Product Details:

- Low-Dropout Voltage Regulators / EL Lamp drivers
- Customer is a leading global manufacturer of IC solutions for the worldwide analog, Ethernet and high bandwidth markets.
- The customer products include advanced mixed-signal, analog, Ethernet switch and physical layer transceiver ICs.
- The customer has gained a reputation as a leading supplier of LDO regulators / Lamp drivers and is a major global supplier to the mobile phone and computing industries.

Project Details:

- The LDO product was designed to be used in RF module and hence had a very low drop-out with a good current load capability.
- The project included the standard DC tests like Line Regulation, Load Regulation, Drop-Out, Quiescent Current, Output Short Circuit Current and AC tests like PSRR etc.
- The customer wanted a Multi-Site Solution with the test time per site as minimum as possible.
- The EL Lamp Driver products required a critical hardware layout design that will induce minimum parasitic effect on the product.
- The devices were to be characterized in bench at first and then the ATE test readings have to be correlated accordingly.
- The project also required characterization of the part at different temperature settings and guard banding of the ambient test limits based on the variation.

Key Highlights

- The dropout voltage was very low less than hundred mV and required a precise measurement without an increased test time. Hence in order to keep the test time minimum, the test systems Arbitrary Waveform Generator & Digitizer Resources were used for performing all the DC tests in one single shot.
- The resources were the dual site were selected in such a way that most of the measurements could be done in parallel for both the sites.
- For measuring the high AC output of the Lamp Driver products, an external hardware circuitry was designed and built suitable enough for being compatible with the tester measurement resources.

- The criticality was in maintaining a very low resistance path between the DUT and the tester resources, resulting in an accurate & desirable measurement.

Equipments Used

Tester : Eagle ETS500, Credence ASL 1000