ZLPROBE

PRODUCT CATALOG

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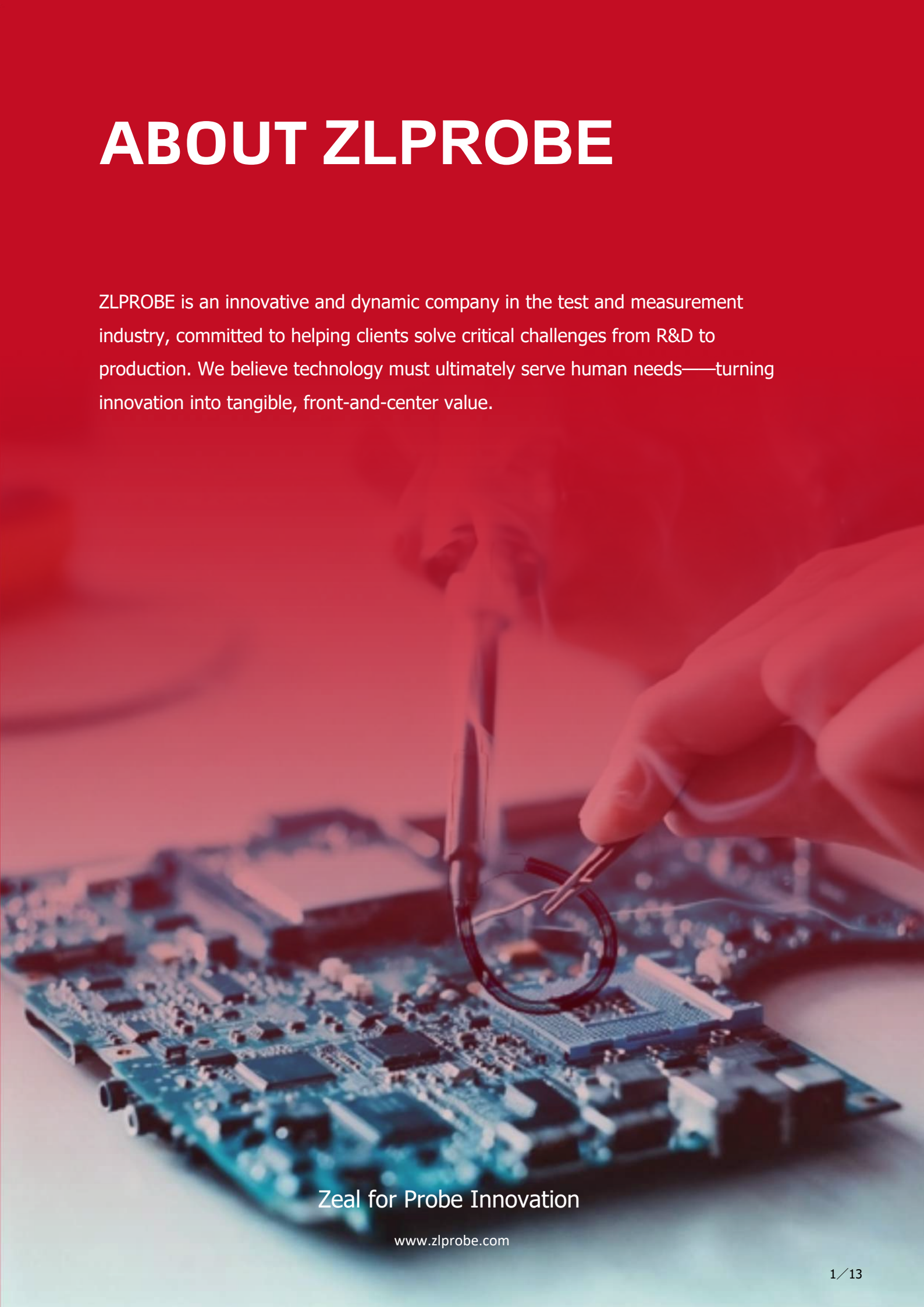
ZLPROBE TECHNOLOGIES CO., LTD

ABOUT ZLPROBE

ZLPROBE is an innovative and dynamic company in the test and measurement industry, committed to helping clients solve critical challenges from R&D to production. We believe technology must ultimately serve human needs——turning innovation into tangible, front-and-center value.



Zeal for Probe Innovation

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Zeal For Probe Innovation

120MHz High-frequency Rogowski Coil Current Probe

FCP120M Series

Applications

- Measurement of power frequency (50/60Hz) and high-order harmonic currents
- Semiconductor switching devices (IGBT, MOSFET, SiC, GaN)
- High-frequency sine waves, pulses, and transient currents
- Current and power quality test of motor drives, UPS, switching power supplies
- Measuring small AC currents in the presence of large DC currents
- Distributed current monitoring, power bus and 3-phase power supply

Key Features

- Thin, flexible, clip-around design, strong anti-interference capability
- Covering frequency range of **4Hz** to **120MHz**
- Peak current range from **60A** to **6KA**
- Coil thickness: **1.6mm**
- Coil length: **70mm**
- Coil insulation: **1kVrms**

FCP120M Series: Coil thickness **1.6mm**, Coil length **70mm**, Max. measurable conductor diameter **20mm**.

Model	Sensitivity (mV/A)	Peak Current (A)	Noise (mVp-p)	Droop (%/ms)	LF Bandwidth -3dB(Hz)	Peakdi/dt (kA/μs)	HF Bandwidth -3dB(MHz)	Delay (ns)
FCP120M60	50	60	26	68	90	10	120	
FCP120M150	20	150	18	42	50	10	120	
FCP120M300	10	300	15	12	20	20	120	
FCP120M600	5.0	600	15	8	15	40	120	19
FCP120M1500	2.0	1500	10	3	10	40	120	
FCP120M3K	1.0	3000	5	2	4	40	120	
FCP120M6K	0.5	6000	5	2	4	40	120	

High-frequency "Forked" Rogowski Coil Current Probe

FCP16X & HFCP16X Series

Applications

- Double-pulse, DPT test of SiC/GaN high-speed switching devices
- Loop current monitoring in high-frequency inverters power supplies
- EMC high-frequency noise source localization (20–80MHz range)
- Transient current capture in pulsed power supplies RF power modules
- PFC and LLC resonant loop analysis in HF data center power systems

Key Features

- Novel **fork-shaped** coil design, allowing access to narrow pins where rigid or looped coil probes cannot reach
- Frequency range: **2Hz** to **80MHz**
- Coil thickness: **1.6mm**
- Coil voltage: **1kVrms**
- Peak current rating from **60A** to **12KA**

FCP16X series: Coil thickness **1.6mm**, max. bandwidth **50MHz**

Model	Sensitivity (mV/A)	Peak current (A)	Noise (mVp-p)	Droop (%/ms)	LF bandwidth -3dB(Hz)	Peak di/dt (kA/μs)	HF bandwidth -3dB(MHz)	Delay (ns)
FCP16X1A60	100	60	20	65	75	4	50	18
FCP16X1A120	50	120	15	35	34	8	50	
FCP16X1A300	20	300	15	9	15	20	50	
FCP16X1A600	10	600	10	6	10	40	50	
FCP16X1A1200	5.0	1200	10	3	6	70	50	
FCP16X1A3K	2.0	3000	5	2	4	70	50	
FCP16X1A6K	1.0	6000	5	2	4	70	50	
FCP16X1A12K	0.5	12000	5	1.8	2	70	50	

HFCP16X series: Coil thickness **1.6mm**, max. bandwidth **80MHz**

Model	Sensitivity (mV/A)	Peak current (A)	Noise (mVp-p)	Droop (%/ms)	LF bandwidth -3dB(Hz)	Peakdi/dt (kA/μs)	HF bandwidth -3dB(MHz)	Delay (ns)
HFCP16X1A60	100	60	20	65	75	4	80	18
HFCP16X1A120	50	120	15	35	34	8	80	
HFCP16X1A300	20	300	15	9	15	20	80	
HFCP16X1A600	10	600	10	6	10	40	80	
HFCP16X1A1200	5.0	1200	10	3	6	70	80	
HFCP16X1A3K	2.0	3000	5	2	4	70	80	
HFCP16X1A6K	1.0	6000	5	2	4	70	80	
HFCP16X1A12K	0.5	12000	5	1.8	2	70	80	

50MHz High-frequency Rogowski Coil Current Probe

HFCP1608 Series

Applications

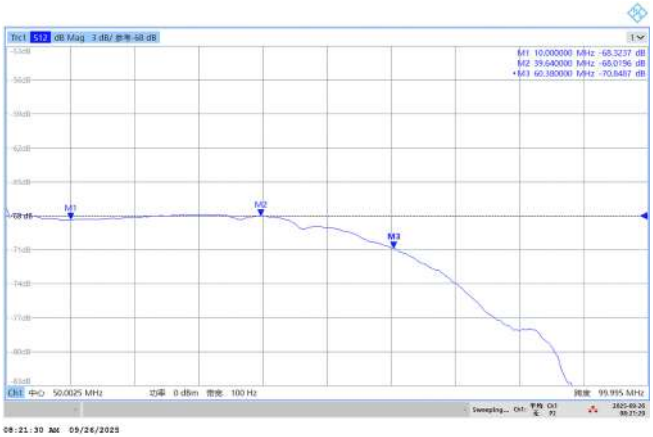
- High-frequency driver and inverter loop current measurement
- Current monitoring in industrial automation equipment
- EMI high-frequency current scanning
- Communication power supply and server power supply testing
- Current evaluation of PCB traces / multi-core cable harnesses

Key Features

- Flexible Rogowski coil design with 360° looped measurement
- Models cover a range of **2Hz** to **50MHz**
- Coil thickness: Std. **1.6mm** (up to 1.0mm, made-to-order)
- Coil length: Std. **80mm** (made-to-order)
- Current ratings from **60A** pk to **12kA** pk

HFCP1608 series: Coil thickness **1.6mm**, Coil insulation **1kVrms**, Coil length **80mm**

Model	Sensitivity (mV/A)	Peak Current (A)	Noise (mVp-p)	Droop (%/ms)	LF Bandwidth -3dB(Hz)	Peak di/dt (kA/ μs)	HF Bandwidth -3dB(MHz)	Delay (ns)
HFCP16081A60	100	60	20	65	75	4	50	18
HFCP16081A120	50	120	15	35	34	8	50	
HFCP16081A300	20	300	15	9	15	20	50	
HFCP16081A600	10	600	10	6	10	40	50	
HFCP16081A1200	5.0	1200	10	3	6	70	50	
HFCP16081A3K	2.0	3000	5	2	4	70	50	
HFCP16081A6K	1.0	6000	5	2	4	70	50	
HFCP16081A12K	0.5	12000	5	1.8	2	70	50	



30MHz Rogowski Coil Current Probe

*FCP1608 Series

Applications

- Photovoltaic inverters and energy storage PCS
- Data center power supplies, PFC, and LLC circuits
- EV high-voltage cable harnesses
- Industrial control equipment and motor drives
- Current transient measurement in power electronic switching circuits

Key Features

- Flexible, clip-around, easy to use Rogowski coil design
- Frequency range: **0.05Hz to 30MHz**
- *Coil thickness: **1.0mm / 1.6 mm / 4.0 mm / 8.0 mm**
- Coil insulation: **1KVrms / 5KVrms / 10KVrms**
- Coil length: **80mm / 100mm / 300mm** (made-to-order)
- Peak current range: 60A to 300kA

FCP1608 Series (Original Models) Coil thickness: **1.6mm** Coil insulation: **1kVrms** Coil length: **80mm**

Model	Sensitivity (mV/A)	Peak Current (A)	Noise (mVp-p)	Droop (%/ms)	LF Bandwidth -3dB(Hz)	Peak di/dt (kA/μs)	HF Bandwidth -3dB(MHz)	Delay (ns)
FCP16081A60	100	60	20	65	75	4	30	18
FCP16081A120	50	120	15	35	34	8	30	
FCP16081A300	20	300	15	9	15	20	30	
FCP16081A600	10	600	10	6	10	40	30	
FCP16081A1200	5.0	1200	10	3	6	70	30	
FCP16081A3K	2.0	3000	5	2	4	70	30	
FCP16081A6K	1.0	6000	5	2	4	70	30	
FCP16081A12K	0.5	12000	5	1.8	2	70	30	

FCP4000 Series

Coil thickness: **4.0mm** Coil insulation: **5kVrms** Coil length: **100mm/200mm**

Model	Sensitivity (mV/A)	Peak Current (A)	Noise (mVp-p)	Droop (%/ms)	LF BW -3dB(Hz)	Peak di/dt (kA/μs)	HF BW -3dB(MHz)		Delay (ns)
							100mm	200mm	
FCP40001A120	50	120	15	4.8	8	2	10	5	24
FCP40001A300	20	300	12	3.6	6	2.5	20	10	
FCP40001A600	10	600	10	1.8	4	5	20	10	
FCP40001A1200	5.0	1200	10	0.8	2	10	20	10	
FCP40001A3K	2.0	3000	8	0.4	2	25	20	10	
FCP40001A6K	1.0	6000	7	0.25	2	40	20	10	
FCP40001A12K	0.5	12000	5	0.2	1	40	20	10	
FCP40001A30K	0.2	30000	5	0.1	1	40	20	10	
FCP40001A60K	0.1	60000	5	0.1	0.4	40	20	10	
FCP40001A120K	0.05	120000	5	0.1	0.4	40	20	10	

FCP8000 Series

Coil thickness: **8.0mm** Coil insulation: **10kVrms** Coil length: **300mm/600mm**

Model	Sensitivity (mV/A)	Peak Current (A)	Noise (mVp-p)	Droop (%/ms)	LF Bandwidth -3dB(Hz)	Peak di/dt (kA/μs)	HF Bandwidth -3dB(MHz)		Delay (ns)
							300mm	600mm	
FCP80001A120	50	120	18	20	25	2	16	10	78
FCP80001A300	20	300	18	10	10	4	16	10	
FCP80001A600	10	600	14	0.9	3	4	16	10	
FCP80001A1200	5.0	1200	14	0.9	3	8	16	10	
FCP80001A3K	2.0	3000	7	0.7	1	20	16	10	
FCP80001A6K	1.0	6000	5	0.5	0.6	40	16	10	
FCP80001A12K	0.5	12000	3.5	0.35	0.4	40	16	10	
FCP80001A30K	0.2	30000	3	0.7	0.2	40	16	10	
FCP80001A60K	0.1	60000	3	0.1	0.1	40	16	10	
FCP80001A120K	0.05	120000	3	0.06	0.05	40	16	10	
FCP80001A300K	0.02	300000	3	0.03	0.05	40	16	10	

FCP16081A300

Low-frequency Rogowski Coil Current Probe

LFCP Series

Applications

- High-power inverters (>100 kW)
- Wind/solar photovoltaic combiner boxes
- Grid harmonics analysis
- Industrial busbars, high-current electroplating/ welding power supplies

Key Features

- Flexible, clip-around, easy to use Rogowski coil design
- Frequency range: **0.05 Hz to 200 kHz**
- Coil thickness: 6mm Coil
- insulation: 10KVrms
- Coil length: 140 mm (made-to-order)
- Peak current range: 120A to 30kA

***MADE-TO-ORDER*: Coil length / Coil thickness / Peak current**

"Forked" coil thickness, 1.3mm/1.6mm

Coil length 600mm, thickness 8.00mm

Coil length 200mm, thickness 4.0mm

Coil length 80mm, thickness 1.6mm

Ultra-thin 1.0mm

Extra-large coil length

100MHz High Voltage Differential Probe

ZLHV1000 Series

Applications

- Power supply and power electronics
- Industrial and frequency conversion equipment
- Electronic equipment
- Experimental and testing scenarios

Key Features

- Support floating measurement
- Multiple measurement ranges
- USB-C power supply, standard BNC interface
- 5MHz bandwidth limit function
- Auto Recovery function
- High-fidelity measurement

Specifications

Model		ZLHV1150		ZLHV1300		ZLHV110K	
Bandwidth (-3dB)		100MHz					
Rise Time		≤3.5ns					
Accuracy		±1%					
Range (Attenuation Ratio)		50X/500X		100X/1000X		100X/1000X	
Max. Differential Measurement Voltage Vp (DC + Peak AC)		50X	±150V	100X	±300V	100X	±1000V
		500X	±1500V	1000X	±3000V	1000X	±10000V
Common Mode Voltage (DC + Peak AC)		±1500V		±3000V		±10000V	
Max. Input-to-Ground Voltage (Vrms)		600V CATIII 1000V CATII		600V CATIII 1000V CATII		1000V CATIII	
Input Impedance	Single-ended to ground	4.5MΩ		9MΩ		40MΩ	
	Differential input	9MΩ		18MΩ		80MΩ	
Input Capacitance	Single-ended to ground	< 2.2pF		< 1.2pF		1.2pF	
	Differential input	< 1.1pF		< 0.6pF		0.6pF	
CMRR	DC	> 80dB		> 80dB		> 80dB	
	100kHz	> 60dB		> 60dB		> 60dB	
	1MHz	> 50dB		> 50dB		> 50dB	
Noise (Vrms)		50X	<50mV	100X	<100mV	100X	<150mV
		500X	<200mV	1000X	<350mV	1000X	<700mV

220MHz High Voltage Differential Probe

ZLHV2000 Series

Applications

- Power supply and power electronics
- Industrial and frequency conversion equipment
- Electronic equipment
- Experimental and testing scenarios

Key Features

- Support floating measurement
- Multiple measurement ranges
- USB-C power supply, standard BNC interface
- 5MHz bandwidth limit function
- Auto Recovery function
- High CMRR
- User-friendly calibration

Specifications

Model		ZLHV2150		ZLHV2300	
Bandwidth (-3dB)		220MHz			
Rise Time		≤1.6ns			
Accuracy		±1%			
Range (Attenuation Ratio)		50X/500X		100X/1000X	
Max. Differential Measurement Voltage Vp (DC + Peak AC)		50X	±150V	100X	±300V
		500X	±1500V	1000X	±3000V
Common Mode Voltage (DC + Peak AC)		±1500V		±3000V	
Max. Input-to-Ground Voltage (Vrms)		600V CATIII 1000V CATII		600V CATIII 1000V CATII	
Input Impedance	Single-ended to ground	4.5MΩ		9MΩ	
	Differential input	9MΩ		18MΩ	
Input Capacitance	Single-ended to ground	< 2.2pF		< 1.2pF	
	Differential input	< 1.1pF		< 0.56pF	
CMRR	DC	> 80dB		> 80dB	
	100kHz	> 60dB		> 60dB	
	1MHz	> 50dB		> 50dB	
Noise (Vrms)		50X	<50mV	100X	<100mV
		500X	<200mV	1000X	<400mV

Integrated Isolated Probe

ZLIP Series

Applications

- SiC or GaN, FET or IGBT Half/Full Bridge Designs
- Switching Power Supply Design
- Motor Drive, Inverter Design
- New Energy Vehicles (OBC, BMS, Motor Control)
- Photovoltaic, Energy Storage, etc. Testing
- Floating Measurement Scenarios

Key Features

- CMRR up to **140dB**
- Differential-mode voltage **±50V** / **±2500V**
- Multiple voltage ranges available
- Common-mode voltage ±10KVpk
- Multiple DUT connection designs for ease of use
- BNC interface compatible with all oscilloscopes
- Power-on and ready to measure, no warm-up

Model	ZLIP200	ZLIP500
Bandwidth (-3dB)	200MHz	500MHz
Rise time	≤1.75ns	≤700ps
Accuracy	±1%	
Noise	0.8mVrms	
Common mode voltage	10kVpk	

CMRR:

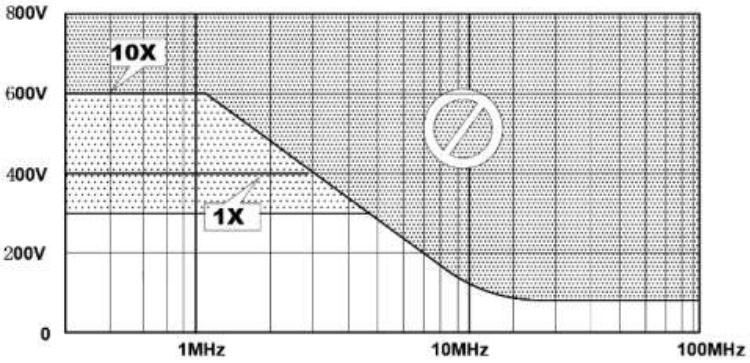
DC	1M	100M	200M	500M
140dB	100dB	90dB	80dB	70dB

Passive Probe

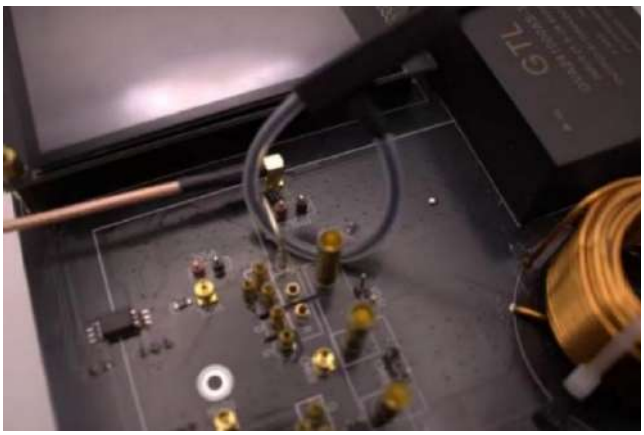
N5000A Series

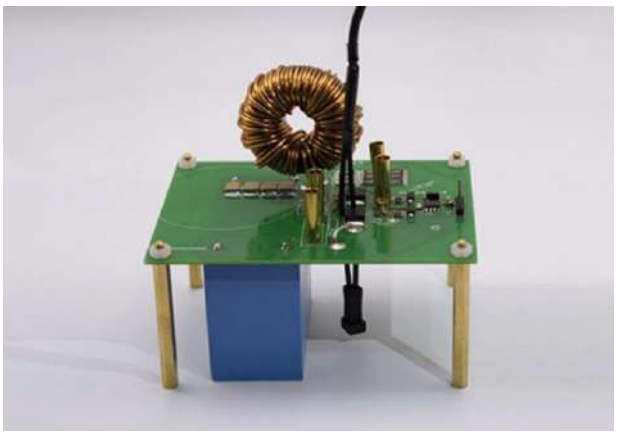
N5100A 100MHz
N5200A 200MHz
N5500A 500MHz

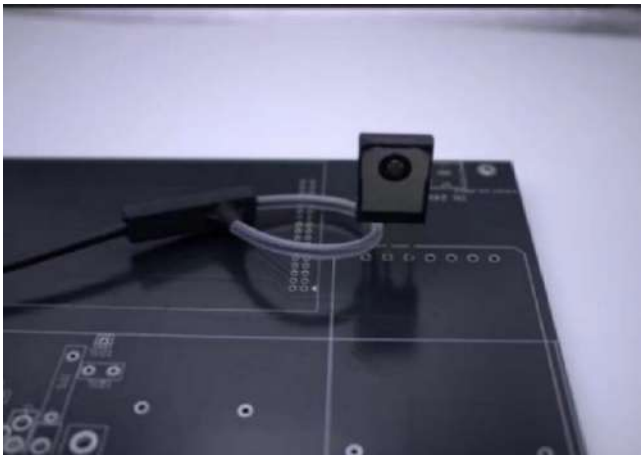
Max. operating voltage derating curve (VDC+Peak AC)

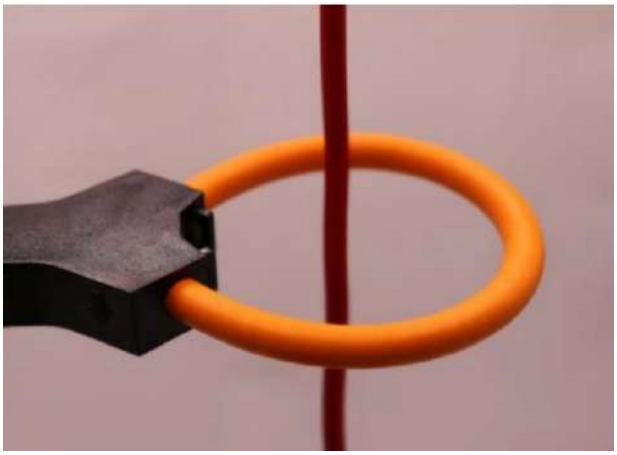


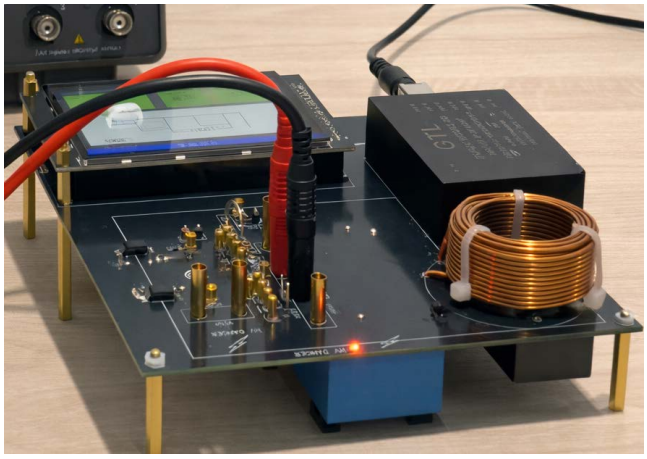
Item	N5100A	N5200A	N5500A
Attenuation	X1 ; X10		
Input Resistance	1MΩ / 10MΩ		
Input Capacitance Compensation	X1: 85pF ~ 115pF X10: 14.5pF ~ 17.5pF		
Range	15pF ~ 35pF		
System Bandwidth	X1:DC~6MHz	X1:DC~6MHz	X1:DC~6MHz
	X10: DC~100MHz	X10: DC~200MHz	X10: DC~500MHz
Maximum Working	X1: <200VDC+Peak AC		
	X10: <600VDC+Peak AC		
Net Weight	< 55g		
Cable Length	120cm		
Temperature Operation			
	-10℃ ~ +50℃		
NonOperation	-20℃~+75℃		
Humidity	≤85% (Relative Humidity)		











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