

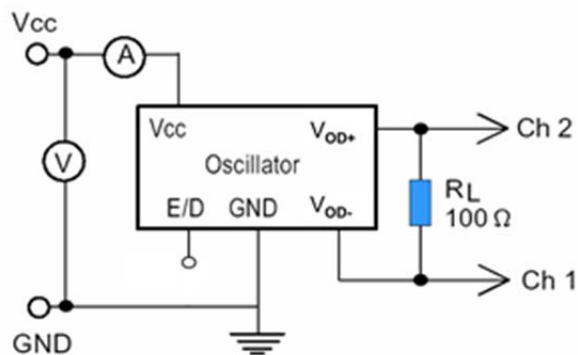
Understanding LVDS

APPLICATION NOTES QTAN-109

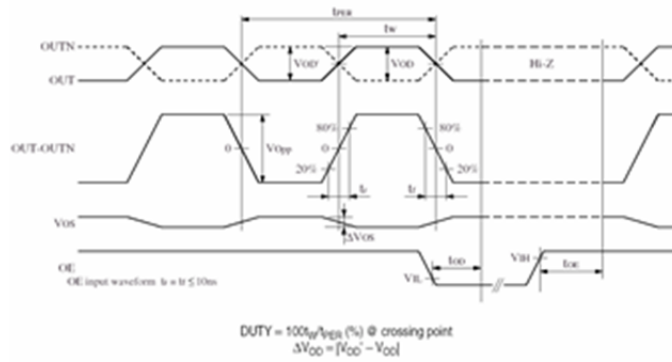
LVDS

- LVDS/LVPECL compatible inputs for a wide range of applications
- Low jitter for better signal integrity
- Standard 3.3Vdc and 2.5Vdc supply
- Full military and industrial range temperatures

LVDS Testing Circuit

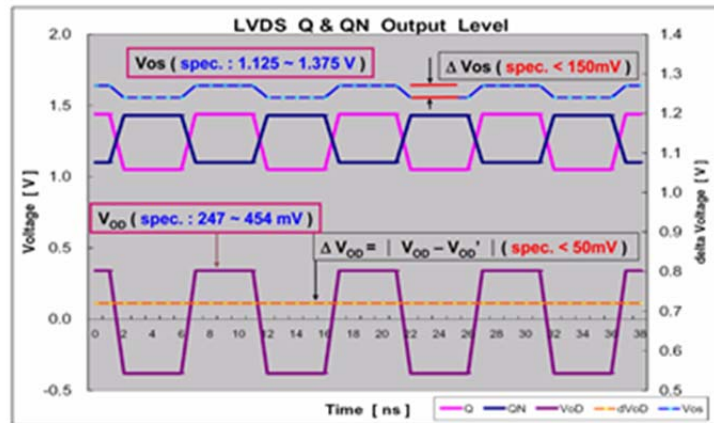


LVDS Output Waveform



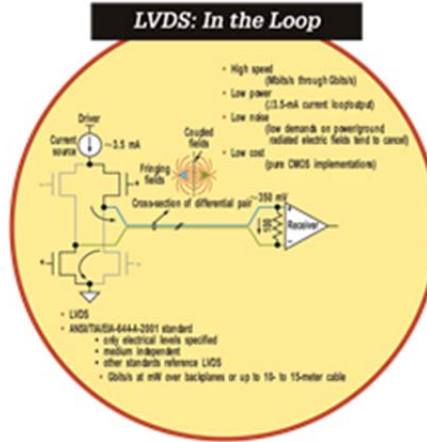
Timing Chart

LVDS Output Level & Waveform

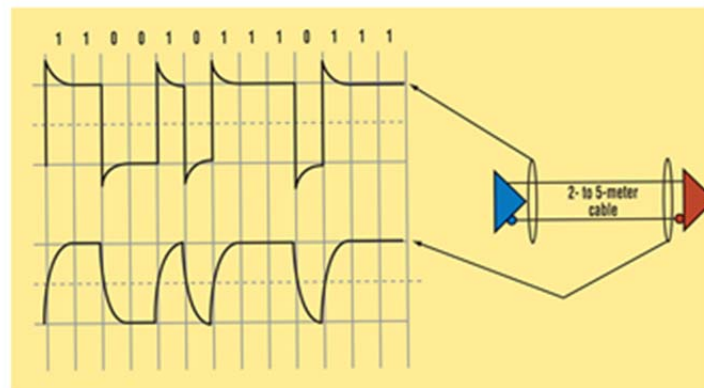


LVDS: In the Loop

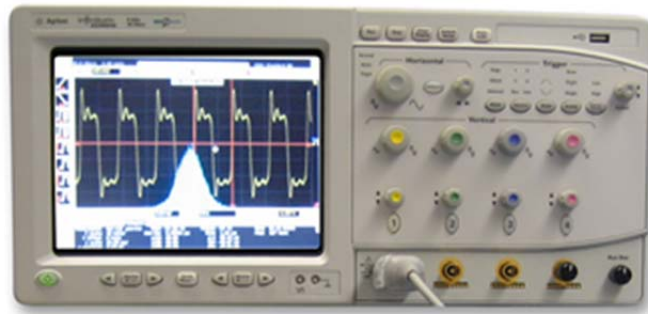
Current loop direction (clockwise or counterclockwise) determines the logic level (high or low). Approximately 3.5mA is driven down one wire of the pair and returns through the other wire of the pair. A voltage (approximately $\pm 3.5\text{mA} \times 100\Omega = \pm 350\text{mV}$) is generated across the termination resistor.



LVDS Signal Integrity

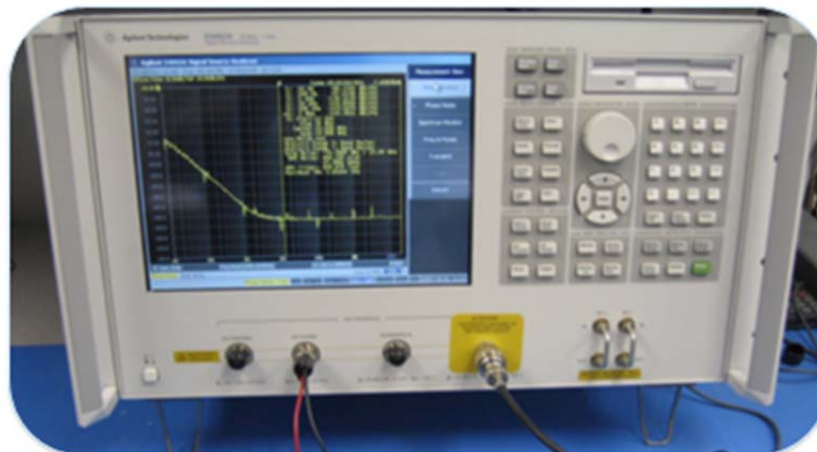


LVDS Test Set Up



DSO Agilent Infinium 80604B
6 GHz 40 Gsa/s
Agilent Differential Probe 1134A
7GHz

Phase Noise Test



Phase Noise of QT93LW10M-250MHz

January 28, 2009

PHASE NOISE OF QT93LW10M-250MHz

