



R&S®RT-ZHD HIGH VOLTAGE DIFF. PROBE FAMILY

versus LeCroy HVD3106A/3206A/3605A



The R&S®RT-ZHD family outperforms the LeCroy HVD3106A/3206A/3605A probes with higher bandwidths and excellent additional functionalities, enabling precise high voltage measurements

To achieve the maximum power efficiency and power densities in switched-mode power supplies, switching loss has to be minimized. This requires the use of modern, fast-switching semiconductors. The R&S®RT-ZHD high voltage differential probes offer a bandwidth of up to 200 MHz and an excellent common mode rejection ratio (CMRR) over a broad frequency range, making them ideal for measurements on fast-switching power electronics. Extraordinarily low added noise results in high-quality measurements.

Your benefit	Features
2000 V offset capability with maximum vertical sensitivity	Due to their integrated offset circuit, the R&S®RT-ZHD probes offer an offset voltage range that is independent of the vertical setting of the oscilloscope and the attenuation factor of the probe. The smallest ripple voltages can be measured on large DC link voltages without compromising sensitivity.
Excellent functions	Automatic range adjustment, overrange signaling, integrated DC voltmeter
Accurate results	Accurate, low inherent noise, high bandwidth and slew rate, high linearity, very low drift, high CMRR

Parameter	R&S®RT-ZHD07	R&S®RT-ZHD15	R&S®RT-ZHD16	R&S®RT-ZHD60	LeCroy HVD3106A	LeCroy HVD3206A	LeCroy HVD3605A
Specifications							
Input voltage	750 V	1500 V		6000 V	1500 V	2000 V	7000 V
Bandwidth	200 MHz	100 MHz	200 MHz	100 MHz	120 MHz	120 MHz	100 MHz
Interface	Rohde & Schwarz probe interface				ProBus		
Input to ground	300 V CAT III	1000 V CAT III			1000 V CAT III		
Attenuation	25:1 250:1	50:1 500:1		100:1 1000:1	50:1 500:1		100:1 1000:1
Noise (mV (RMS))	12 mV	20 mV	25 mV	70 mV	30 mV		65 mV
DC accuracy	0.5 %				1 %		
Drift	very low				-		
Common mode rejection ratio (CMRR)							
DC to 60 Hz	> 80 dB (meas.)				85 dB		
to 1 MHz	60 dB (meas.)				65 dB		
to 5 MHz	55 dB (meas.)				40 dB		
to 100 MHz	30 dB (meas.)				30 dB		
Additional functionality							
Additional offset compensation	±1000 V	±2000 V			-		
DC voltmeter	integrated				-		
R&S®ProbeMeter measurement error	< 0.1 %			< 0.12 %	-		

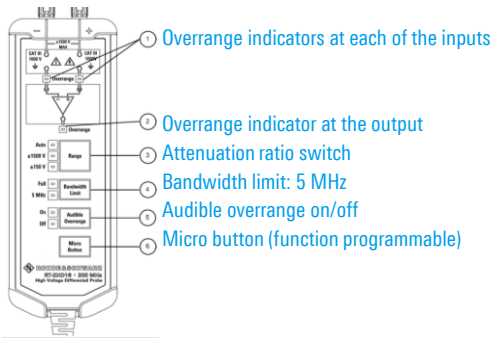


For more information, visit

www.rohde-schwarz.com/product/high-voltage-probes

Comparison of functionality

R&S®RT-ZHD family



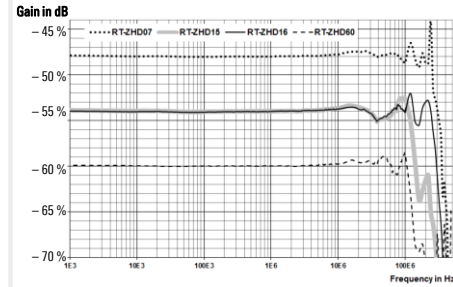
The R&S®RT-ZHD features a wide range of additional functionalities that are not available on the LeCroy HVD3106A/3206A/3605A

LeCroy HVD3106A/3206A/3605A

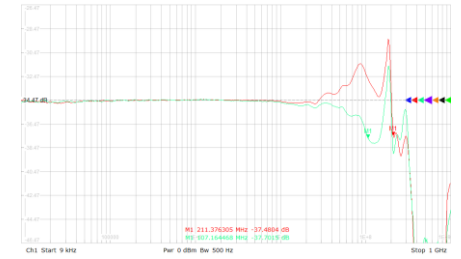


- No offset generation in the probe
- No overrange indication at the input
- No overrange indication at the output
- No micro button (not programmable)

Bandwidth and step response comparison



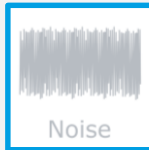
The R&S®RT-ZHD features up to 200 MHz bandwidth. This makes it possible to precisely capture flanks with a rise time of up to 1.75 ns, making the R&S®RT-ZHD suitable for all high-power applications.



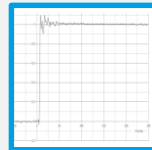
The LeCroy HVD probes have a maximum bandwidth of 120 MHz, 40 % less than the maximum bandwidth of the R&S®ZHD probes. This limits the possibility to capture flanks precisely to a maximum rise time of only 3 ns.

Advantages of the R&S®RT-ZHD over the LeCroy HVD3106A/3206A/3605A

High measurement accuracy



Minimal noise



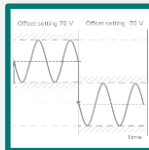
Very high linearity and very small zero error



Very high temperature stability

Best in class

Versatile range of applications



Very high DC offset range (e.g. ±2000 V with 25 mV/div)



Precise voltage measurements (0.1 % with R&S®ProbeMeter)



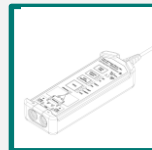
Measurements in CAT III conditions

Unique feature

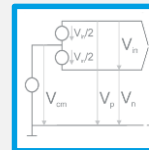
Easy operation



Control the oscilloscope via probe



DC common mode voltage always readable (R&S®ProbeMeter)



Automatic divider setting and overvoltage display