

# Active Probe for SMDs

▶ P6245 • P6243



▶ P6243

## Features & Benefits

### P6245

- ≥1.5 GHz Bandwidth (Typical, Probe Only)
- ≤1 pF Input Capacitance
- 1 MΩ Input Resistance
- Direct Access to SMDs as Small as 0.5 mm Pitch
- Measures CMOS, BiCMOS, ECL, GaAs and TTL Logic

### P6243

- 1 GHz Bandwidth (probe only)
- ≤1 pF Input Capacitance
- 1 MΩ Input Resistance
- Direct Access to SMDs as Small as 0.5 mm Pitch
- Measures CMOS, BiCMOS, ECL, GaAs and TTL Logic
- Low Mass Probe Head/Cable
- No Additional Power Supplies or Cables Are Required with TEKPROBE™ BNC Interface

## Applications

- High-speed Digital Systems Design
- Component Design/Characterization
- Manufacturing Engineering and Test
- Educational Research

## P6245 and P6243 Active Probes for TEKPROBE BNC Interfaces

### P6245

The P6245 Active FET probe achieves high-speed signal acquisition by solving three traditional problems:

- ▶ Lower DUT loading (≤1 pF/1 MΩ probe loading)
- ▶ Direct and easy access to SMDs
- ▶ Access DUT signals and scope bandwidth for TDS600/700/3000/5000/6000/7000\*1 and CSA7000 scopes up to 1 GHz bandwidths

The P6245 and P6243 Active probes provide the electrical and mechanical performance required for today's digital systems designs. No additional power supplies or cables are required when used with TEKPROBE BNC oscilloscopes. Both the P6245 and P6243 achieve high-speed signal acquisition and low circuit loading, required for solving today's problems faced by designers.

The small compact probe head and versatile attachment accessories allow direct connection to the device under test.

The P6245 and P6243 Active Probes provide scope bandwidth at the probe tip for the TDS500/600/700; the P6243 provides scope bandwidth at the probe tip for the TDS3000 Series scope up to 1 GHz bandwidth.

\*1 Some TDS6000 or TDS7000 oscilloscopes require a TCA-BNC adapter.

**P6243**

The P6243 Active FET probe is the high performance probing solution for 500 MHz oscilloscopes. The P6243 has a probe only bandwidth of 1 GHz and will provide a 500 MHz system bandwidth when used with Tektronix' full line of 500 MHz oscilloscopes. In addition, the P6243 is powered by the TEKPROBE BNC interface, eliminating the need for additional power supplies and cables when used with TEKPROBE BNC oscilloscopes.

The P6243 offers superior signal acquisition on surface mount devices compared to the much higher capacitive loading of passive probes. The P6243 has  $\leq 1$  pF capacitive loading which allows it to measure high speed signals without affecting the signal or device under test. Furthermore, the included accessories and adapters allow for easy attachment to SMDs.

**► Characteristics**

Probe Type	P6243	P6245
Cable Length	1.3 m	1.3 m
Attenuation	10X	10X
Bandwidth in GHz (Probe Only)	1 GHz	1.5 GHz
Rise-time	<350 ps	<250 ps
Input C in pF	$\leq 1$ pF	$\leq 1$ pF
Input R in $\Omega$	1 M $\Omega$	1 M $\Omega$
Linear Dynamic Range	$\pm 8$ V	$\pm 8$ V
DC Offset Range	N/A	10 V
Max Voltage (Nondestruct) (DC+PkAC)	$\pm 15$ V	$\pm 15$ V
Propagation Delay	5.3 ns $\pm 200$ ps	5.3 ns $\pm 200$ ps

**► Ordering Information****P6245**

Active Probe.

**P6243**

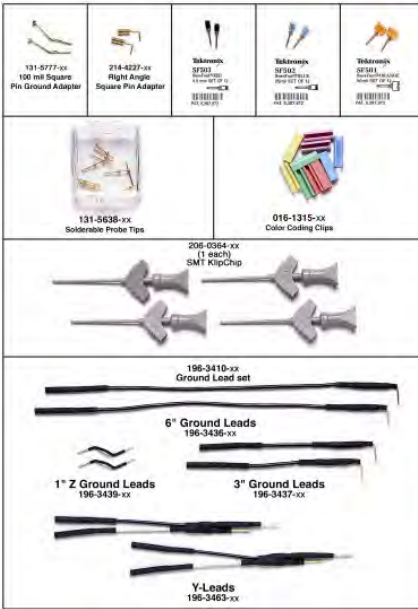
Active Probe.

**► Included Accessories**

Description	Quantity P6245	Quantity P6243	Reorder Part Number
Solderable Probe Tips	10 each	10 each	131-5638-xx (Pkg. of 10)
1 in. Ground Lead	2 each	2 each	196-3439-xx (Pkg. of 10)
6 in. Ground Lead	2 each	1 each	196-3436-xx
3 in. Ground Lead	2 each	1 each	196-3437-xx
Y Lead Adapters	2 each	1 each	196-3463-xx
SMT KlipChip™ adapter	4 each	2 each	206-0364-xx
Color Coding Clips, 2 each 5 colors	1 each	1 each	016-1315-xx
Right Angle Square Pin Adapter	2 each	1 each	214-4227-xx
100 Mil Square Pin Adapter	2 each	1 each	131-5777-xx

**Tektronix**

P6245 / P6243  
Part Reorder 1-800-833-9200



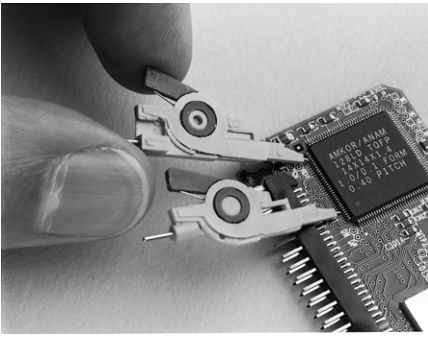
**Service**

- 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

**Recommended Accessories**



► SF500 Series (Surefoot)



▶ IC Grabber 013-0309-00

### SMD Probing Adapters\*1

SureFoot® Adapters –

50 mil pitch. Order SF501.

25 mil and 0.65 mm pitch. Order SF502.

0.5 mm pitch. Order SF503.

**IC Grabber** – 0.5 mm pitch. Order 013-0309-00 (See SureFoot Adapters).

\*1 See SureFoot for complete SMD Adapters information.

Please see the General Customer Information pages for additional information.



Product(s) are manufactured in ISO registered facilities.