

LVDS Rx/Tx(45nm) Design:

Parameter	LVDS Transmitter			Unit
	min	typ	max	
Supply Voltage	1.08	1.2	1.32	V
Operating temperature range	-40		85	C
Single ended output Impedance	40	50	62.5	ohm
Tr/Tf	150		0.3	UI
Output Static common mode voltage	150	200	250	mV
Differential output voltage	140	200	270	mV

Modulator Spec				
Frequency		750	1.5	MHz
Maximum Duty Cycle		50		%

Parameter	LVDS Receiver			Unit
	min	typ	max	
Supply Voltage	1.08	1.2	1.32	V
Operating temperature range	-40		85	C
Common-mode voltage	70		330	mV
Differential input high threshold			70	mV
Differential input low threshold	-70			mV
Single-ended input high voltage			460	mV
Single-ended input low voltage	-40			mV
Differential input impedance	80	100	125	ohm

Modulator Spec				
Frequency		750	1.5	MHz
Maximum Duty Cycle		50		%

- Project: LVDS
 - Technology: 45nm
- Work Done:
 - Architecture selection
 - Area analysis with multiple form factors (aspect ratio)
 - High level power analysis
 - Support for System level integration, package, bump ball map
 - Circuit design and Schematic implementation
 - High Level Floorplan implementation
 - Detailed Layout analysis and implementation
 - Complete physical verification, antenna
 - Signal integrity analysis, EMIR, GB, timing – for critical paths
 - Signoff checks - metal fill, density checks
 - Testability / DPPM checks
 - Final Tapeout checks and signoff
- Team size:
 - Lead: 1
 - Circuit Designer: 3
 - Layout Engineer: 3
- Project Duration: 6 months