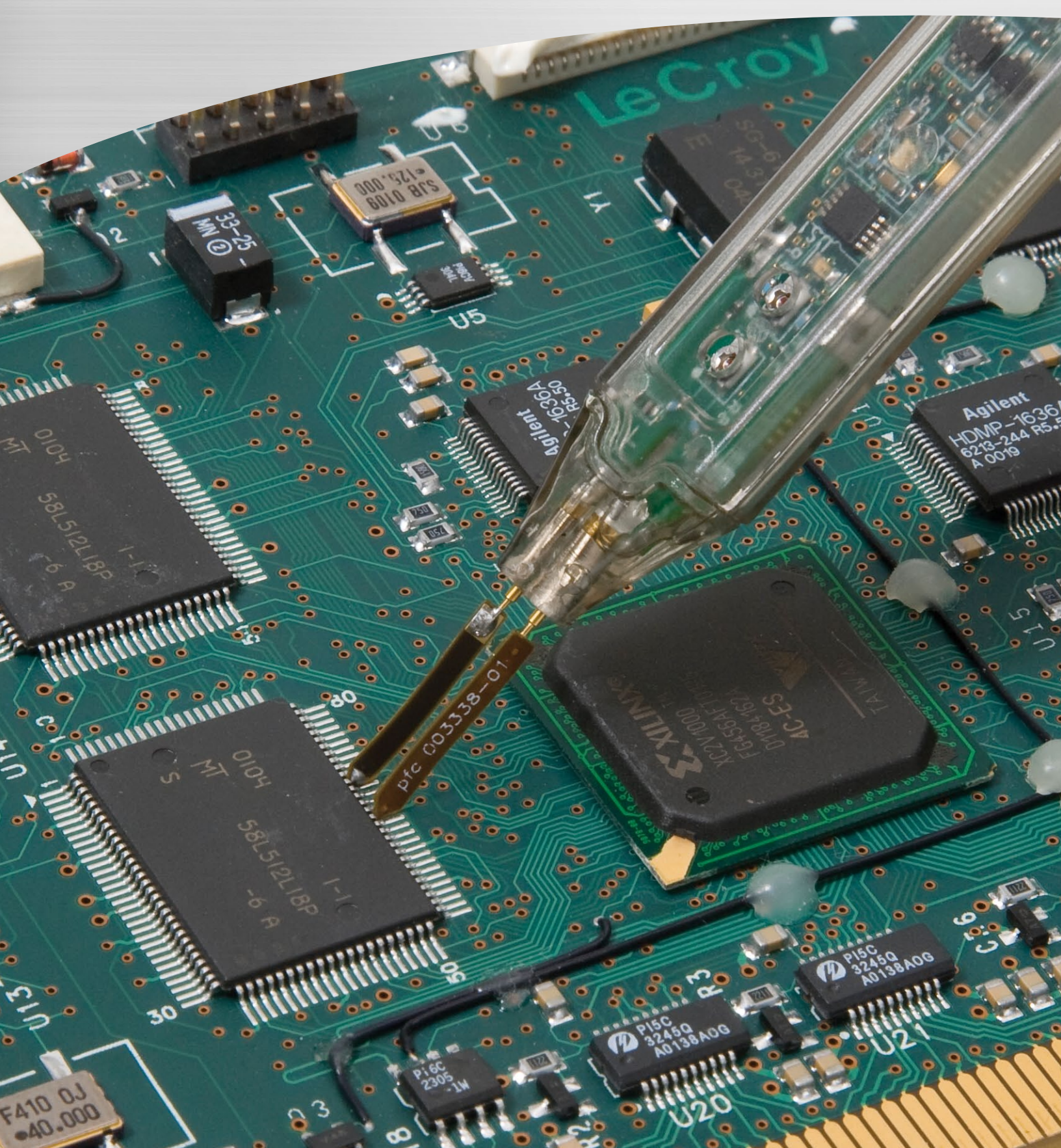
LeCroy

ZD Series Active Differential Probes

1.5 GHz, 1 GHz, and 500 MHz



ZD SERIES ACTIVE DIFFERENTIAL PROBES

The ZD Series probes provide wide dynamic range, excellent noise and loading performance and an extensive set of probe tips, leads, and ground accessories to handle a wide range of probing scenarios. The low 1 pF capacitance means this probe is ideal for all frequencies. The ZD Series differential probes provide full system bandwidth for all LeCroy Oscilloscopes 1.5 GHz and lower.

Fully Integrated

With the ProBus interface, the ZD500, 1000, and 1500 becomes an integral part of the oscilloscope. All probe gain and offset controls are transparent to the user, making it easier to probe the circuit without concern for which gain setting to choose. When used with a LeCroy digital oscilloscope, no external power supply is required.

Wide Dynamic Range

The ZD500, 1000, 1500 probes provides transparent probe attenuation so signals are always optimized for the display. The differential range is 18 V_{p-p} with a differential offset of ±8 and common mode range of ±10 V, making this versatile for every probing application.

Wide Applications

The wide dynamic range of 16 V_{p-p} and offset range of ±8 suit this probe to a wide range of applications and signal types. The ZD differential probes are ideally suited for Automotive, Serial Data, power, and general purpose use.

The differential input capacitance is only 1 pF to minimize loading distortion on the highest frequency signals under test. System noise of only 4 mV_{rms} allows accurate measurement of the smallest signals.

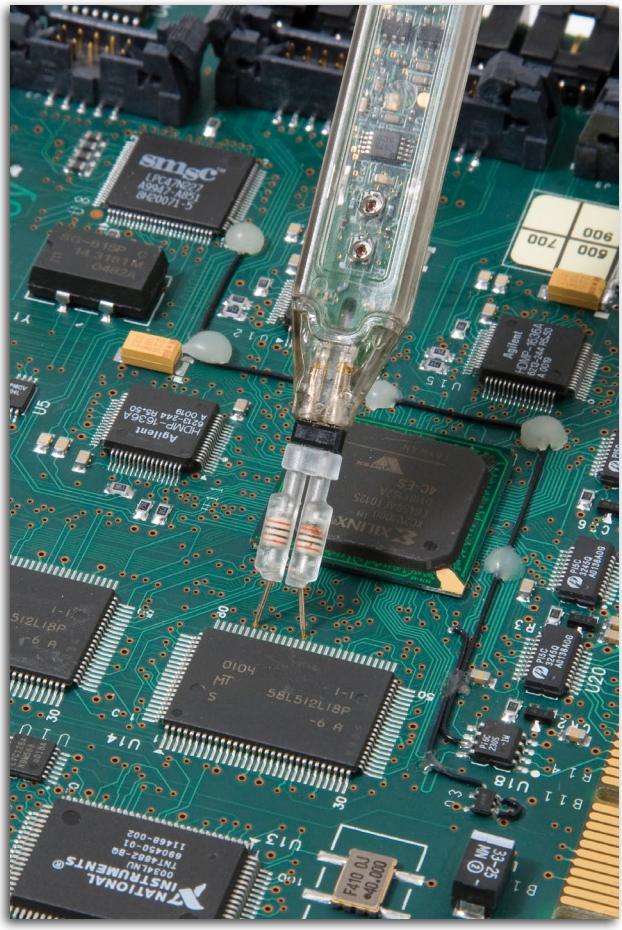
A Variety of Probe Tips for Varied Tasks

Engineers often need to probe a variety of different test points in confined spaces. The extensive range of standard tip accessories for the ZD Series of probes ensures that this probe can meet any difficult probing challenge.

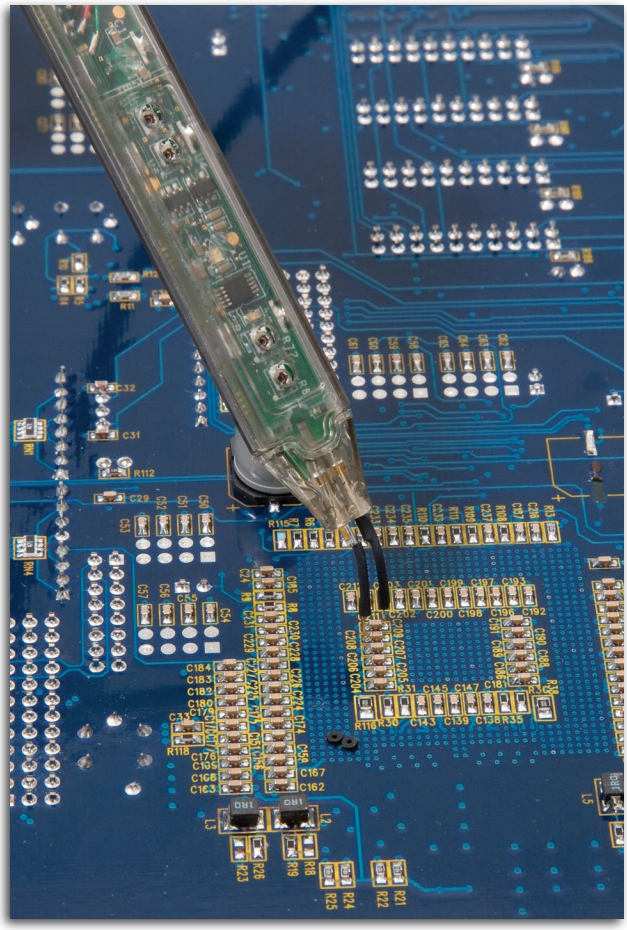
Innovative Probe Leads and Tips Provide Excellent Signal Performance Without Degradation

Probing with long leads or accessories is sometimes necessary to reach the test points, but it comes at the expense of reduced bandwidth, increased capacitance, and added noise. The ZD accessories are engineered to provide the best signal fidelity without ringing or distortions commonly introduced with tip accessories.

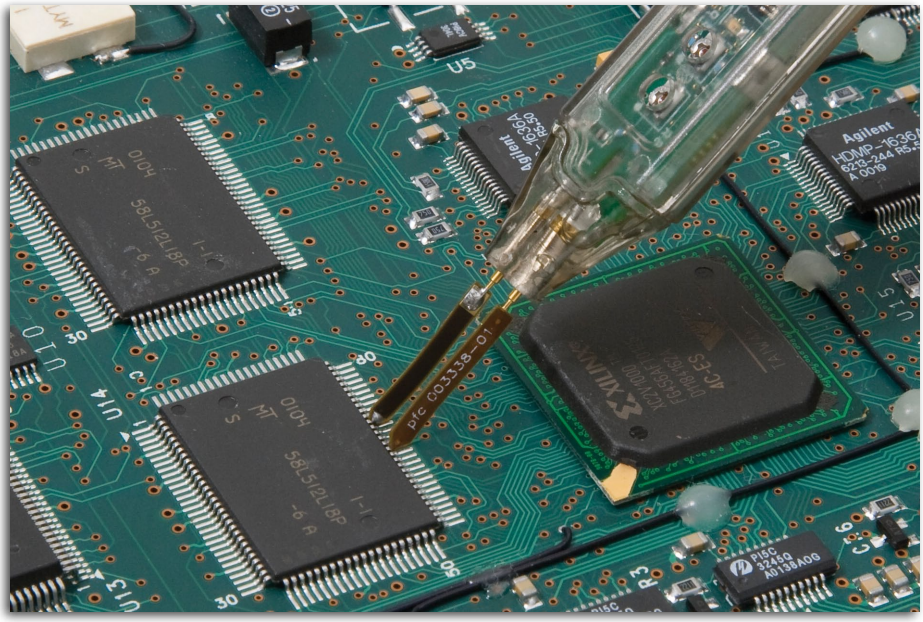
ZD SERIES ACTIVE DIFFERENTIAL PROBES



The Swivel Tip adapter can be adjusted to probe test points ranging from 0 to .300" apart with Z-Axis compliance.



The short spring loaded ground leads can be used as either a ground accessory or an extension of the probe inputs.



The IC leads with a compensation resistor provide excellent signal fidelity when probing pins of an IC. One side of each blade is insulated to prevent shorting the signal to the adjacent pin.

SPECIFICATIONS AND ORDERING INFORMATION

Specifications

Electrical Characteristics

	ZD1500	ZD1000	ZD500
Bandwidth (Warranted)	1500 MHz	1000 MHz	500 MHz
Bandwidth (Typical)	1700 MHz	1200 MHz	650 MHz
Risetime 10–90% (Typical)	270 ps	375 ps	650 ps
Risetime 20–80% (Typical)	200 ps	280 ps	500 ps
LF Attenuation Accuracy (Warranted)		2%	
Zero Offset (Typical) (within 15 minutes after autozero)		5 mV	
System Noise (Typical)	1.75 mV_{rms}	1.75 mV_{rms}	1.3 mV_{rms}
Probe Noise Density (Typical)		38 nV/rt (Hz)	
Input Differential Range (Nominal)		±8 V (16 V_{p-p})	
Differential Offset Range (Nominal)		±18 V	
Offset Gain Accuracy (Typical)		2%	
Common Mode Range (Nominal)		±10 V	
Maximum Non-destruct Voltage (Nominal)		30 V	
CMRR (Typical)	60 dB 50/60 Hz 30 dB 20 MHz 25 dB @ 1500 MHz	60 dB 50/60 Hz 30 dB 20 MHz 25 dB @ 1000 MHz	60 dB 50/60 Hz 30 dB 20 MHz 25 dB 500 MHz
DC Input Resistance (Nominal)		50 kΩ (Common Mode) 120 kΩ (Differential Mode)	
Differential Input Capacitance (Typical)		< 1.0 pF	

Ordering Information

Product Description	Product Code
500 MHz, 1.0 pF, 1 MΩ Active Differential Probe	ZD500
1 GHz, 1.0 pF, 1 MΩ Active Differential Probe	ZD1000
1.5 GHz, 1.0 pF, 1 MΩ Active Differential Probe	ZD1500

Standard Accessories

Y Lead Adapter, Qty 1	PACC-ZD001
Solder-In Lead, Qty 2	PACC-ZD002
Long Spring Loaded Bendable Ground, Qty 2	PACC-ZD003
Tip Saver, Qty 2	PACC-ZD004
Swivel Tip Adapter	PACC-ZD005
Small IC Adapter, Qty 2	PACC-ZD006
Micro Pogo Pin Tip, Qty 6	PACC-ZD009
Right Angle Connector Short, Qty 2	PACC-LD003

Product Description	Product Code
Right Angle Connector Long, Qty 2	PACC-LD004
Micrograbber, Qty 2	PK006-4
Minigrabber, Qty 2	PACC-CL001
Short Spring Loaded Bendable Ground, Qty 2	PACC-CD008
Probe Calibration Fixture, Qty 1	PCF200
ZD Replacement Kit	PK111
Hands Free Probe Holder, Qty1	PACC-MS001

Customer Service

LeCroy oscilloscopes and probes are designed, built, and tested to ensure high reliability. In the unlikely event you experience difficulties, our digital oscilloscopes are fully warranted for three years and our probes are warranted for one year.

This warranty includes: • No charge for return shipping • Long-term 7-year support • Upgrade to latest software at no charge

LeCroy
1-800-5-LeCroy
www.lecroy.com

Local sales offices are located throughout the world.
Visit our website to find the most convenient location.

ZDProbesDS-25May11
PDF