

# **Nortel Prototype Conducted Emissions of the 48V DC/DC Power Supply**

**Rick Brooks**

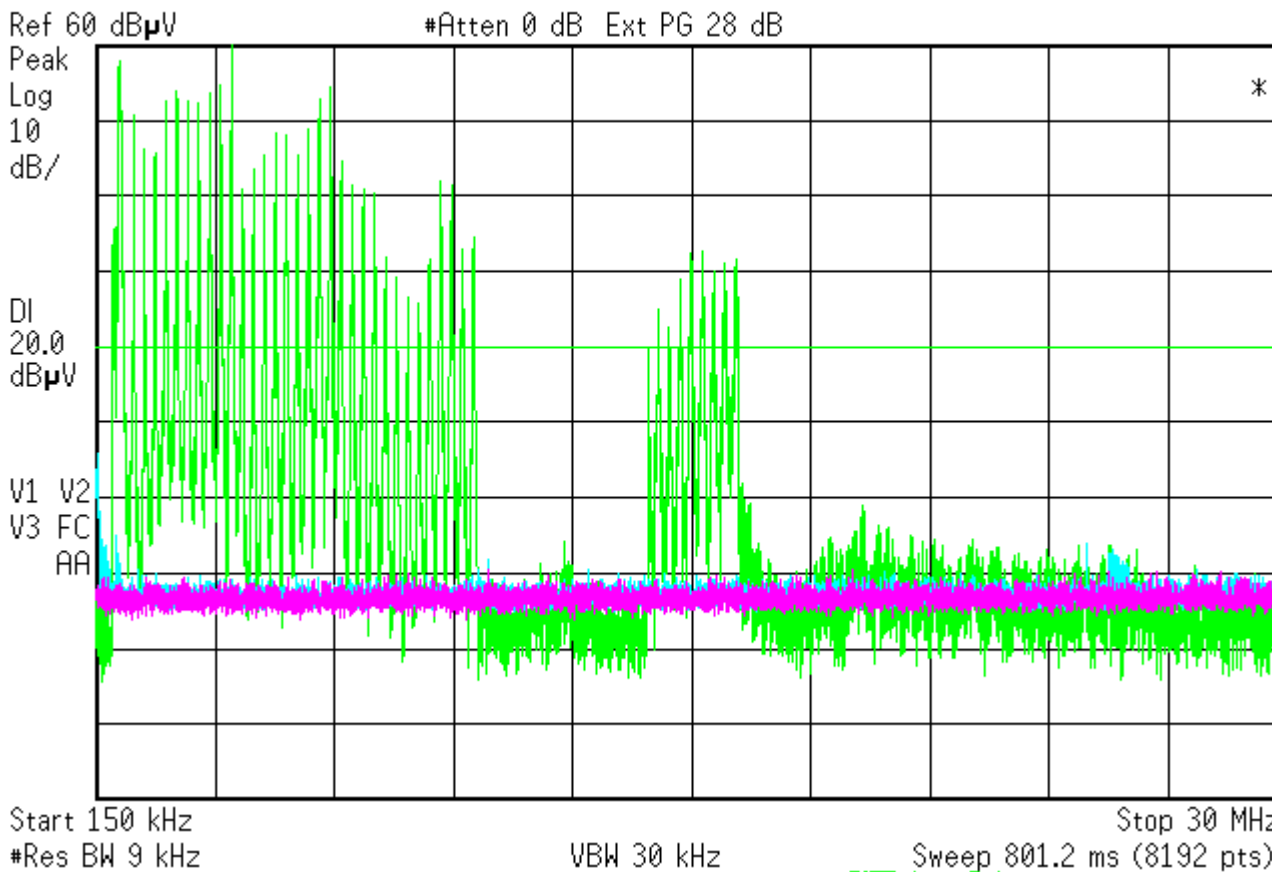
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# Diode Discovery, Conducted Common Mode Current, 0 dBuV = 0 dBuA

- **Discovery and 48 VDC Power, repeating on and off, baseline and discovery only on max hold**
  - baseline, max hold, (magenta trace)
  - Nortel proto on/off discovery only, no 48 VDC input, max hold (light blue trace)
  - Nortel proto on/off discovery and 48 VDC input, no max hold (light green trace), 15W switcher is turning on and off

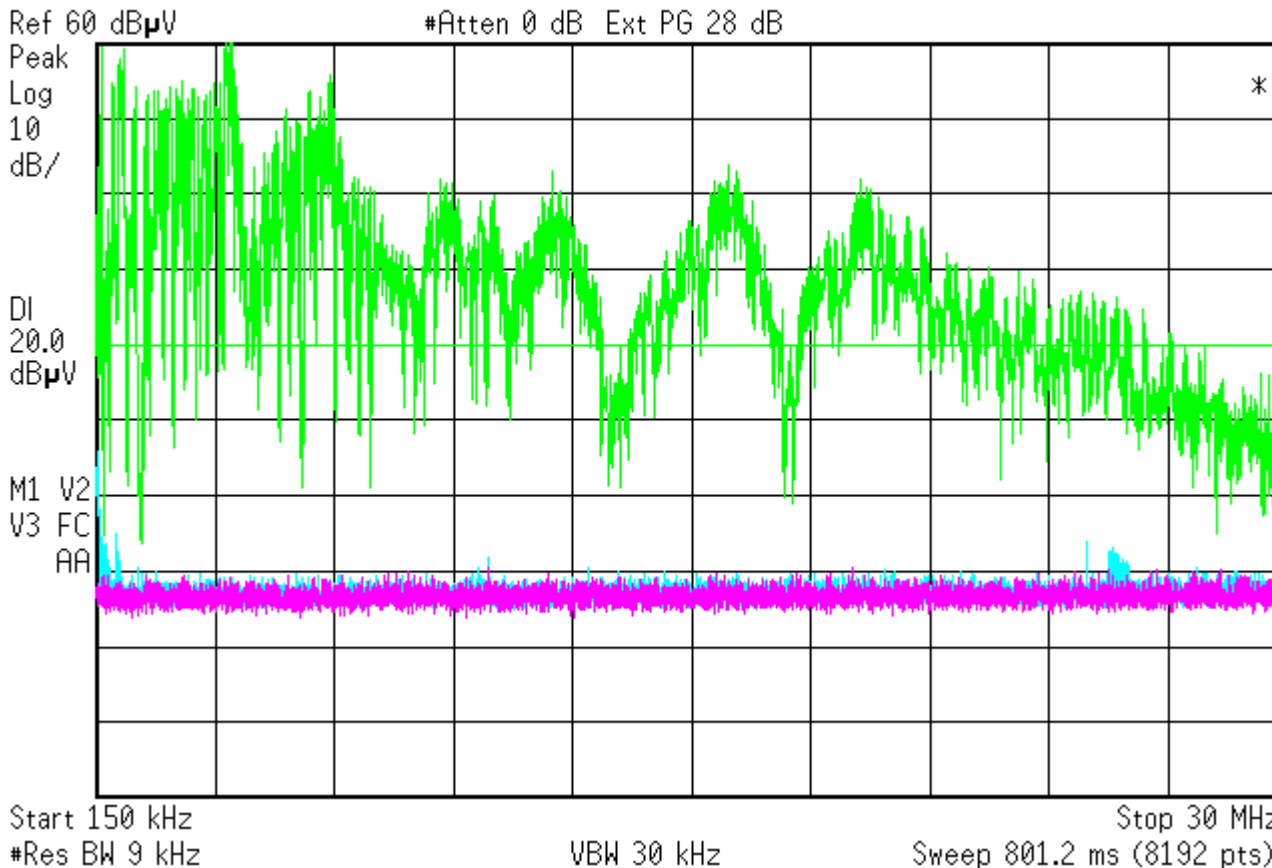
Agilent 10:18:55 Nov 3, 2000



# Diode Discovery, Conducted Common Mode Current, 0 dBuV = 0 dBuA

- **Discovery and 48 VDC Power, repeating on and off, all data on max hold, 5 minutes**
  - baseline, max hold, (magenta trace)
  - Nortel proto on/off discovery only, no 48 VDC input, max hold (light blue trace)
  - Nortel proto on/off discovery and 48 VDC input, max hold (light green trace), 15W switcher is turning on and off

Agilent 10:24:10 Nov 3, 2000



## Summary

- **The 48 VDC, 15 watt power supply is very noisy, when it is powering up and running**
  - It is just a prototype, the first rev of a power supply
- **We will have to fix this**
  - the second version of the power supply is much quieter
- **This may show that a secondary hot swap type switch (FET) will be necessary**
- **This is a separate issue from the discovery process**