

# Probe Specifications

ZT6101, ZT6102, ZT6103



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# Specifications

The system bandwidths for the various ZTEC Instruments products versus probe is listed in Table 1.

Table 1 - System Bandwidths (in MHz)

	ZT6101	ZT6102	ZT6103
ZT4611	450	17	480
ZT410	100	15	100
ZT412	150	10	150
ZT431	90	15	90
ZT432	90	7	100
ZT450-20	250	80	250
ZT450-50	NA	70	NA
ZT450-55	450	15	450
ZT452-20	50	30	250
ZT452-50	NA	30	NA
ZT452-55	NA	NA	450
ZT1428	100	20	100

If your instrument is not represented in Table 1, please visit our website at [www.ztecinstruments.com](http://www.ztecinstruments.com) for current information.

Table 3 – Electrical Characteristics

	ZT6101	ZT6102	ZT6103
Attenuation	10x	1x	10x
Input Resistance	10M $\Omega$	1M $\Omega$	10M $\Omega$
Input Capacitance	14pF	100pF	8pF
Compensation	Yes	None	Yes

For probes which are able to be compensated, refer to the compensation procedure.

# General Safety Summary

Review the following precautions to avoid injury and prevent damage to any products connected to the probe.

To Avoid Fire and Personal Injury:

Observe Maximum Working Voltage. Do not use the probes above the voltages listed in Table 2.

Table 2 - Maximum Working Voltage

	Maximum Working Voltage (V dc, CAT I)
ZT6101	600
ZT6102	300
ZT6103	600

Do not elevate the common terminal.

Do not operate with suspected failures.

Do not operate in wet/damp conditions.

Do not operate in an explosive environment.

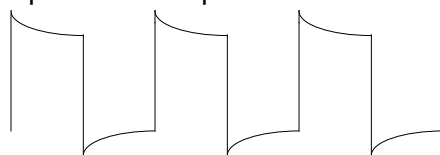
Keep product surfaces clean and dry.

## Compensating your probe

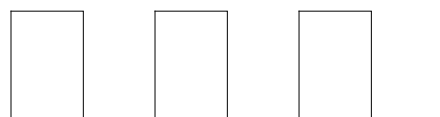
To maximize the bandwidth of an attenuating probe, the probe capacitor must be adjusted such that the input capacitance of the scope is canceled. The 10x probes have a built in compensation network. To compensate the probe:

1. Attach the probe to the oscilloscope
2. Connect a 1 kHz square wave to the probe tip
3. Use the provided adjustment tool to adjust the compensation network (located on the probe tip on the ZT6103 and on the BNC connector on the ZT6101) to obtain a waveform that is as square and flat topped as possible. The waveform should not have overshoot or rounding. See Fig 1 for the correct square wave response.

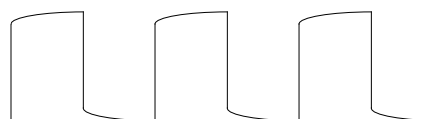
Figure 1 - Probe compensation square wave response



Over compensated



Properly compensated



Under compensated