

# 4 GHz Active Probes

► P7240 • P6249 • P6241 • P6209



## Features & Benefits

<120 ps Rise Time (Guaranteed)

4 GHz Bandwidth

<0.5 pF Input Capacitance (P6241 Only)

Small Form Factor Probe Head

8 V<sub>p-p</sub> Dynamic Range (P6241 Only)

Direct Access to SMDs

Oscilloscopes Supported:

- **P7240** TDS/CSA7000 Series
- **P6249** TDS/CSA7000, 6000, 700, 600 Series
- **P6241** TDS/CSA7000, 6000, 700, 600 Series
- **P6209** CSA/TDS8000, TDS800 Series

Probe Interfaces:

- **P7240** TekConnect™ Interface
- **P6249** TekProbe® II BNC Interface
- **P6241** TekProbe II BNC Interface
- **P6209** TekProbe SMA Interface

## Applications

High-speed Digital Systems Design

Component Design/Characterization

Signal Integrity, Jitter and Timing Analysis

Manufacturing Engineering and Test

Signals with Voltage Swings up to 8 V<sub>p-p</sub>

Measures 3.0 V Logic, InfiniBand, PCI Express, DDR, Rambus Data Lines, Gigabit Ethernet

Selecting the right probe for your application is key to attaining the best signal fidelity in your measurements. Active probes provide truer signal reproduction and fidelity for high frequency measurements. Tektronix provides you a wide range of 4 GHz active probes to select from for your application.

### TekConnect Interface - P7240

The P7240 with TekConnect interface is a high-performance active probe with high bandwidth and low capacitive loading to make it the probe of choice for demanding design applications, such as Rambus, DDR DRAM and AGP. This probe and others in the family are also suited for applications in the communication industry, for measurements on Fibre Channel and Gigabit Ethernet. With the TekConnect interface, you can be assured that maximum signal integrity is maintained to meet present and future bandwidth needs.



### TekProbe BNC Interface - P6249 and P6241

The P6249 and P6241 have similar performances to the P7240. Primarily used for the TDS694C and TDS794D performance scopes, these probes may also be used with conventional BNC interfaces via the Tektronix 1103 TekProbe Power Supply. The P6249 provides 4 V<sub>p-p</sub> dynamic range. The P6241 offers a 10X attenuation and a 8 V<sub>p-p</sub> dynamic range plus has a lower input capacitance due to the unique probe tip. A full complement of versatile probe tip accessories helps users connect to the wide range of devices faced by digital designers.

### SMA Interface/Sampling Oscilloscopes - P6209

The P6209 provides a high-bandwidth, low circuit loading probing solution for the CSA/TDS8000B sampling oscilloscopes with TekProbe SMA input connection. Based on the P6249 probe design, the P6209 has similar performance and a similar small probe head for access to today's fine-pitch SMDs and connection points.

## ► Characteristics

### ► Model

	<b>P7240</b>	<b>P6249</b>	<b>P6209</b>
Rise Time	<120 ps	<120 ps	<120 ps
Bandwidth	4.0 GHz	4.0 GHz	4.0 GHz
Attenuation	5X	5X	5X
DC Resistance	20 kΩ	20 kΩ	20 kΩ
Input Capacitance	<1 pF	<1 pF	<1 pF
Dynamic Range	±2 V	±2 V	±2 V
Offset Range	±5 V	±5 V	±5 V
Interface	TekConnect™	TekProbe® II	TekProbe SMA

### ► Model

	<b>P6241</b>
Rise Time	<120 ps
Bandwidth	4.0 GHz
Attenuation	10X
DC Resistance	40 kΩ
Input Capacitance	<0.5 pF
Dynamic Range	±4 V
Offset Range	±10 V
Interface	TekProbe II

## ► Ordering Information

### **P7240**

4.0 GHz Active Probe.

### **P6249**

4.0 GHz Active Probe.

### **P6241**

4.0 GHz Active Probe.

**P6209**

4.0 GHz Active Probe.

**Warranty** – One year.**User Manuals** – P7240: Order 071-0759-xx.

P6249: Order 071-0538-xx.

P6241: Order 071-1188-xx.

P6209: Order 071-0634-xx.

**► Included Accessories**

Product Name/Description	P6241 Part Number	Quantity	P7240/P6249/P6209 Part Number	Quantity
3 Inch Ground Leads (Set of 2)	196-3437-10	1		
Customizable Ground Lead (Set of 5)	196-3482-00	1	196-3482-00	1
Lead Set: 196343700 (3) 196345700 (2)			196-3456-00	1
Y Lead Adapter	196-3434-00	2		
L Adapter (Set of 2)	016-1913-00	1		
Adapter Spring (Set of 10)			016-1774-00	1
SMT KlipChip™ Adapter	206-0364-01	2	206-0364-01	2
Short Pogo Pin Ground (Set of 8)	016-1917-00	1		
Pogo Pin (Set of 10)			016-1772-xx	1
Square Pin Socket (Set of 10)			016-1773-xx	1
Square Pin Adapter (Set of 4)	016-1910-01	1		
Probe Tip (Set of 30)			131-5638-30	1
Color Coding Bands, 2 Each of 5 Colors	016-1315-00	1	016-1315-00	1
Probe Carrying Case	016-1879-01	1	016-1879-01	1
Accessory Case	006-7164-00	1	016-7164-00	1
Wrist Strap	006-3415-04	1	006-3415-04	1
SureToe™ (Set of 12)	ST501 (Replacement Pkg of 12)	1	ST501 (Replacement Pkg of 12)	1

**► Recommended Accessories**

Product Name/Description	P6241 Part Number	Quantity	P7240/P6249/P6209 Part Number	Quantity
SMK4 - IC Grabber (Set of 2)	013-0309-00	1	013-0309-00	1
SureFoot®, 50 mil (Set of 12)			SF501	1
SureFoot, 25 mil (Set of 12)			SF502	1
SureFoot, 0.5 mil (Set of 12)			SF503	1














**Support Options****Opt. C3** – Calibration Service 3 Years**Opt. C5** – Calibration Service 5 Years**Opt. D1** – Calibration Data Report**Opt. D3** – Calibration Data Report 3 Years (with Option C3)**Opt. D5** – Calibration Data Report 5 Years (with Option C5)**Opt. R3** – Repair Service 3 Years**Opt. R5** – Repair Service 5 Years

**Tektronix**  
 P7240 / P6249 / P6209  
 Part Reorder 1-800-835-3553

 Tektronix ST501 SOLDER IRON ADAPTER REF ID: A1111111	 Tektronix ST501 SOLDER IRON ADAPTER REF ID: A1111111	 Tektronix 016-1775-00 SOLDER IRON ADAPTER REF ID: A1111111
 Tektronix 016-1775-00 SOLDER IRON ADAPTER REF ID: A1111111	 Tektronix 016-1775-00 SOLDER IRON ADAPTER REF ID: A1111111	 Tektronix 016-1775-00 SOLDER IRON ADAPTER REF ID: A1111111
 Tektronix 016-1775-00 SOLDER IRON ADAPTER REF ID: A1111111	 Tektronix 016-1775-00 SOLDER IRON ADAPTER REF ID: A1111111	 016-1315-00 Coding Color Clips
 Quantity 1 SMT KlipChip Adapter		 013-0309-00

**Tektronix**

**P6241 Probe Accessory Reorder List**  
 To reorder parts, visit [www.tektronix.com/accessories](http://www.tektronix.com/accessories) or call 1-800-833-9200 (USA)  
 Outside USA contact your local Tektronix representative

 ST501 SOLDER IRON ADAPTER REF ID: A1111111	 016-1910-XX SOLDER IRON ADAPTER REF ID: A1111111	 016-1913-XX SOLDER IRON ADAPTER REF ID: A1111111	 016-1917-XX SOLDER IRON ADAPTER REF ID: A1111111
 196-3477-10 SOLDER IRON ADAPTER REF ID: A1111111	 016-1315-XX CODING COLOR BANDS 5 COLORS	 206-4264-XX SOLDER IRON ADAPTER REF ID: A1111111	 SMG50 SOLDER IRON ADAPTER REF ID: A1111111
 196-3434-XX SOLDER IRON ADAPTER REF ID: A1111111	 196-3468-XX SOLDER IRON ADAPTER REF ID: A1111111	 016-1306-XX CODING COLOR BANDS 5 COLORS	 013-0309-XX SOLDER IRON ADAPTER REF ID: A1111111
 196-3482-XX Customizable Ground Lead			



Product(s) are manufactured in ISO registered facilities.