.

The module occupies 4 slots of a 3U PXI chassis. In addition, since only the first left slot in a chassis requires electrical connection, the unit can also be used in a low cost version with extension slots.

### RF Characteristics

Impedance:	50 Ohms
Operating Frequency:	DC – 18 GHz
Switching Speed:	20 ms (max)
Operating Life:	1,000,000 cycles (Cold Switching)

### Voltage Standing Wave Ratio (VSWR)

		Frequency (GHz)			
DC-4	4-8	8-12	12-16	16-18	
1.30	1.35	1.40	1.50	1.80	

### Insertion Loss (dB)

		Frequency (GHz)			
DC-4	4-8	8-12	12-16	16-18	
0.3	0.4	0.6	0.8	0.9	

### Open Channel Isolation (dB)

		Frequency (GHz)			
DC-4	4-8	8-12	12-16	16-18	
80	80	70	60	50	

### RF Carry Power (W)

		Frequency (GHz)			
DC-4	4-8	8-12	12-16	16-18	
100 W	70 W	60 W	50 W	50 W	

### Power Consumption Backplane Supply

+12 VDC	+5 VDC	+3.3 VDC	-12 VDC
1 A	0.15 A	0.1 A	0 A

### Environment

Operating Temperature:	0 °C to +55 °C
Storage Temperature:	-20 °C to +70 °C
Relative Humidity:	5% to 85% (non-condensing)
Operating Altitude:	5,000 m
Storage Altitude:	15,000 m



### Command and Control

#### Software

The Dow-Key PXI card is supplied with an IVI compliant driver providing complete functionality for the matrix module. The driver supports the following Windows platforms: 98/2000/XP.

#### PXI Interface

The Dow-Key PXI Card complies with the PXI Specification 2.1. Trigger Bus, Star Trigger, Interrupts, and Local Bus are not implemented.

#### Recommended Software

LabVIEW  
LabWindows  
Visual Basic  
C/C++

### Physical

Relay Type:	Electromechanical
Contact Material:	Beryllium copper, gold-plated
I/O Connectors:	SMA Female
Dimensions:	4-slot, 3U, PXI/PCI module

### Shock and Vibration

Operational Shock:	30 g peak, half-sine, 11 ms pulse
Random Vibration:	
>> Operating	5 to 500 Hz, 0.3 grms
>> Nonoperating	5 to 500 Hz, 2.4 grms



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