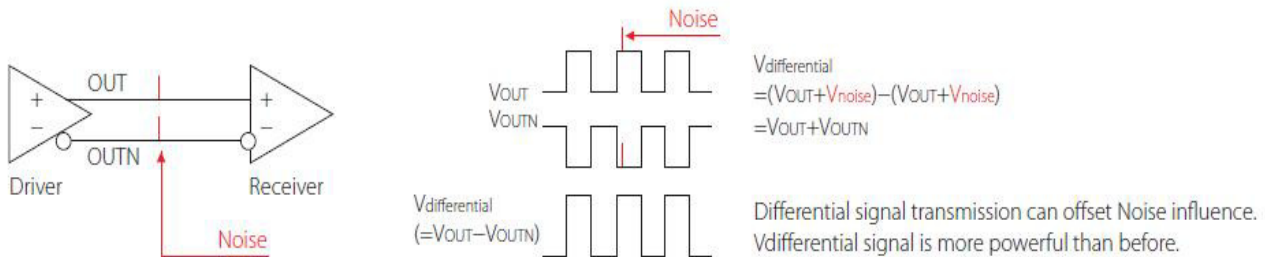


Differential Outputs Crystal Oscillator

In the past, the Bus interface of PC had been quick moving from drive voltage 5V of TTL and CMOS to drive voltage 3.3V of LVTTTL and LVCMOS which are the mainstream. Recently people desire mostly the high speed of Bus interface and develop successfully Giga Ethernet Technology which can transmit Gbps. However, under gigabyte transmission, the Clock will be over 100MHz even higher, the Noise influence will be very obvious. For providing a good quality crystal oscillator, SIWARD developed triumphantly OSC57A, OSC57B and SEV-7050. Those interface is differential interface of LVPECL and LVDS. Moreover, those can be used in high speed transmission without Noise influence.

Differential signal transmission can lower Noise influence.

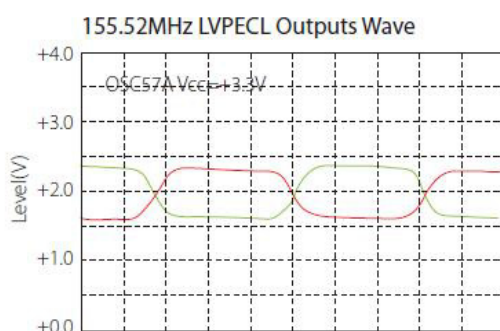
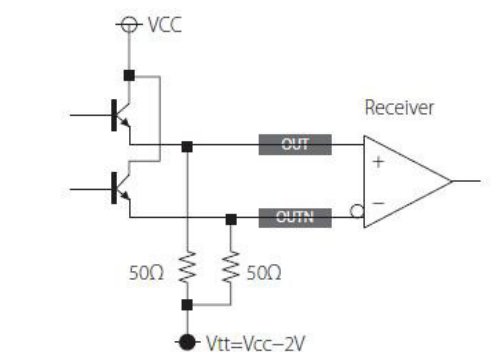


The following diagrams indicate the LVPECL and LVDS.

LVPECL (Low Voltage Positive Emitter Coupled Logic)

- Molecule Process: NPN-PNP Bipolar transistor
- Transporting speed / 800Mbps Max
- 750mV output with two reciprocal opposition direction signals
- ECL electronic diagram shows as following
- Terminated resistance: 50Ω / Terminated V_{tt}=V_{cc}-2V
- Function : System clock distribution

Output drawing of LVPECL



LVDS (Low Voltage Differential Signal)

- Molecule Process: MOS FET
- Transporting speed / 2Gbps Max.
- 350mV output with two reciprocal opposition direction signals
- Terminated resistance: 100Ω
- MOS electronic diagram shows as following
- Function : High speed transportation & power saving

Output drawing of LVDS

