

# 20X Low Capacitance Probe

P6158

## ★ Features and Benefits

- 3 GHz Bandwidth
- 1.5 pF Input Capacitance
- 1 k $\Omega$  Input Resistance
- 22 V<sub>RMS</sub> Max. Input Voltage
- Activates 20X Readout in TEKPROBE® Interface Instruments
- Compact Probe Tip Compatible with a Wide Range of Tektronix Accessories and Adapters



## A Applications

- High-speed Device Characterization
- Propagation Delays for ECL, CMOS, and Other Logic Circuitry and Devices
- Circuit Board Impedance Testing (TDR)
- High-speed Sampling Systems

The P6158 is a 3 GHz, 20X, low-capacitance probe. The P6158 is ideal for high-speed applications because of its ability to extend high-frequency response to 3 GHz. The BNC connector incorporates encoding to correct scale factors for 20X attenuation in oscilloscopes with TEKPROBE® interface. To facilitate SMD probing, the P6158 comes standard with SureFoot™ adapters. Additionally, the probe comes standard with an array of

short ground leads that insert minimal inductance into the signal path of the measured waveform. The compact probe head/tip assembly is compatible with the full line of 3.5 mm probe accessories. Although designed for the TDS 500/600/700 series oscilloscopes, the P6158 probe may be used with 11000 Series plug-ins, and the 11800 Series SD2X Sampling/TDR plug-ins.

## CHARACTERISTICS

### TYPICAL SPECIFICATIONS

Bandwidth (Probe Only) – DC to 3 GHz, –3 dB.  
Rise Time – <100 ps.  
Attenuation –  $\Gamma$ 20 (–26 dB).  
Attenuation Accuracy –  $\pm$ 3%.  
Input C – 1.5 pF.  
Input R – 1 k $\Omega$ .  
Output Termination – Terminate into 50  $\Omega$ .  
Signal Delay – 5 ns.

### PHYSICAL CHARACTERISTICS

Probe Tip/Head Style – 3.5 mm/Compact.  
Output Cable Length – 1.2 m.

### ENVIRONMENTAL CHARACTERISTICS

Temperature –  
Operating: –15° C to +55° C (+5° F to +131° F).

Humidity –  
High Operating: 55° C @ 95 to 97% RH.  
Low Operating: 30° C @ 95 to 97% RH.

### RECOMMENDED INSTRUMENTS

TDS 500/600/700 Series.  
11000 Series.  
11800 SD2X Sampling/TDR plug-ins.

CE Certified for CE Marking.



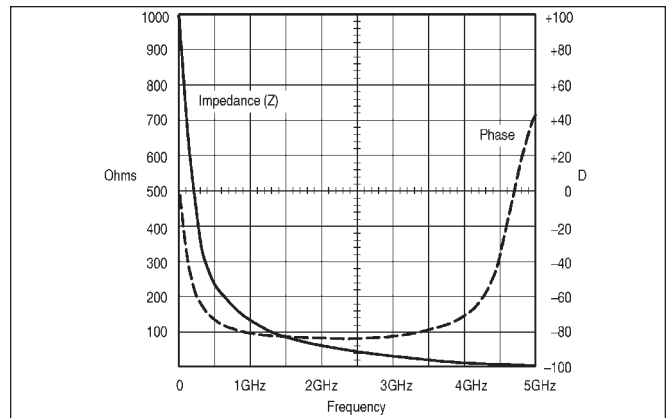
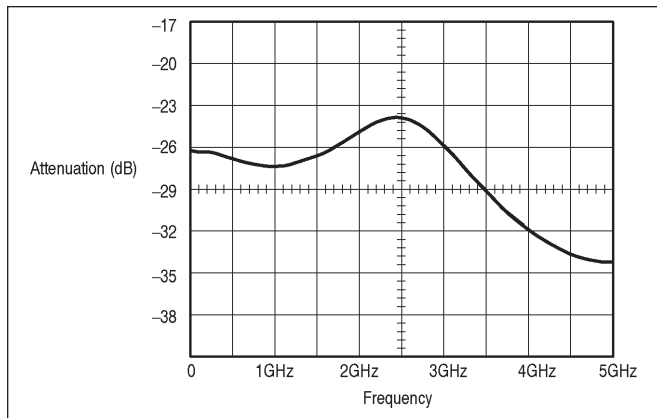
See Tektronix on the World Wide Web:  
<http://www.tek.com>



Tektronix Measurement  
products are manufactured  
in ISO registered facilities.

# 20X Low Capacitance Probe

P6158



## ORDERING INFORMATION

**P6158**  
3 GHz Low Capacitance Probe.

Includes: P6158 Probe Tip Accessory Kit (020-2232-00) with: Attenuator Tip Cover (204-1049-00); 2 ea. 50 mil, 25 mil (0.65 mm), and 0.5 mm SureFoot™ Adapters; 2-in. Ground Lead (195-4240-00); Ground Collar (343-1003-01); 2 ea. Ground Tip Contact, 5 lengths w/cover shell (016-1077-00); 2 ea. Compact Probe Tip Circuit Board Test Points; 2 ea. Marker Set, Various Colors (016-0633-00); Instruction Manual (071-0123-00).

### RECOMMENDED REPLACEMENT ACCESSORIES

SureFoot™ Adapter, Orange, 50 mil (12 ea.) – SF201A.

SureFoot™ Adapter, Blue, 0.65 mm/25 mil (12 ea.) – SF202A.

SureFoot™ Adapter, Red, 0.50 mm/20 mil (12 ea.) – SF203A.

Compact Probe Tip Circuit Board Test Points (25 ea.) – 131-5031-00.

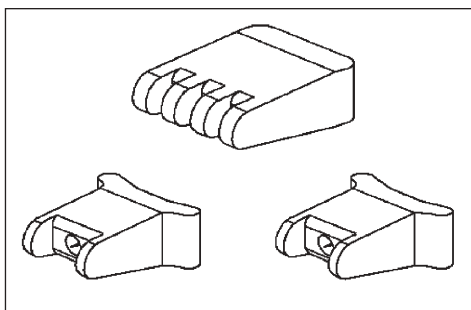


Figure 3. SF200A Series SureFoot™ adapters.

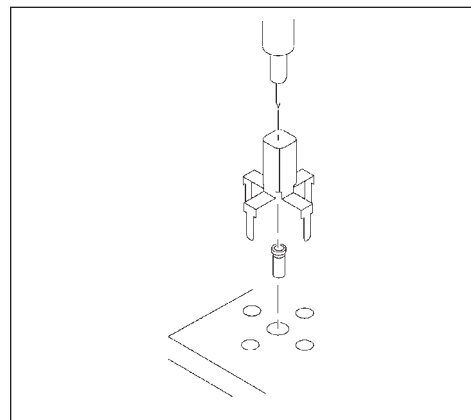


Figure 4. Compact probe tip circuit board test points.

For further information, contact Tektronix:

World Wide Web: <http://www.tek.com>; ASEAN Countries (65) 356-3900; Australia & New Zealand 61 (2) 888-7066; Austria, Eastern Europe, & Middle East +43 2236 8092 0; Belgium +32 (2) 715.89.70; Brazil and South America 55 (11) 3741-8360; Canada 1 (800) 661-5625; Denmark +45 (44) 850 700; Finland +358 (9) 4783 400; France & North Africa +33 1 69 86 81 81; Germany + 49 (221) 94 77 400; Hong Kong (852) 2585-6688; India (91) 80-2275577; Italy +39 (2) 25086 501; Japan (Sony/Tektronix Corporation) 81 (3) 3448-3111; Mexico, Central America, & Caribbean 52 (5) 666-6333; The Netherlands +31 23 56 95555; Norway +47 22 07 07 00; People's Republic of China 86 (10) 6235 1230; Republic of Korea 82 (2) 528-5299; South Africa (27 11)651-5222; Spain & Portugal +34 (1) 372 6000; Sweden +46 (8) 629 6503; Switzerland +41 (41) 729 36 40; Taiwan 886 (2) 722-9622; United Kingdom & Eire +44(0)1628 403400; USA 1 (800) 426-2200.

From other areas, contact: Tektronix, Inc. Export Sales, P.O. Box 500, M/S 50-255, Beaverton, Oregon 97077-0001, USA 1 (503) 627-6877.

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