

# Differential/SMA Probes

Powerful signal integrity for high-speed communications testing



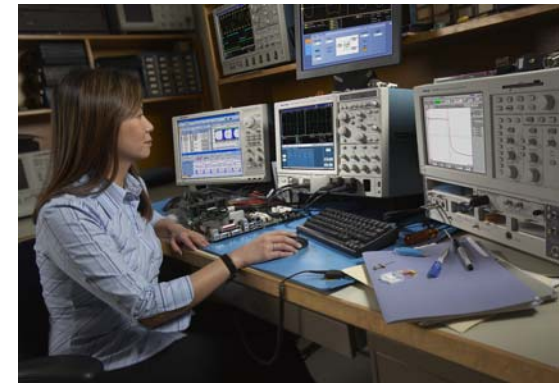
**Features**

**Benefits**

High differential signal bandwidth	Enables differential SMA based measurement of PCI Express lanes, Serial ATA channels and other high speed serial differential traffic with up to 13 GHz bandwidth.
Differential return loss and VSWR	Provides high signal integrity for leading edge design validation and Serial Data compliance tests on standards like Serial ATA, PCI Express and HDMI.
Very low CMRR	Enable highly accurate Serial Data characterization with low CMRR of >15 dB at 12.5 GHz
Controllable internal termination voltage generator	Allows easy termination of signals that are not AC coupled and are biased around other voltages than ground. Can be controlled from Oscilloscope or probe body
Phase matched SMA cables with cable loss compensation	Ensures accurate differential measurements through a pair of 1 meter cables
Auxiliary (inverted) output	Enables use of SMA probes with other instruments like the RTSA Spectrum Analyzer

Product Fact Sheet

## Accurate Differential Probing on SMA-based Serial Signals



Acquire up to 4 Differential Signal pairs with 4 scope channels

**Features:**

- High speed differential amplifier
- Superior 50Ω terminations
- Low return loss
- Flexible termination voltage
- Quality phase matched SMA cables



# Differential/SMA Probes

## Key specifications and ordering information

Product Fact Sheet

Model	Dynamic Range	Bandwidth at -3 dB	Differential Input Resistance	Differential Input Capacitance	Interface
<b>SMA Differential Probes</b>					
P7350SMA	±2.5V	>5 GHz	100 Ω	NA	TekConnect
P7380SMA	±0.31V, ±1.5V	>8 GHz			
P7313SMA	±0.4V, ±1.8V	>13 GHz			
<b>Differential Probes</b>					
ADA400A	80V, 10V, 1V, 0.1V	1 MHz	1 MΩ	55 pF	TekProbe BNC
P5200	1000Vrms	25 MHz	4 MΩ	7 pF	TekProbe BNC
P5205	1000Vrms	100 MHz	4 MΩ		
P5210	4400Vrms	50 MHz	8 MΩ		
P6246	±0.850V, ±8.5V	400 MHz		<1 pF	TekProbe BNC
P6247		1 GHz	200 kΩ		
P6248		1.5 GHz			
P6250	±4.25V, ±42V	500 MHz	1 MΩ	<1 pF	TekProbe BNC
P6251		1 GHz			
TDP0500	±4.25V, ±42V	500 MHz	1 MΩ	<1 pF	TekVPI
TDP1000		1 GHz			
TDP1500	±0.850V, ±8.5V	1.5 GHz	200 kΩ	<1 pF	TekVPI
TDP3500	±2V	3.5 GHz	100 kΩ	<0.3 pF	
P6330	±2V	3.5 GHz	100 kΩ	<0.3 pF	TekConnect
P7330					
P7350	±2.5V	5 GHz	100 kΩ	<0.3 pF	TekConnect
P7340A	±1V, ±2.5V	>4 GHz	100 kΩ	Loading Zmin >290 Ω	TekConnect
P7360A		>6 GHz			
P7380A		>8 GHz			
P7313	±0.625V, ±2.0V	>12.5 GHz	100 kΩ	Loading Zmin >200 Ω	TekConnect



### Recommended Service Options

R3/R5	3 or 5 year repair service plan
C3/C5	3 or 5 year calibration service plan

Key Application	Benefits
<ul style="list-style-type: none"> <li>High-speed serial data differential signal probing</li> </ul>	<ul style="list-style-type: none"> <li>Analyze 4 differential pairs of serial bus traffic on a single oscilloscope</li> </ul>
<ul style="list-style-type: none"> <li>HDMI Compliance Testing</li> </ul>	<ul style="list-style-type: none"> <li>Provides the required termination voltage control due to HDMI signals being biased around 3V.</li> </ul>