

# Picoprobe®

BY GGB INDUSTRIES INC.



(Can be mounted on any micropositioner for use with any probing system.)

**PICOPROBE® MODELS 28 & 29** have been designed to serve the needs of integrated circuit engineers working in the most advanced high speed, submicron, MOS technology. These high frequency instruments include the attractive features of their sister probes, the MODELS 18B & 19, which encompass full dc capability, negligible dc current drain, and extremely low input capacitance. In addition the frequency range of the MODELS 28 & 29 have been extended to a full 1 GHz.

The MODELS 28 & 29 utilize their own special probe tips developed by GGB Industries, Inc. Probe tips can be ordered with 10, 20, or 50 micron diameter tungsten probe wires that are electrochemically sharpened to a point radius of less than 0.2, 1.0 and 3.0 microns respectively. The 10 and 20 micron wires flex when in contact with the circuit so that the potential for damage to the circuit and probe point is minimized. The flexible tip tends to keep the probe point in contact with the circuit even in the presence of probe table vibrations. The heavier 50 micron probe wire can be used when a stronger contact force is required.

The circuitry located in the MODEL 28 & MODEL 29 Picoprobe® body is very rugged; however, the unprotected MOS/SOS (metal on sapphire/silicone on sapphire) input built into each replaceable probe tip is subject to damage by accidental electrostatic discharge. Should the MOS/SOS input or probe point become damaged, the probe tip can easily be removed and replaced at minimal cost.


## SPECIFICATIONS:

	MODEL 28	MODEL 29
Input Capacitance.....	0.04pF.....	0.04pF
Input Leakage.....	$10^{-14}$ A.....	$10^{-14}$ A
Rise/Fall Time.....	350ps (+5V pulse or less).....	350ps ( $\pm 2.5$ V pulse or less)
Frequency Response.....	dc to 1 GHz (-3dB).....	dc to 1 GHz (-3dB)
Operating Range.....	0 to +9V.....	-7 to +2V
Linearity.....	0.5% (0 to +4V range).....	0.5% (-2 to +2V range)
	2.0% (0 to +9V range).....	2.0% (-7 to 2 range)
Gain Accuracy.....	$\pm 3\%$ .....	$\pm 3\%$
Signal Attenuation.....	20 to 1 (50 ohm oscilloscope input).....	20 to 1 (50 ohm oscilloscope input)

**GGB INDUSTRIES, INC. • P.O. BOX 10958 • NAPLES, FL 34101**

Telephone (239) 643-4400 • Fax (239) 643-4403 • E-mail email@ggb.com • www.picoprobe.com

## PICOPROBE® Model 28 & Model 29 REPLACEMENT TIPS

Part Number	Tungsten Wire Shaft Diameter	Point Radius	Probe Tip Housing Shape
28-5-10	10 micron	<0.1 micron	 (Can be bent to any shape desired)
28-5-20	20 micron	<1.0 micron	
28-5-50	50 micron	<3.0 micron	

In most cases if a probe tip becomes bent accidentally, it can be mechanically straightened with no adverse effects on performance. Probe points that have become soiled or dulled can be cleaned and resharpened by shipping the tips back to GGB Industries, Inc.

When ordering a Model 28 or Model 29 Picoprobe®, simply state the make and the model of your probe station and micropositioner. A Picoprobe® and tip with the proper shape will be supplied. For custom built stations, please contact our business office for special instructions.