



Contribution ID: 8

Type: **Oral presentation**

# Innovative High Power, High Efficient Amplifier Design for Accelerator-Applications

*Thursday 23 June 2016 17:00 (30 minutes)*

Amplifiers for Broadcast applications with RF output power in the range of 100kW was a domain of tube (IOT) amplifiers.

Since innovative and powerful LDMOS transistors are available, IOT amplifiers are being replaced by solid state.

Efficiency and size of modern LDMOS-amplifiers are very competitive and not worse than tube based amplifiers anymore.

The big advantage to use LDMOS technology is the overall handling: low supply voltages, redundant RF power, high efficiency, serviceability, MTTR, etc.

All advantages "out of the broadcast world", i.e. high efficiency and broadband design, high redundancy, hot pluggable amplifier design, high availability and serviceability during operation can be applied to the design and requirements of broad- and narrowband amplifiers for accelerator applications.

This presentation shows how the technologies and design principles used in field proven and reliable broadcast transmitters, which are produced in high volumes and designed for 24/7 operation, can be adapted to fulfill the requirements of amplifiers for accelerator applications.

## Summary

This presentation shows how the technologies and design principles used in field proven and reliable broadcast transmitters, which are produced in high volumes and designed for 24/7 operation, can be adapted to fulfill the requirements of amplifiers for accelerator applications.

**Author:** Mr DALISDA, Uwe (Rohde & Schwarz GmbH & Co. KG)

**Presenter:** Mr DALISDA, Uwe (Rohde & Schwarz GmbH & Co. KG)

**Session Classification:** Solid state amplifiers 3