



# Features

## SMP4044 8 x 20 Coaxial Matrix

Ideal for Instrument Matrix Switching

Front Panel Expandability to Larger Matrix Configurations

1 A Switching per Path

50  $\Omega$  Characteristic Impedance

Extensive Shielding Employed on PCB's for Excellent Signal Fidelity

VXI *plug&play* Drivers

## 8 x 20 High-density Coaxial Matrix

### Overview

The SMP4044 series high-density matrix is designed for applications that require matrix switching in a shielded coaxial environment. This card provides the ability to connect any input to any output. It is ideally suited for signal routing and connection of arbitrary waveform sources, pulse generators and other stimulus and measurement instrumentation.

Expandability was a key design goal with the SMP4044. The high density, modular architecture of the SMP4044 family provides the basis for extremely flexible and easily reconfigurable matrix switch systems. The front panel contains high-density modular coaxial connectors designed for high reliability and superior signal integrity.

### Specifications

<b>Maximum Switching Voltage:</b>	125 V ac, 110 V dc
<b>Maximum Switching Current:</b>	1 A
<b>Maximum Switching Power:</b>	30 W dc, 37 VA
<b>Path Resistance:</b>	< 1 $\Omega$
<b>Insulation Resistance:</b>	>1x10 <sup>9</sup> $\Omega$
<b>Maximum Thermal Offset Per Channel (HI-LO):</b>	<7 $\mu$ V
<b>Capacitance:</b>	
Open Channel:	<50 pF
Channel-Mainframe:	<20 pF
High-Low:	<50 pF
<b>Bandwidth (-3 dB):</b>	>60 MHz
<b>Insertion Loss:</b>	
100 kHz:	<0.1 dB
1 MHz:	<0.2 dB
10 MHz:	<0.5 dB
<b>Crosstalk:</b>	
100 kHz:	<-90 dB
1 MHz:	<-70 dB
10 MHz:	<-50 dB
<b>Isolation:</b>	
100 kHz:	<-90 dB
1 MHz:	<-70 dB
10 MHz:	<-60 dB
<b>Rated Switch Operations:</b>	
Mechanical:	1 x 10 <sup>7</sup>
Electrical:	5 x 10 <sup>5</sup> at full load
<b>Switching Time:</b>	<3 ms