api technologies corp.
› WEINSCHEL

SP4T Terminated Switch – 10 to 8000 MHz
USB, PARALLEL, I2C, SPI & UART Control Modes

Features

- Ideal for Automated Test Equipment (ATE), 2G/3G/4G LTE/5G, MIMO, WiMAX, WiFi, engineering/production test lab environments
- Excellent solid-state repeatability and performance
- High port to port isolation
- Control software included

Description

API Weinschel's new 4284A single pole 4 throw Digital Switch operate over the 10 to 8000 MHz frequency range. All unselected ports are internally terminated to a 50 ohm termination. These units can be controlled using parallel (TTL compatible), I2C, SPI, UART, or USB interfaces.

Specifications

Frequency Range	10 to 8000 MHz
Nominal Impedance	50 Ω input/output
CW Power Handling	+30 dBm
Switch Type	Terminated SP4T

Insertion Loss (dB)		
Frequency Range (GHz)	Typical	Maximum
0.01 – 3	2.8	3.5
3 – 6	3.5	4.0
6 – 8	4.5	5.25

Isolation (dB)		
Frequency Range (GHz)	Typical	Minimum
0.01 – 3	85	80
3 – 6	75	70
6 – 8	68	60

VSWR		
Frequency Range (GHz)	Typical	Maximum
0.01 – 3	1.3:1	1.6:1
3 – 8	1.4:1	1.8:1

Additional Specifications

| Switching Speed	+5 usec. (50% V_{CTL} to 90% RF)
Control Logic	PARALLEL, I2C, SPI, UART or USB
Operating Voltage	+3.3 to +16 VDC @ 25 mA
Supply Current	+25 mA max
Temperature Range	-20° C to +85° C
RF Connectors	SMA Female
Control Connectors	The AUX control connector is an AMP-Latch 10-pin ribbon cable connector that mates with AMP P/N 746285-1 (supplied with each unit). The USB connector is a standard USB Mini-B.
Weight	83 g (2.92 oz.)
Test Data	Test data available upon request

Control Software Included

API Weinschel's LabView based USB Switch Control Software (SCS) can also be used in the operation of this series of digital Switches. The SCS will allow the user to setup, control, and perform test and measurements over a standard USB 2.0 communication interface. Additional information is available in the Operating & Installation Manual, IM-696.
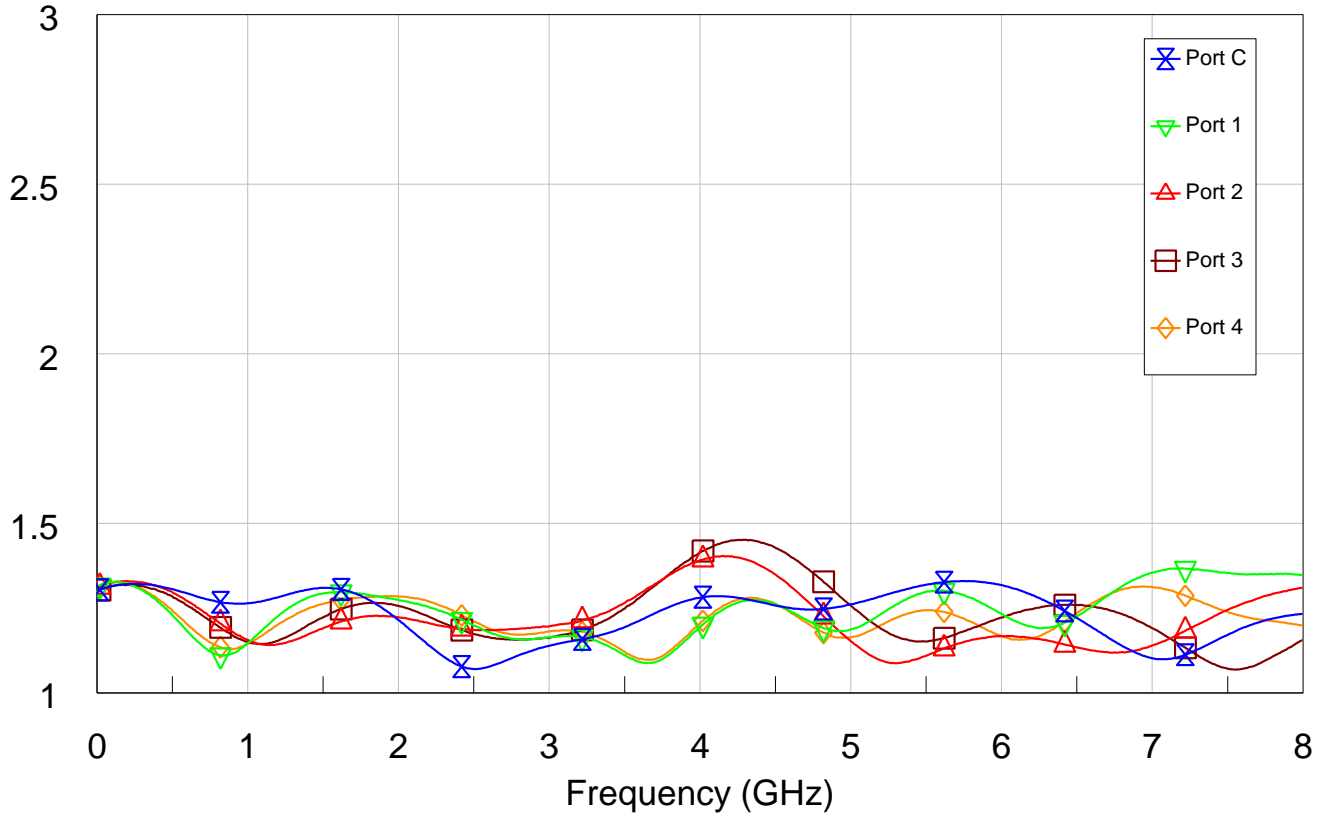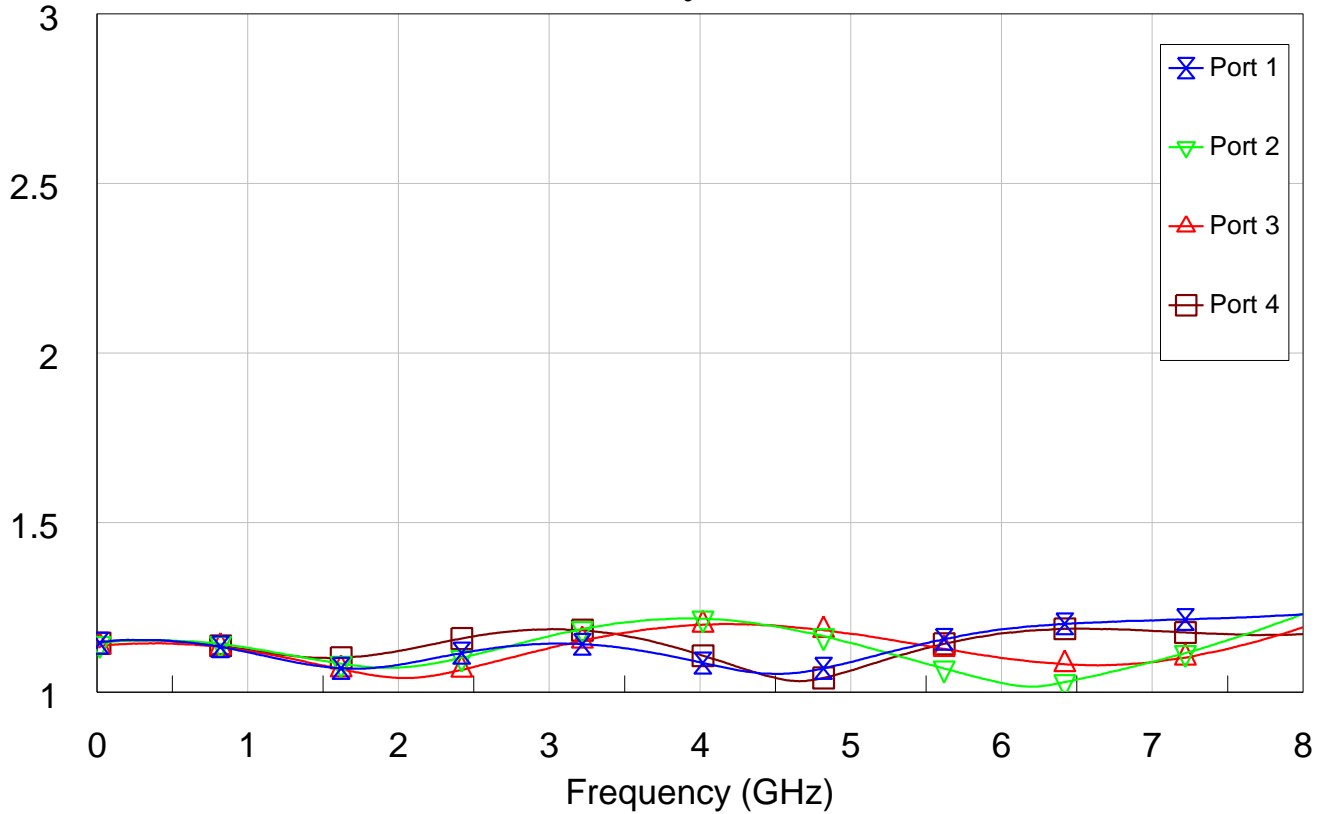
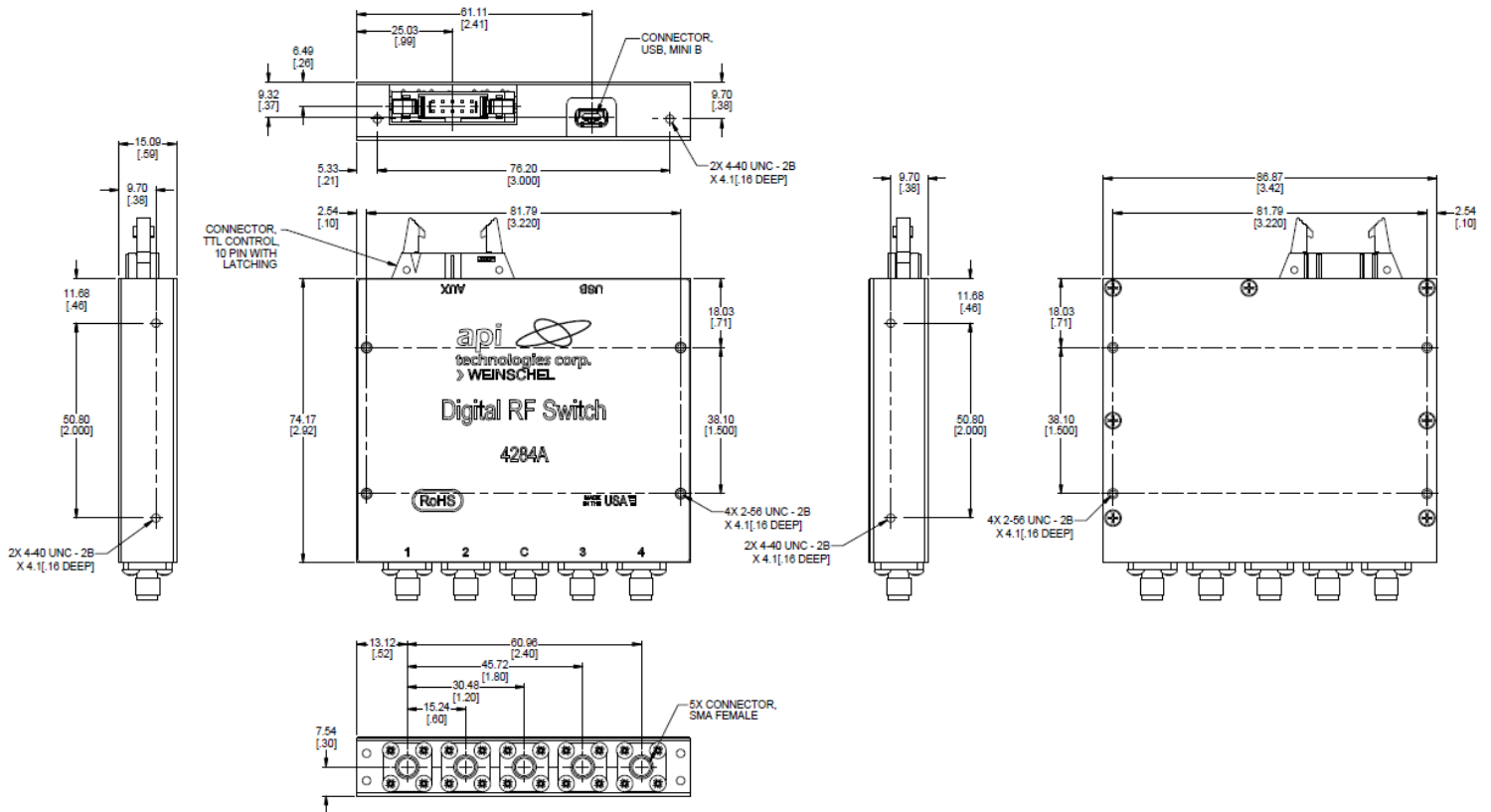## Insertion Loss Port C to Port X
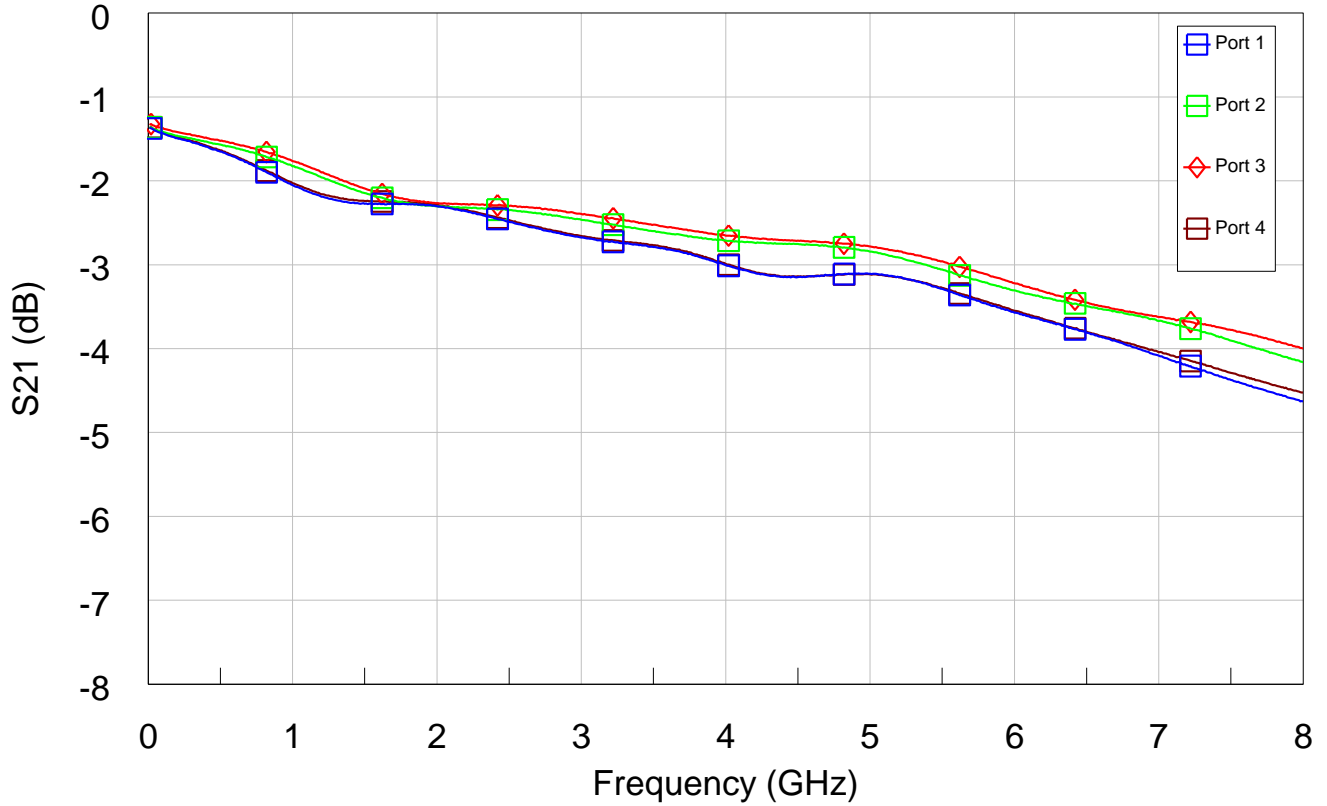
Isolation Port C to Port X
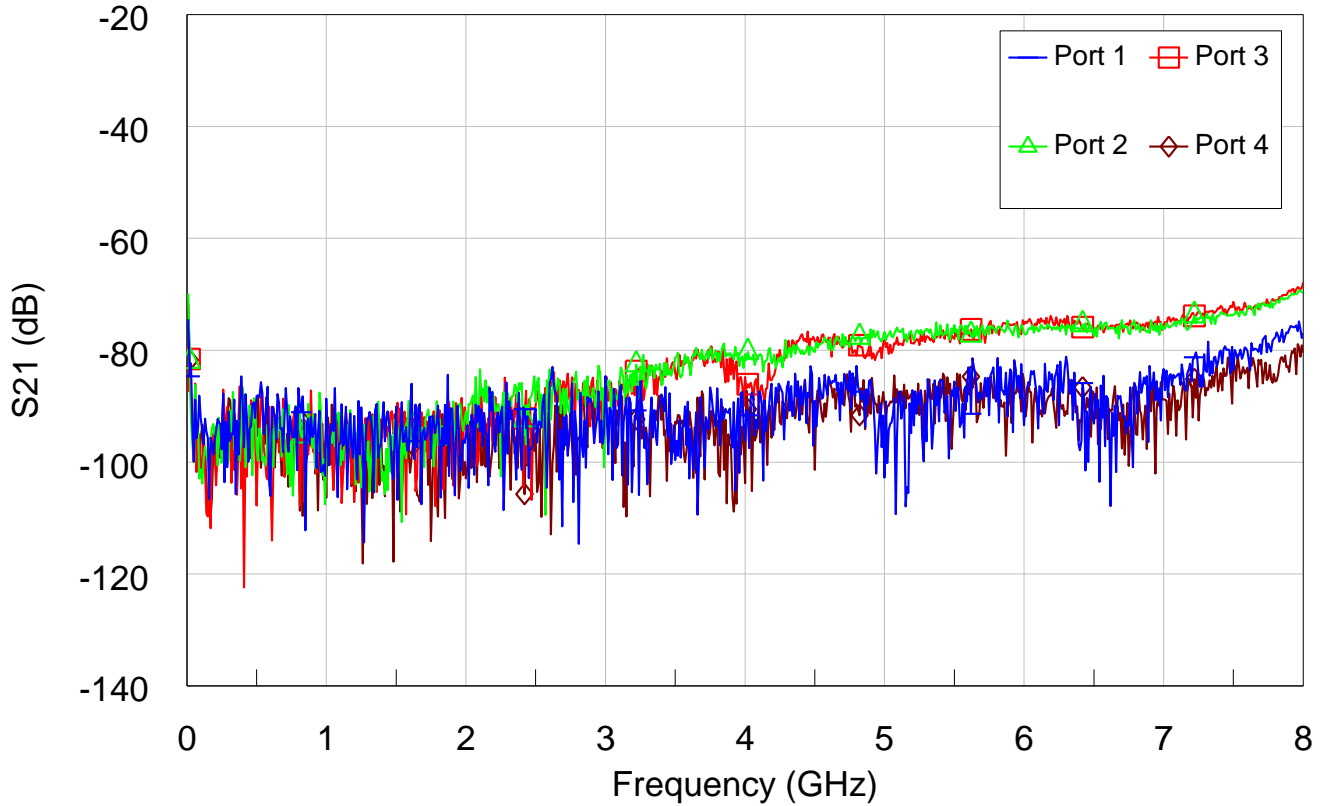
VSWR at Active Port X

VSWR at Internally Terminated Port X

Physical Dimensions

NOTES:

1. ALL DIMENSIONS ARE GIVEN IN mm [in.]

2. ALL MATERIALS AND PROCESSES ARE TO BE IN COMPLIANCE WITH THE EUROPEAN DIRECTIVE RESTRICTION OF HAZARDOUS SUBSTANCES (RoHS) (REF: WEINSCHEL 080-638).

3. 4284A (WITHOUT MOUNTING PANEL)

10 PIN Aux Control Connector:

PIN #	PIO[1]	I2C	SPI	UART
1	Port C to Port 1	A0	NC	NC
2	Port C to Port 2	A1	NC	NC
3	Port C to Port 3	A2	NC	RXD
4	Port C to Port 4	A3	NC	TXD
5	NC	TRIG	SSN	NC
6	NC	RESETN	SCLK	NC
7	NC	SCL	SDI	NC
8	NC	SDA	NC	NC
9	Supply Voltage (VDC)			
10	Ground			

1. Parallel Input Mode:
Digital input Low turns OFF desired path
Digital input High turns ON desired path