

50 OHM RF MULTIPLEXERS AND MATRICES

Switching Series | PXIe Test And Measurement Suite

RF MULTIPLEXERS

The VTI Instruments SMX-6XXX Series of high density non-blocking RF multiplexers deliver exceptional performance and reliability in a compact configuration. Front panel connectivity is available in both SMB (single / double slot) and PkZ (single slot) formats to integrate seamlessly into new or existing test systems. Embedded virtual schematic control further simplifies setup and debugging allowing all relays to be engaged independent of application software and device drivers.

The SMX-6XXX Series delivers unmatched bandwidth and isolation performance resulting in exceptional measurement integrity that is ideal for the most demanding aerospace, defense and automotive automated test equipment (ATE) applications.



Features

- Non-Blocking Configuration
- Bandwidth Ranges from 1.5 GHz to 3.5 GHz (configuration specific)
- 300VDC, 300VAC
- 1.5A Switching Current
- Embedded Virtual Schematic
- Relay Cycle Count Odometer
- High Density Single-Slot Implementations using PKZ Connector
- Software-configurable
- Embedded Health Monitoring
- Improved Test Reliability
- Exceptional Noise Immunity
- Efficient High-density Packaging
- Interactive Schematic Control
- 3 Year warranty

ATE MARKETS & APPLICATIONS

- › AVIONICS
- › ELECTRONICS
- › OIL AND GAS
- › AUTOMOTIVE
- › DEFENSE AND AEROSPACE
- › ENERGY / POWER GENERATION

SPECIFICATIONS

Maximum Switching Voltage	300VDC, 300VAC
Maximum Switching Current	1.5 A
Maximum Switching Power	50W (2.5GHz), 62.5VA
Rated Switch Operations	
Mechanical	1 X 10 ⁷
Switching Time	< 8 ms
RF Impedance	50Ω
Connector	SMB or PkZ

Specifications subject to change without notice.

ORDERING INFORMATION

MODEL	PART NO.	CONFIGURATION
SMX-6101	70-0409-140R	(10) 1X4 COAX MUXES
SMX-6101-SMB	70-0409-150R	(10) 1X4 COAX MUXES
SMX-6111	70-0409-144R	(5) 1X4 COAX MUXES
SMX-6111-SMB	70-0409-154R	(5) 1X4 COAX MUXES
SMX-6106	70-0409-143R	(2) 1X16 COAX MUXES
SMX-6106-SMB	70-0409-153R	(2) 1X16 COAX MUXES
SMX-6116	70-0409-146R	(1) 1X16 COAX MUXES
SMX-6116-SMB	70-0409-156R	(1) 1X16 COAX MUXES
SMX-6105	70-0409-142R	(4) 1X8 COAX MUXES
SMX-6105-SMB	70-0409-152R	(4) 1X8 COAX MUXES
SMX-6115	70-0409-145R	(2) 1X8 COAX MUXES
SMX-6115-SMB	70-0409-155R	(2) 1X8 COAX MUXES
SMX-6103	70-0409-141R	(1) 1X32 COAX MUX
SMX-6103-SMB	70-0409-151R	(1) 1X32 COAX MUX

RF SPECIFICATIONS

	SMX-6101/6111 (1X4)	SMX-6105/6115 (1X8)	SMX-6106/6116 (1X16)	SMX-6103 (1X32)
Characteristic Impedance	50Ω	50Ω	50Ω	50Ω
Bandwidth (-3dB)	3.4 GHz	2.5 GHz	2 GHz	1.5 GHz
Insertion Loss @ 3.5 GHz	3.3 dB	4.4 dB	4.7 dB	5.5 dB
Isolation & Crosstalk @ 1.5 GHz	-60 dB	-60 dB	-60 dB	-60 dB
VSWR DC-3.5 GHz	2:1	2:1	2:1	2:1
Propagation Delay (Typical)	2.35 ns	3.50 ns	3.50 ns	4.50 ns

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RF MATRICES

The VTI Instruments SMX-6XXX Series of high density non-blocking RF matrix cards deliver exceptional performance and reliability in a compact configuration. Front panel connectivity is available in both SMB and PkZ formats to integrate seamlessly into new or existing test systems. Embedded virtual schematic control further simplifies setup and debugging allowing all relays to be engaged independent of application software and device drivers.

The SMX-6XXX Series delivers unmatched bandwidth and isolation performance for multi-point connectivity, resulting in exceptional measurement integrity that is ideal for the most demanding aerospace, defense and automotive automated test equipment (ATE) applications.



Features

- Non-blocking Configuration
- Bandwidth > 2 GHz (configuration specific)
- 300 VAC / 300 VDC
- 1.5A Switching Current
- Embedded Virtual Schematic
- Relay Cycle Count Odometer
- Software-configurable
- Embedded health monitoring
- Improved test reliability
- Exceptional noise immunity
- Efficient high-density packaging
- Interactive schematic control
- 3 Year warranty

SPECIFICATIONS

Maximum Switching Voltage	300VDC, 300VAC
Maximum Switching Current	1.5 A
Maximum Switching Power	50W (2.5GHz), 62.5VA
Rated Switch Operations	
Mechanical	1 X 10 ⁷
Switching Time	< 8 ms
RF Impedance	50Ω
Connector	SMB or PkZ

Specifications subject to change without notice.

RF SPECIFICATIONS

	SMX-6144 (4X4)
Characteristic Impedance	50 Ω
Bandwidth (-3dB)	2 GHz
Insertion Loss @ 3.5 GHz	4.3 dB
Isolation & Crosstalk @ 1.5 GHz	-60 dB
VSWR DC-3.5 GHz	2:1
Propagation Delay (Typical)	3.50 ns

ATE MARKETS & APPLICATIONS

- > AVIONICS
- > AUTOMOTIVE
- > ELECTRONICS
- > DEFENSE AND AEROSPACE
- > OIL AND GAS
- > ENERGY / POWER GENERATION

ORDERING INFORMATION

MODEL	PART NO.	CONFIGURATION
SMX-6144	70-0409-147R	(1) 4X4 COAX MATRIX
SMX-6144-SMB	70-0409-157R	(1) 4X4 COAX MATRIX