

Product Details:

- ❖ Mixed Signal Integrated Write Strategy Laser diode driver supporting up to 12X DVD & CD R/RW.
- ❖ Completely programmable laser diode drivers with a low rise time
- ❖ 8bitx 8bit multiplying DAC outputs.
- ❖ The product has an HFM Oscillator programmable from 100 MHz to 500 MHz, with the internal PLL allowing a reduced-frequency clock input.
- ❖ The product has a Sample and a hold section.
- ❖ The product has a Serial port input up to 25 Mb/s for the device programming & read back.

Project Details:

- ❖ The project is intended to verify the write strategy engine's function of supporting multi-standard recordable optical disk drives.
- ❖ The various tests include the DC parameters of three 8 bit DACs, standard DC tests like Supply current test, leakage test, functional verification tests for the driver output current & PLL tests.
- ❖ The minimum and maximum frequency for the High Frequency Modulation section & the amplitude has to be verified using paged memory map.
- ❖ The devices were to be characterized in bench at first and then the ATE test readings have to be correlated accordingly.

Key Highlights

- ❖ LABVIEW communication using parallel port was first established to program the registers in the memory page when characterized at bench.
- ❖ The INL and DNL tests of the DAC were then characterized at bench using different register settings.
- ❖ User test routine was developed in the tester in order to translate the value to be written in the register to the memory page as the tester did not support such routines.
- ❖ External Oscilloscope was interfaced with the tester for effective measurement of the output frequency in the range of 250 to 400 MHz, as the tester could not support such high frequency measurements.
- ❖ The device characterization was done both at bench and tester level.
- ❖ The criticality was in external instrument interface, test time reduction, high frequency hardware handling, etc.

Equipments Used

Tester : Credence ASL 1000