

5 FCC Rules and Regulations Part 2 §2.1051: Spurious Emissions at Antenna Terminals; RSS-119 §6.3: Unwanted Emissions

5.1 Test Procedure

ANSI TIA-603-C-2004, Section 2.2.13.

The transmitter was interfaced with a spectrum analyzer through an appropriate 50 ohm attenuator and a notch filter. The transmitter was operated at maximum power. Attenuator and cable losses were accounted for.

Device with digital modulation: Modulated to its maximum extent using a pseudo random data sequence – 9600 bps.

The EUT was tested in three different transmitting configurations:

1. VRM and VRB units transmitting simultaneously on separate frequencies.
2. VRM transmitting alone at high power.
3. VRB transmitting alone at high power.

The VRM was set to a power of 40.0 dBm (high power) and the VRB was set to a power of 34.8 dBm (high power) for all configurations. Plots represent combined mode measurements and tables represent VRM and VRB transmitting individually.

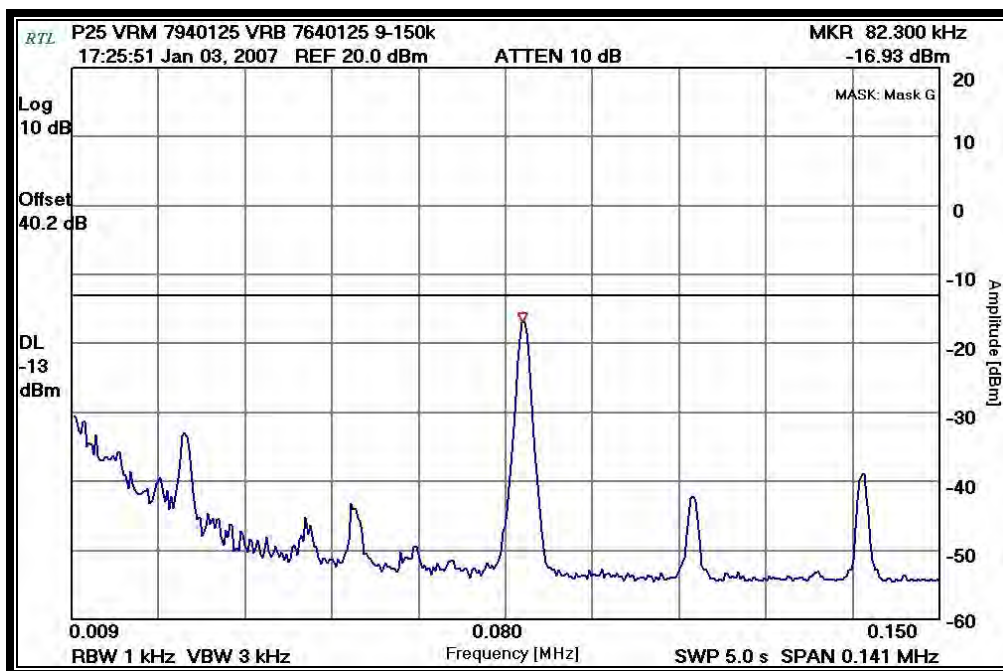
5.2 Test Data

Frequency range of measurement per Part 2.1057: 9 kHz to $10 \times F_c$.

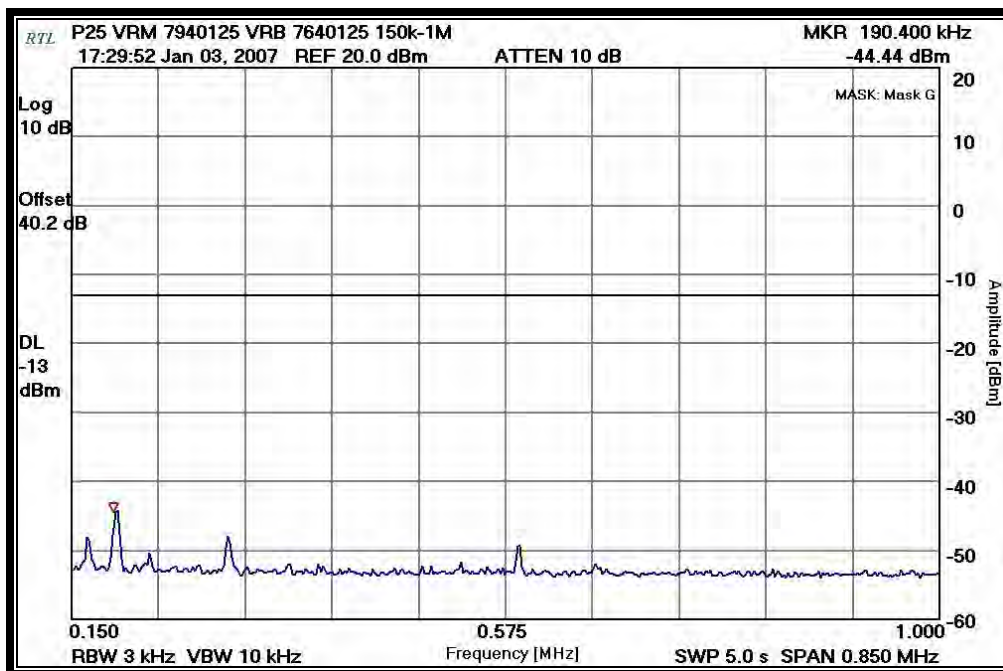
Limits: $P(\text{dBm}) - (43 + 10 \times \text{LOG } P(\text{W}))$

The worst case (unwanted emissions) channels are shown. The magnitude of emissions attenuated more than 20 dB below the FCC limit need not be recorded.

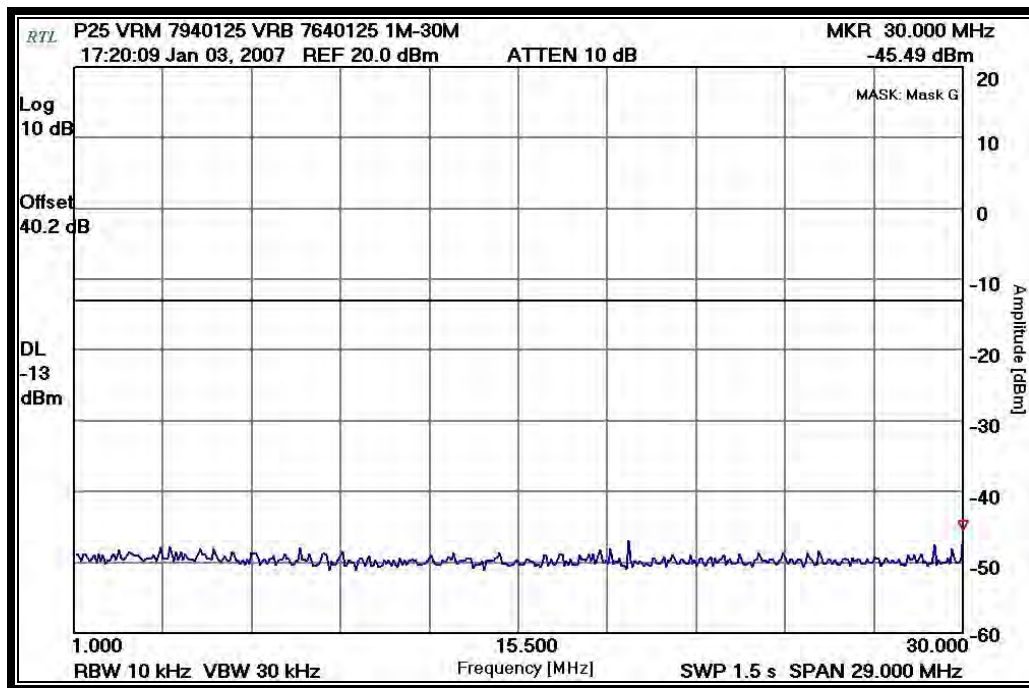
Plot 5-1: Conducted Spurious Emissions – P25 mode - VRM-794.0125/VRB-764.0125 MHz (9 kHz–150 kHz)



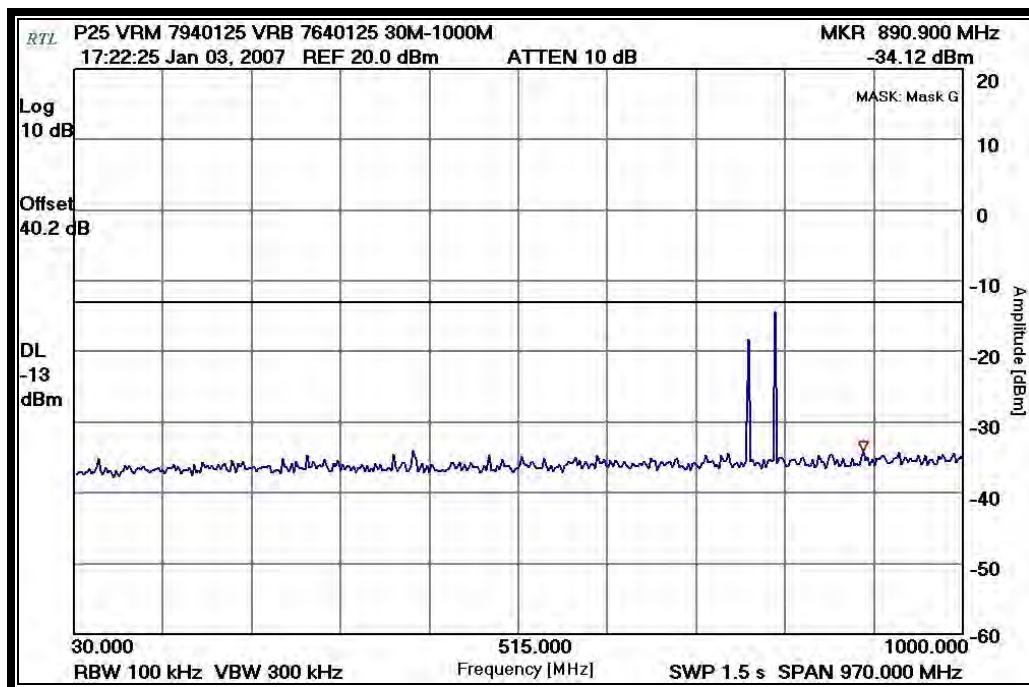
Plot 5-2: Conducted Spurious Emissions – P25 mode VRM-794.0125/VRB-764.0125 MHz (150 kHz–1 MHz)



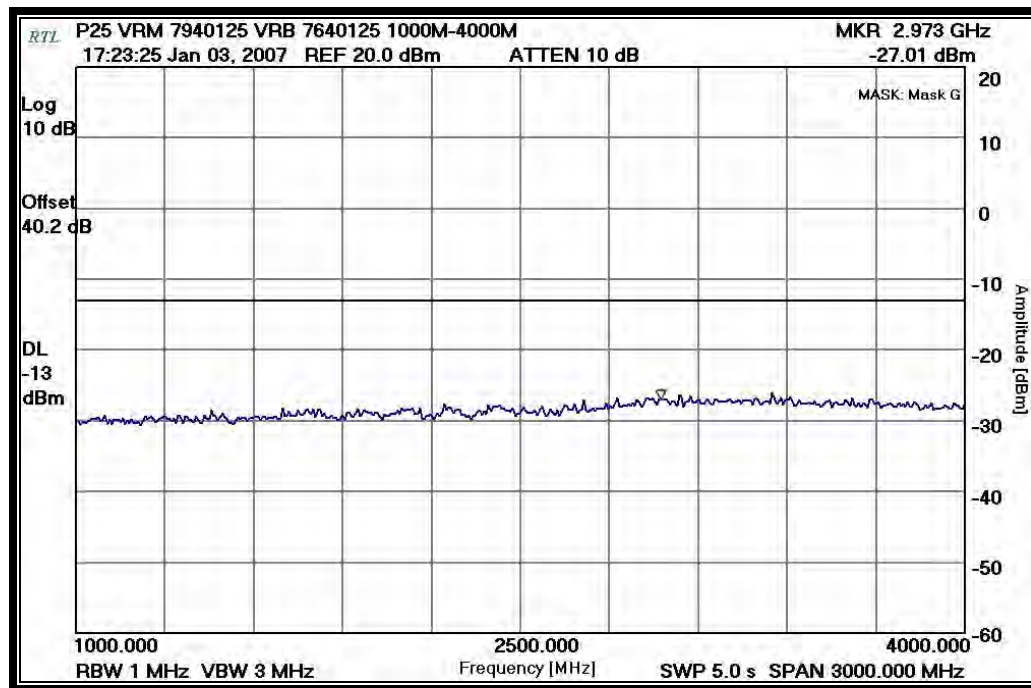
Plot 5-3: Conducted Spurious Emissions - P25 mode – VRM-794.0125/VRB-764.0125 (1 MHz–30 MHz)



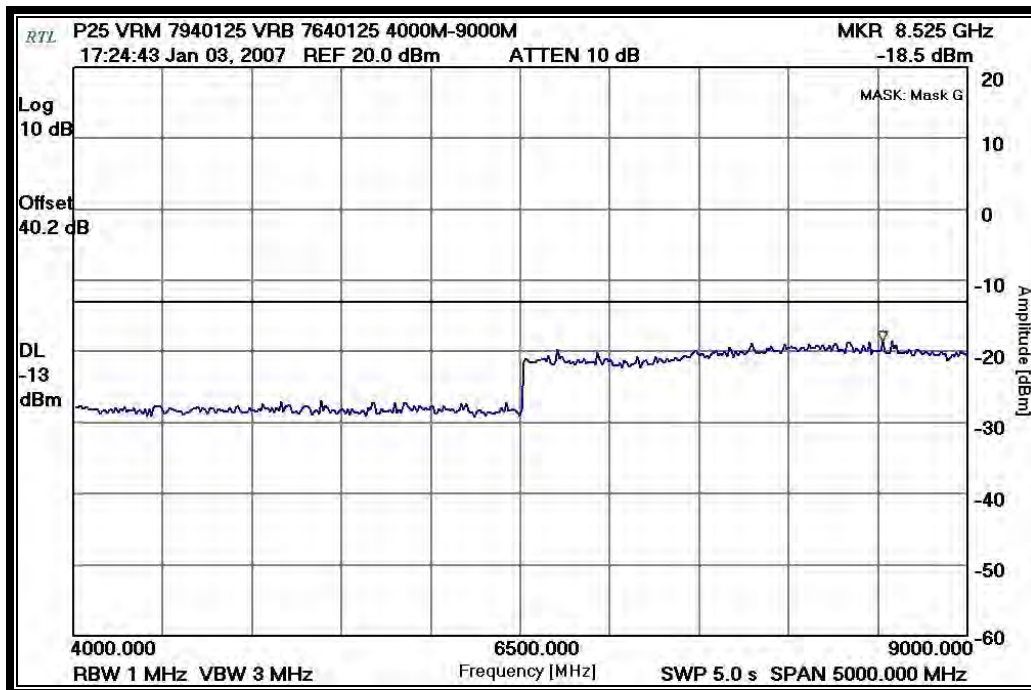
Plot 5-4: Conducted Spurious Emissions - P25 mode – VRM-794.0125/VRB-764.0125 (30 MHz–1 GHz)



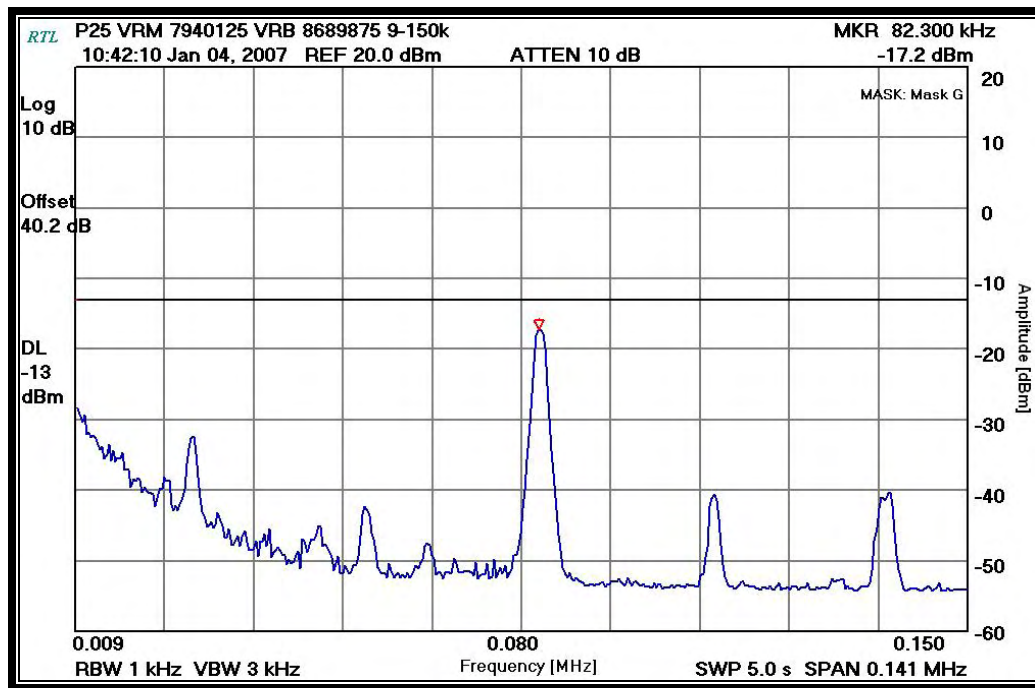
Plot 5-5: Conducted Spurious Emissions - P25 mode – VRM-794.0125/VRB-764.0125 (1 GHz–4 GHz)



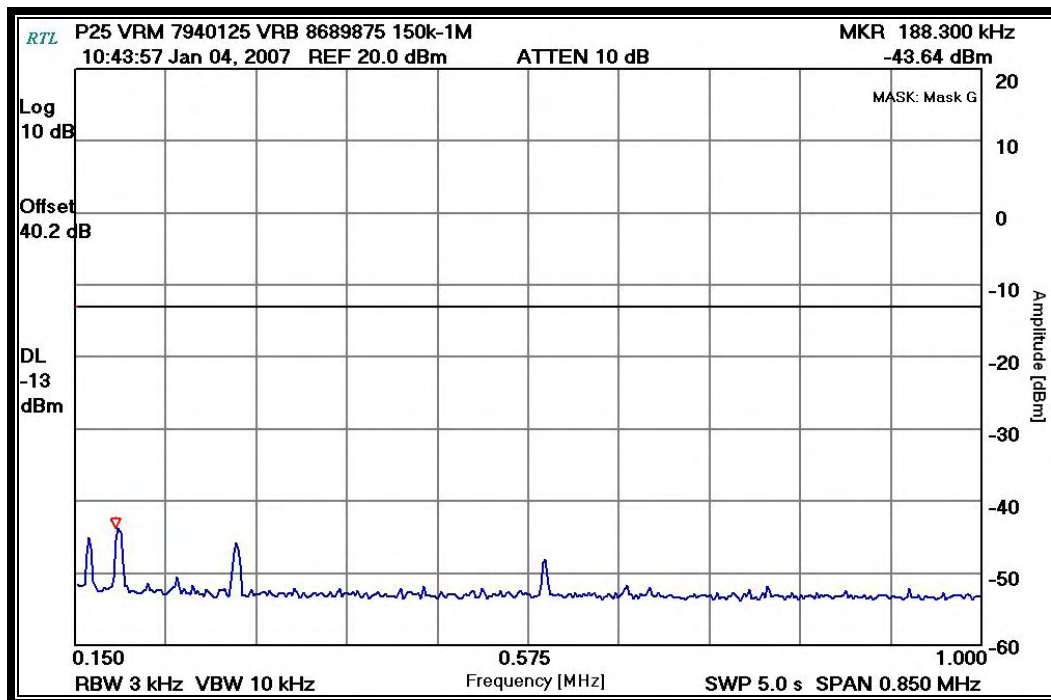
Plot 5-6: Conducted Spurious Emissions - P25 mode – VRM-794.0125/VRB-764.0125 (4 GHz–9 GHz)



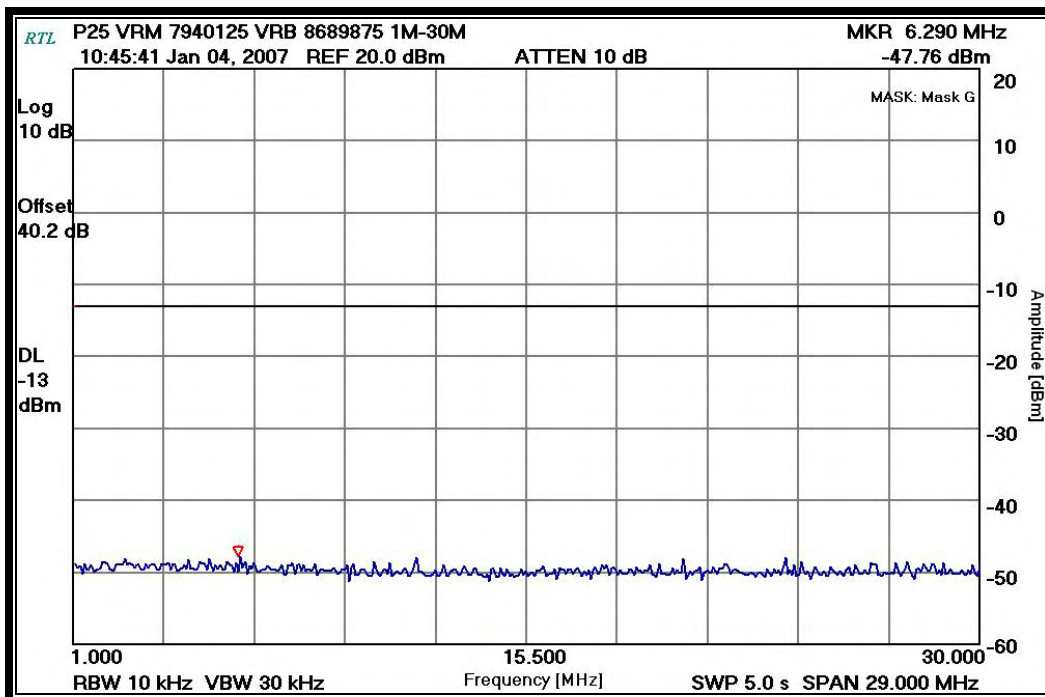
Plot 5-7: Conducted Spurious Emissions – P25 mode – VRM-794.0125/VRB-868.9875 (9 kHz–150 kHz)



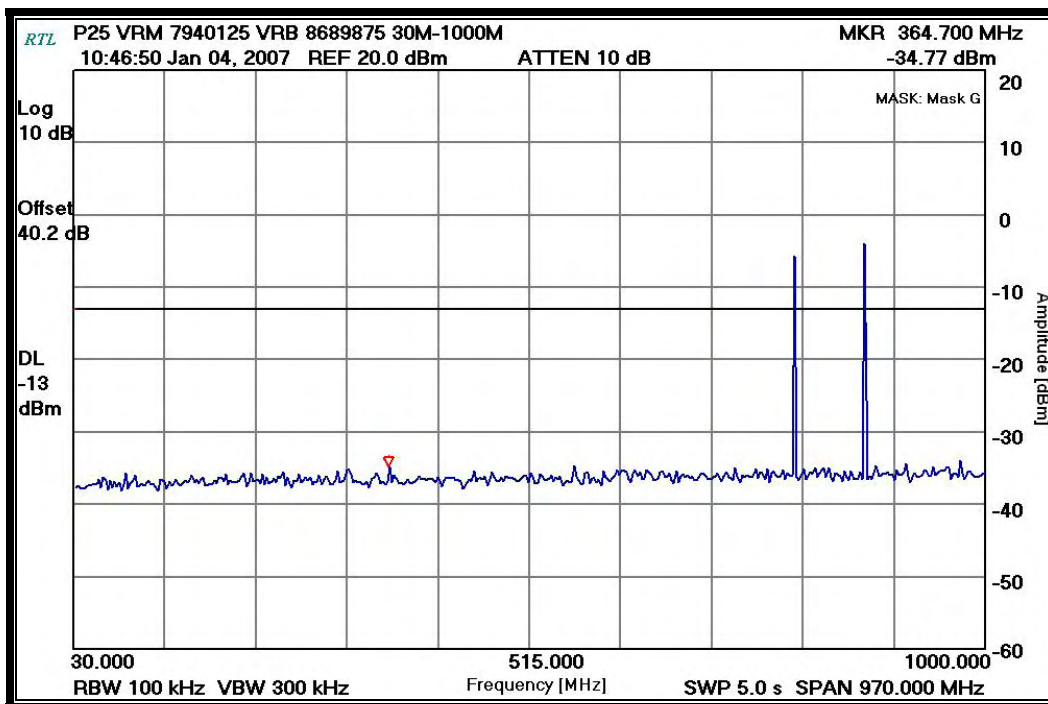
Plot 5-8: Conducted Spurious Emissions – P25 mode – VRM-794.0125/VRB-868.9875 (150 kHz – 1 MHz)



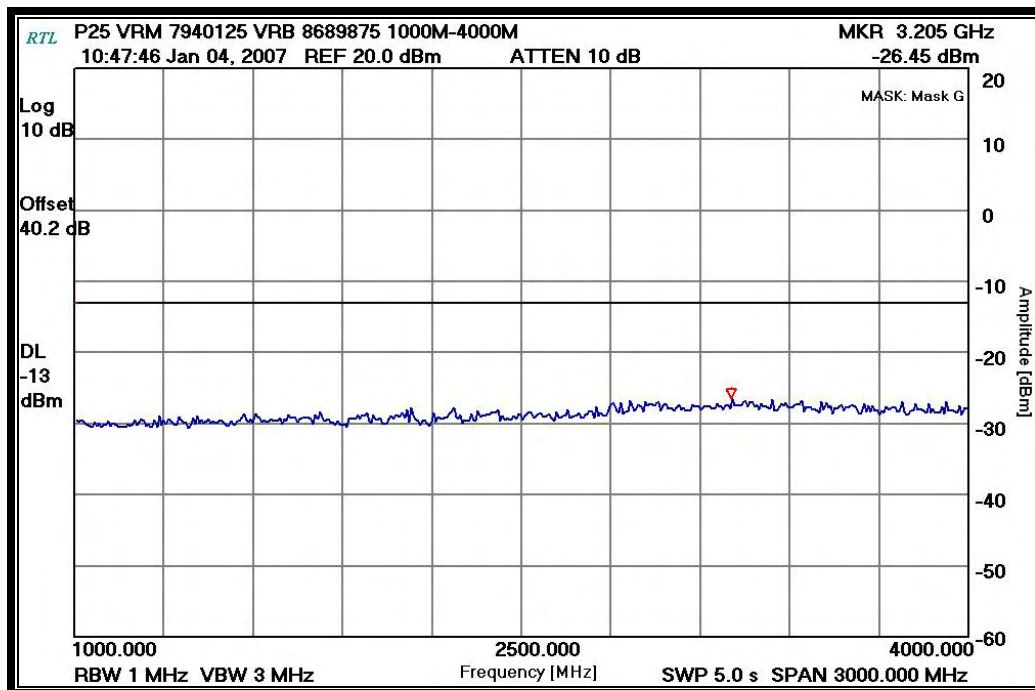
Plot 5-9: Conducted Spurious Emissions – P25 mode – VRM-794.0125/VRB-868.9875 (1 MHz–30 MHz)



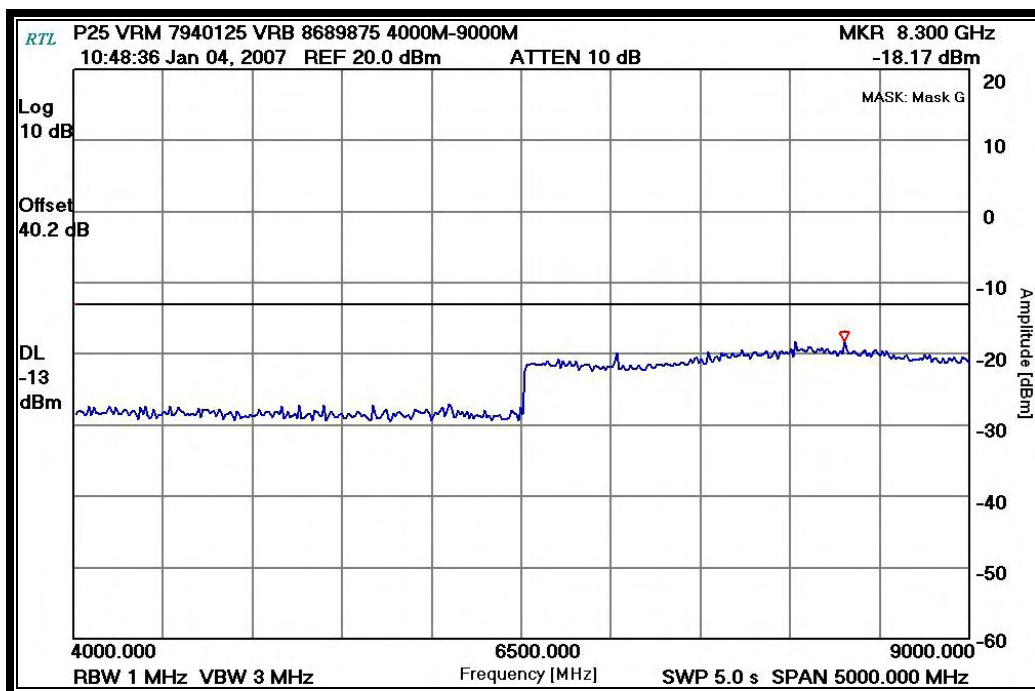
Plot 5-10: Conducted Spurious Emissions – P25 mode – VRM-794.0125/VRB-868.9875 (30 MHz–1 GHz)



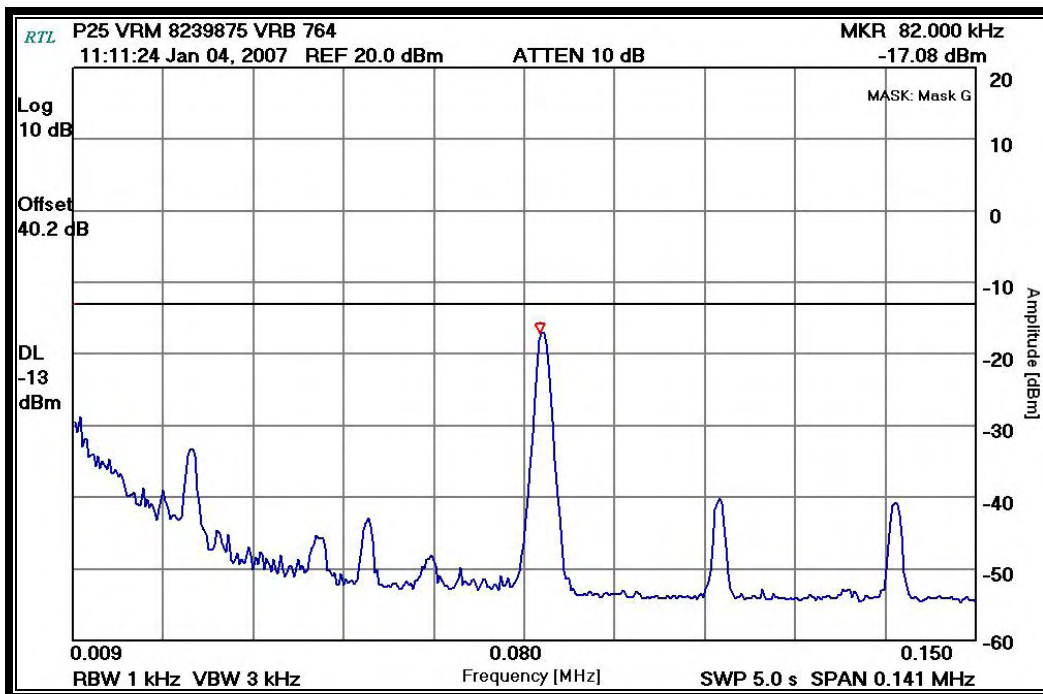
Plot 5-11: Conducted Spurious Emissions – P25 mode – VRM-794.0125/VRB-868.9875 (1 GHz–4 GHz)



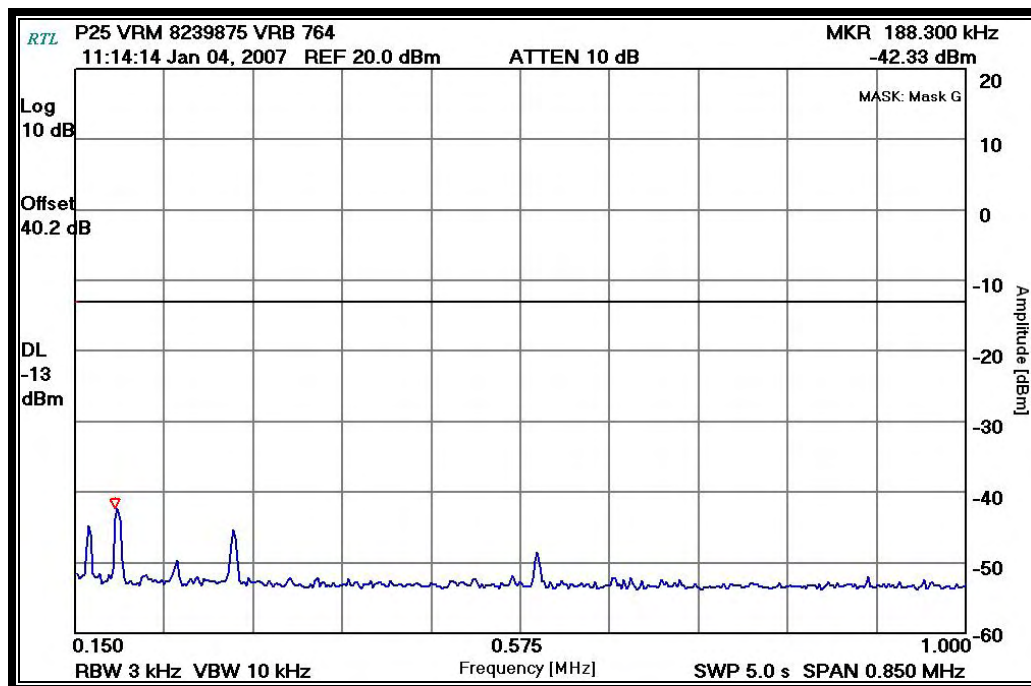
Plot 5-12: Conducted Spurious Emissions – P25 mode – VRM-794.0125/VRB-868.9875 (4 GHz – 9 GHz)



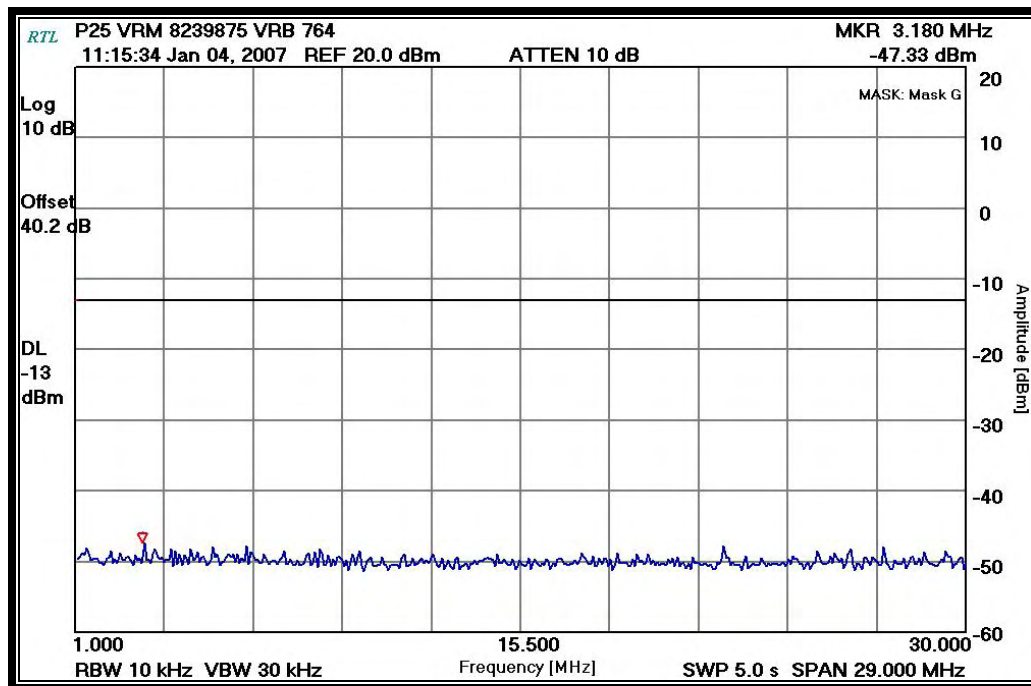
Plot 5-13: Conducted Spurious Emissions – P25 mode – VRM-823.9875/VRB-764.0125 (9 kHz – 150 kHz)



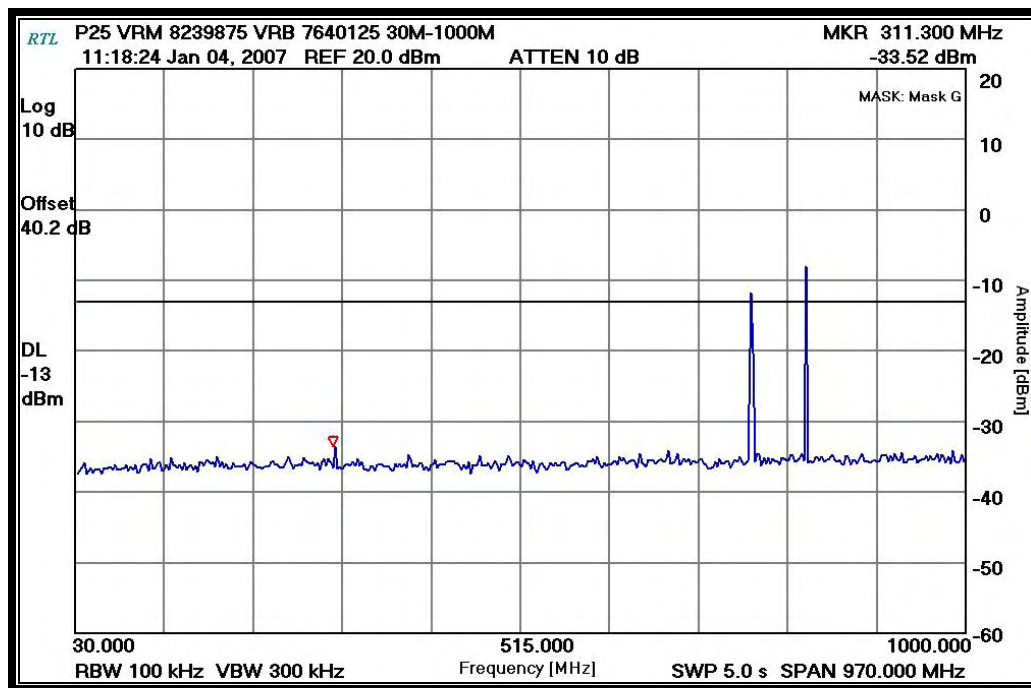
Plot 5-14: Conducted Spurious Emissions – P25 mode – VRM-823.9875/VRB-764.0125 (150 kHz – 1 MHz)



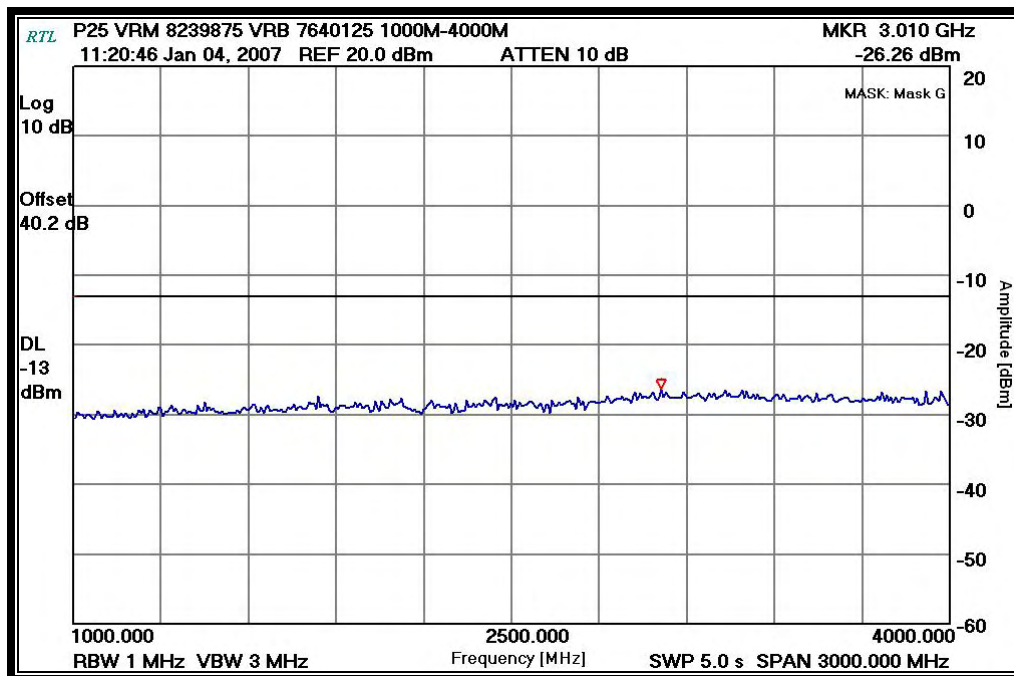
Plot 5-15: Conducted Spurious Emissions – P25 mode – VRM-823.9875/VRB-764.0125 (1 MHz – 30MHz)



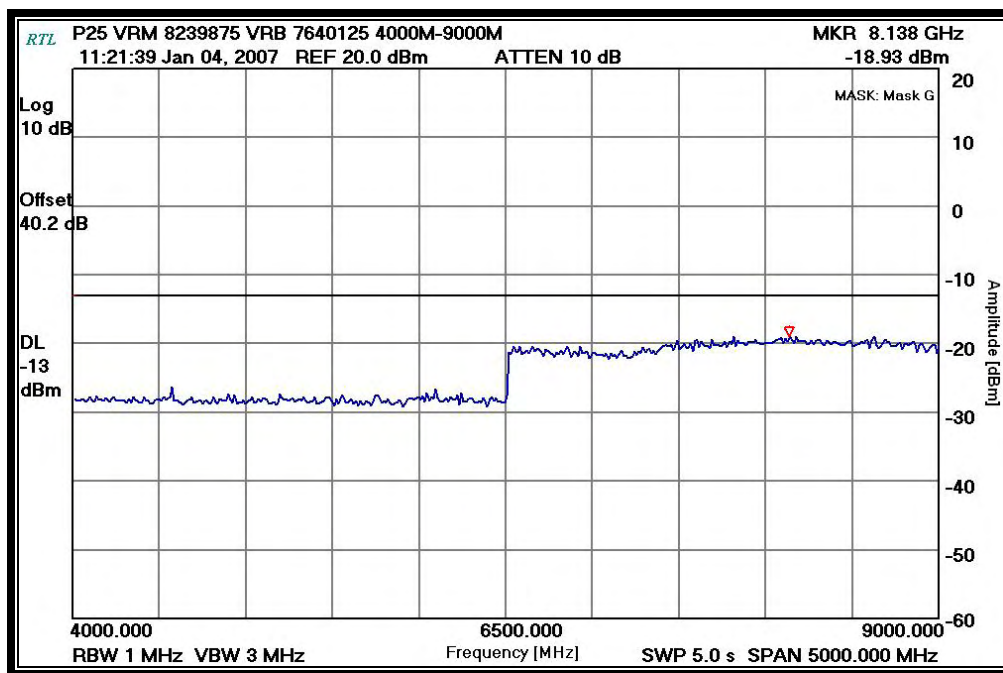
Plot 5-16: Conducted Spurious Emissions - P25 mode – VRM-823.9875/VRB-764.0125 (30 MHz– 1 GHz)



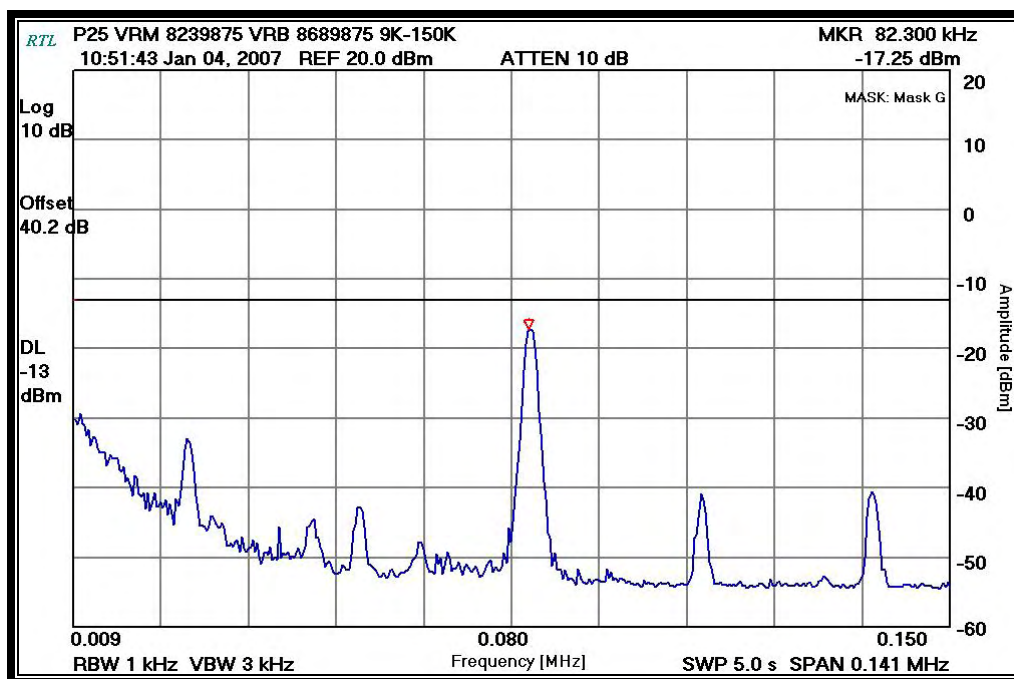
Plot 5-17: Conducted Spurious Emissions – P25 mode – VRM-823.9875/VRB-764.0125 (1 GHz–4 GHz)



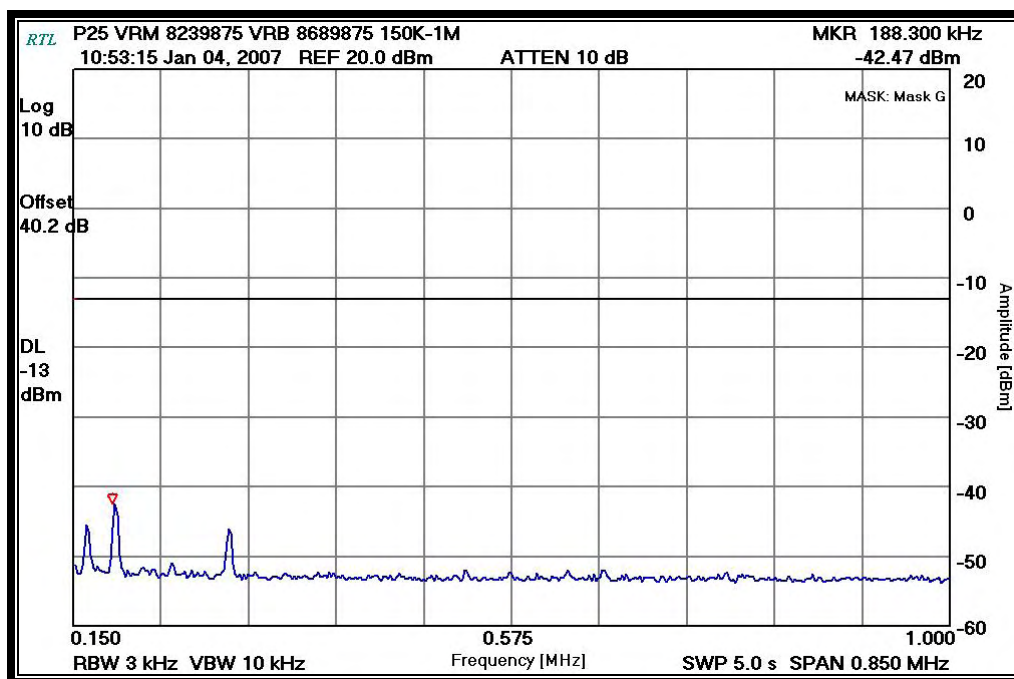
Plot 5-18: Conducted Spurious Emissions – P25 mode – VRM-823.9875/VRB-764.0125 (4 GHz–9 GHz)



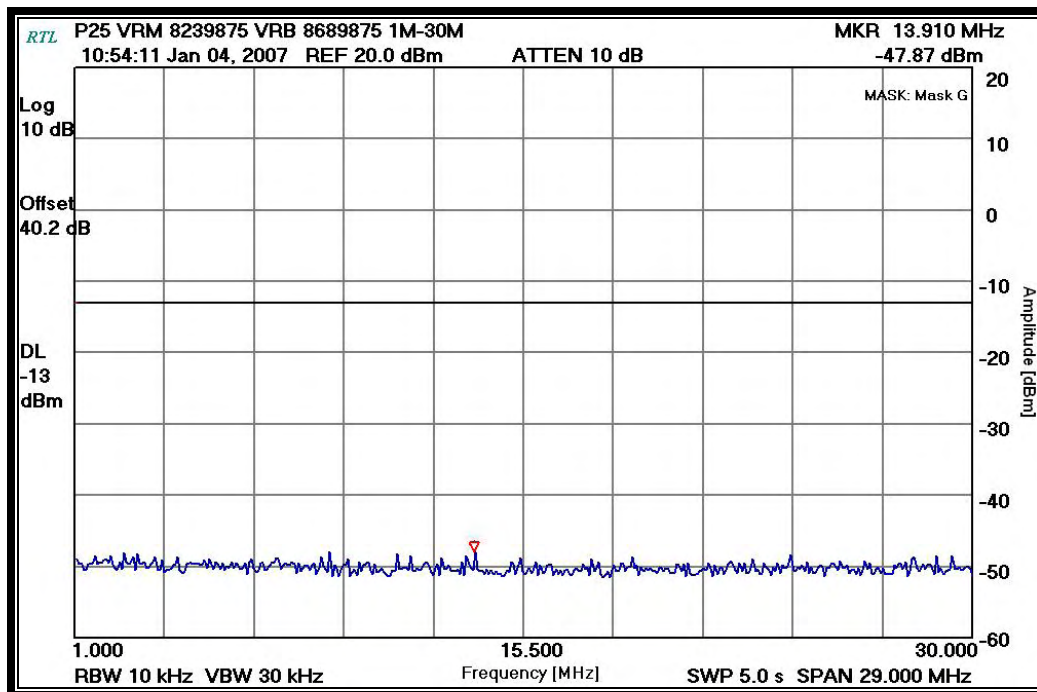
Plot 5-19: Conducted Spurious Emissions – P25 mode – VRM-823.9875/VRB-868.9875 (9 kHz – 150 kHz)



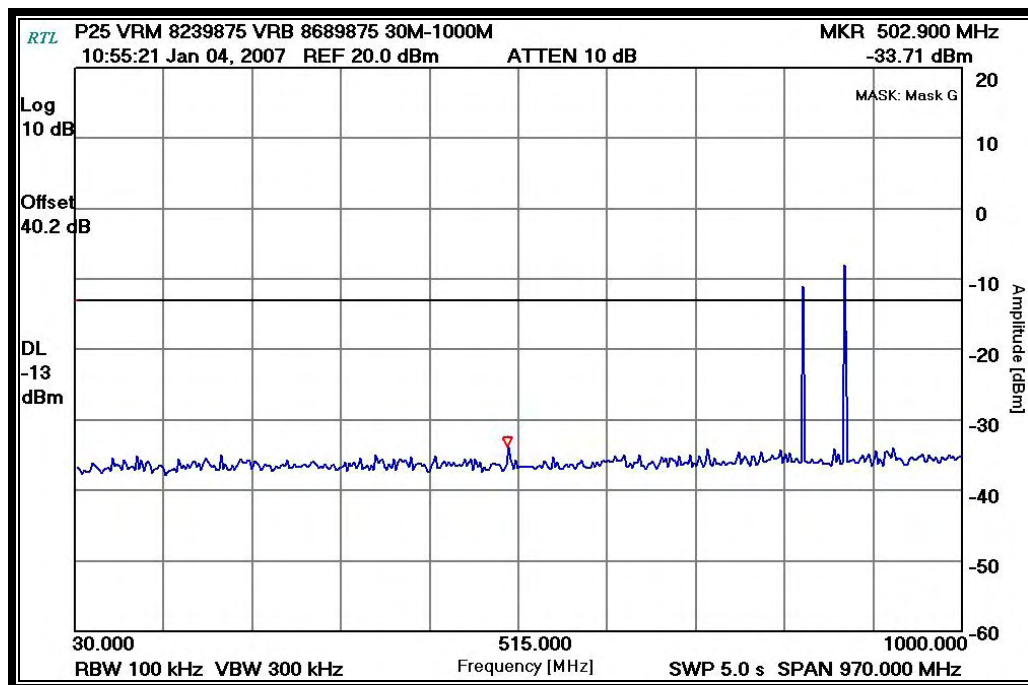
Plot 5-20: Conducted Spurious Emissions – P25 mode – VRM-823.9875/VRB-868.9875 (150 kHz – 1 MHz)



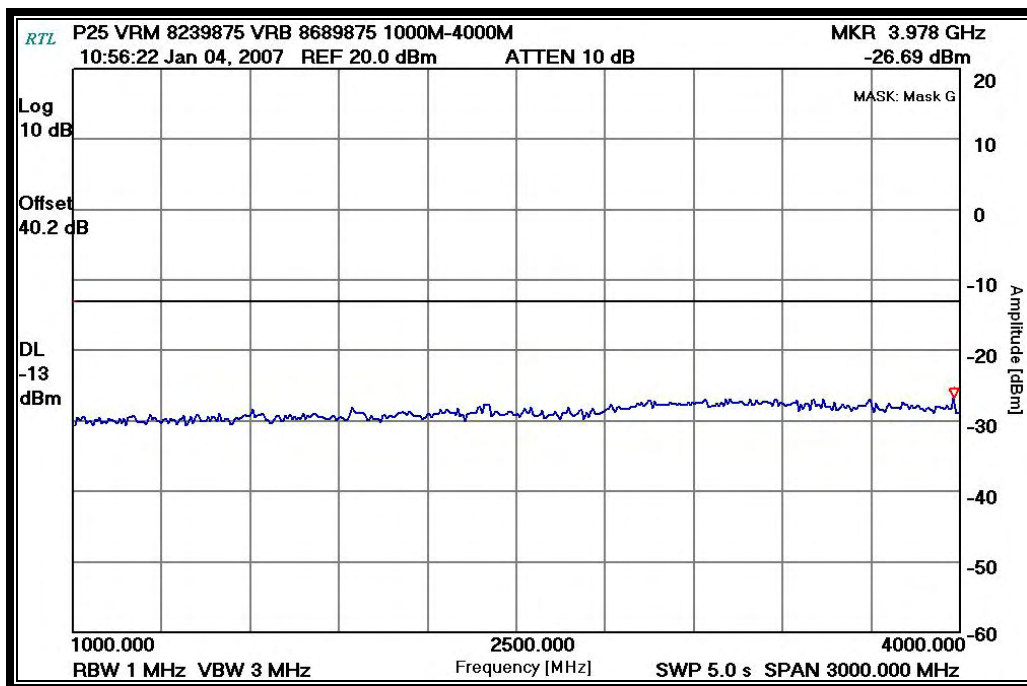
Plot 5-21: Conducted Spurious Emissions – P25 mode – VRM-823.9875/VRB-868.9875 (1 MHz – 30MHz)



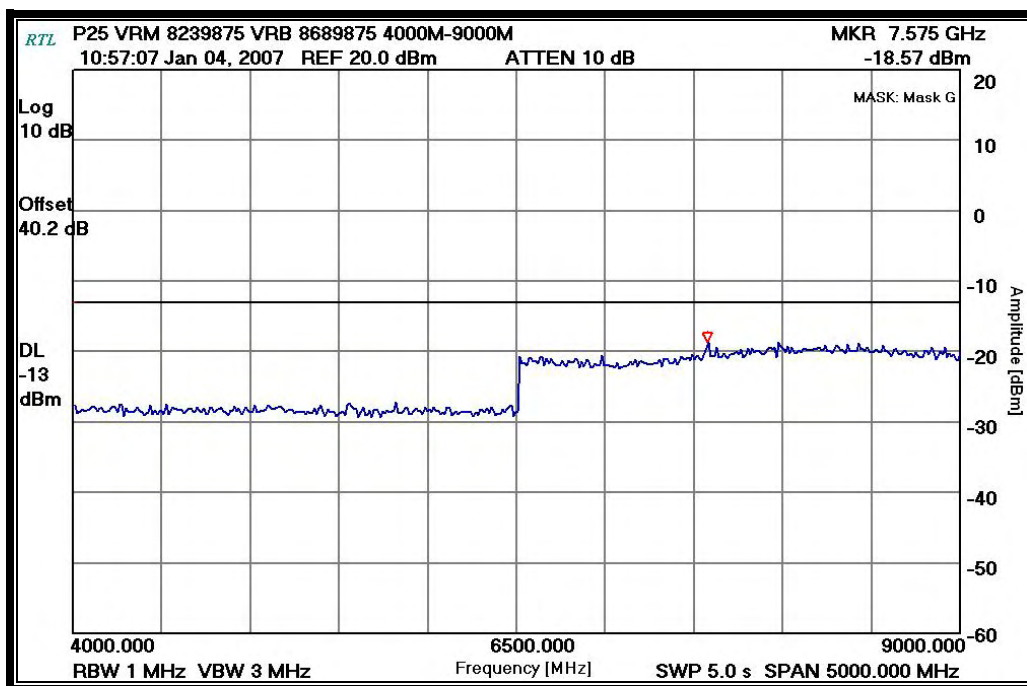
Plot 5-22: Conducted Spurious Emissions - P25 mode – VRM-823.9875/VRB-868.9875 (30 MHz– 1 GHz)



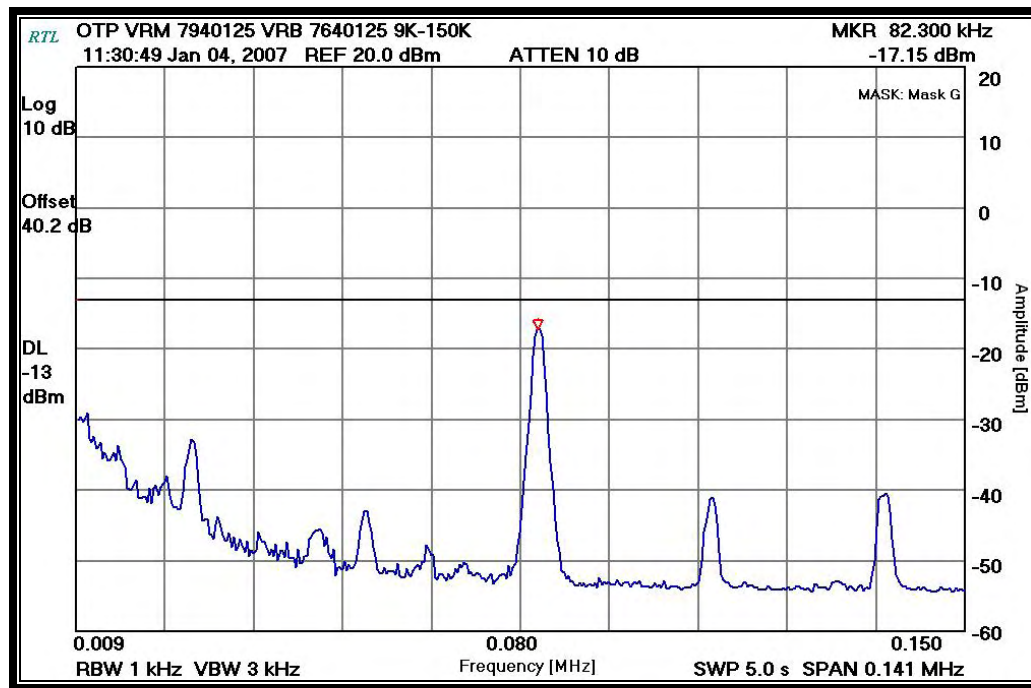
Plot 5-23: Conducted Spurious Emissions – P25 mode – VRM-823.9875/VRB-868.9875 (1 GHz–4 GHz)



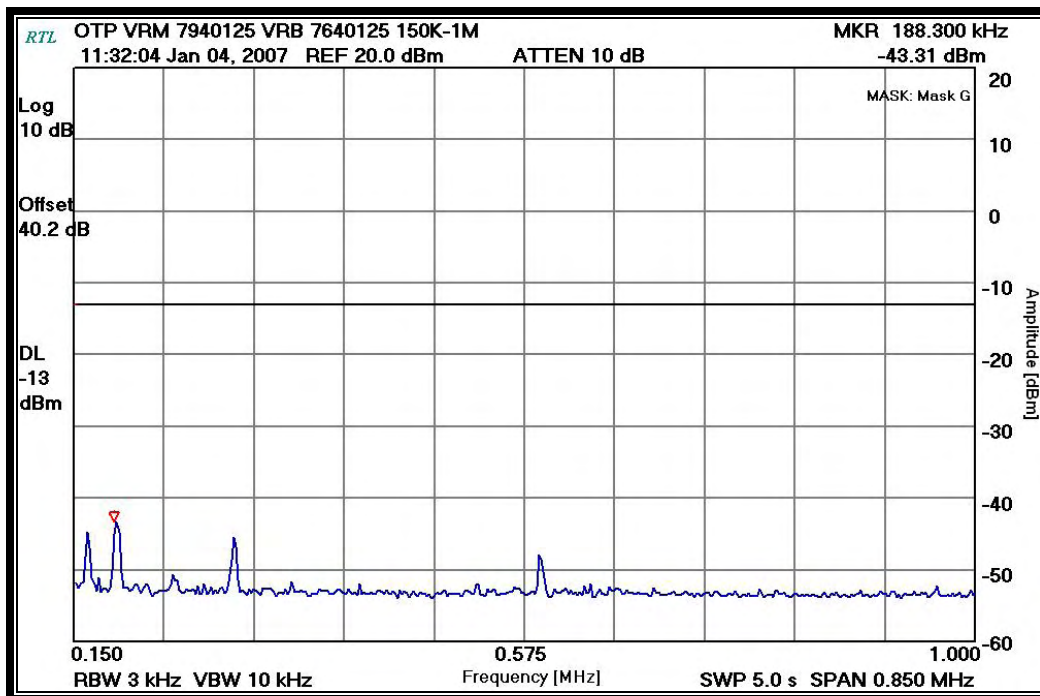
Plot 5-24: Conducted Spurious Emissions – P25 mode – VRM-823.9875/VRB-868.9875 (4 GHz–9 GHz)



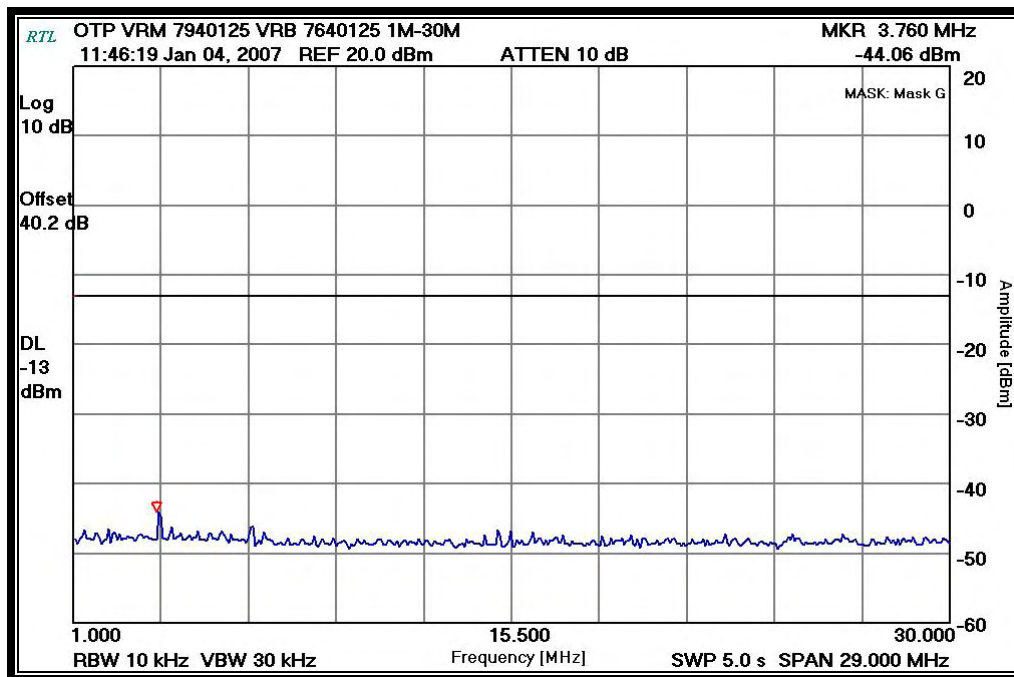
Plot 5-25: Conducted Spurious Emissions – OTP mode - VRM-794.0125/VRB-764.0125 MHz (9 kHz–150 kHz)



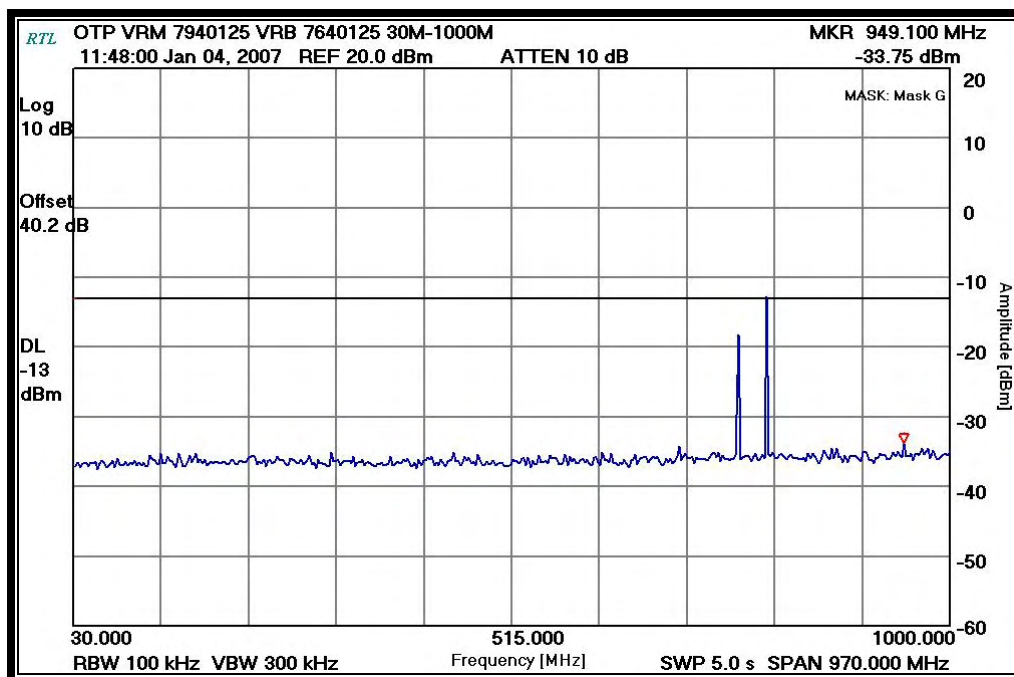
Plot 5-26: Conducted Spurious Emissions – OTP mode VRM-794.0125/VRB-764.0125 MHz (150 kHz–1 MHz)



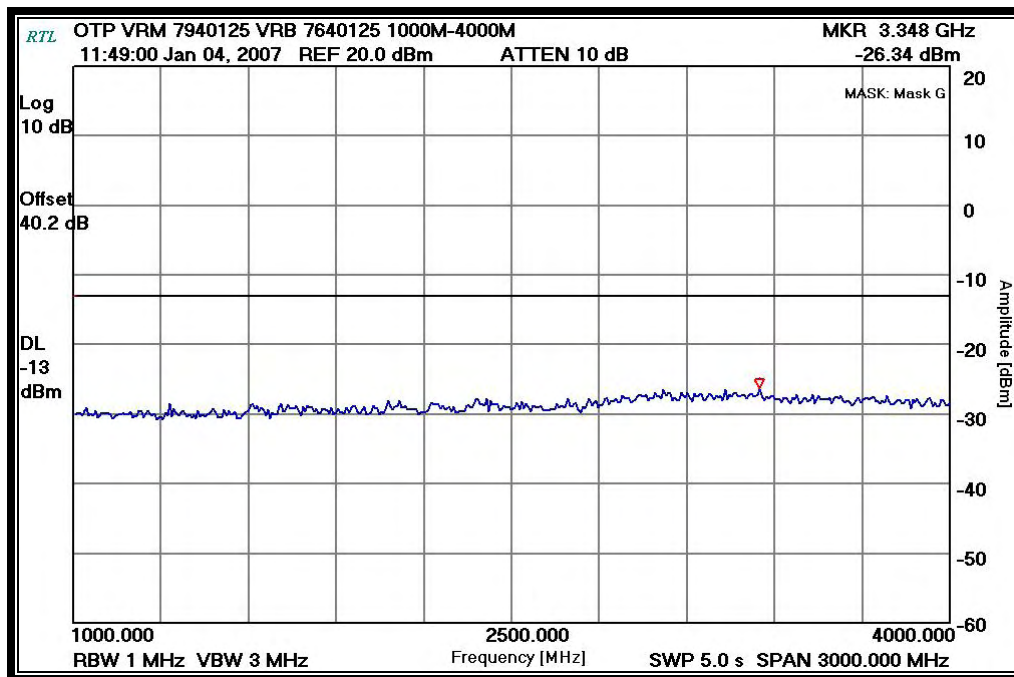
Plot 5-27: Conducted Spurious Emissions - OTP mode – VRM-794.0125/VRB-764.0125 (1 MHz–30 MHz)



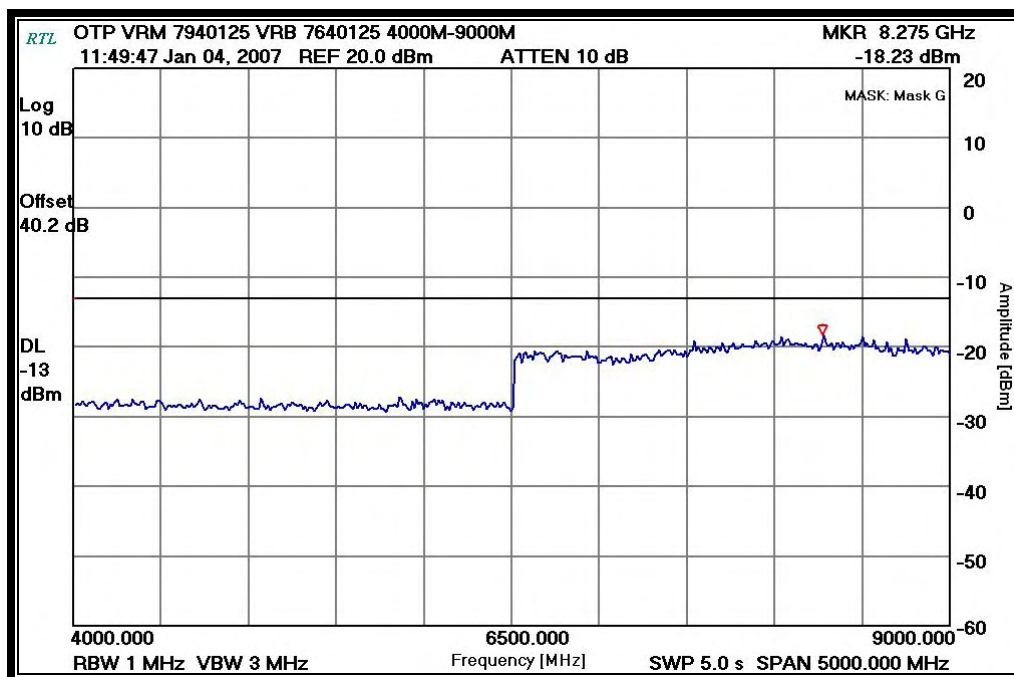
Plot 5-28: Conducted Spurious Emissions - OTP mode – VRM-794.0125/VRB-764.0125 (30 MHz–1 GHz)



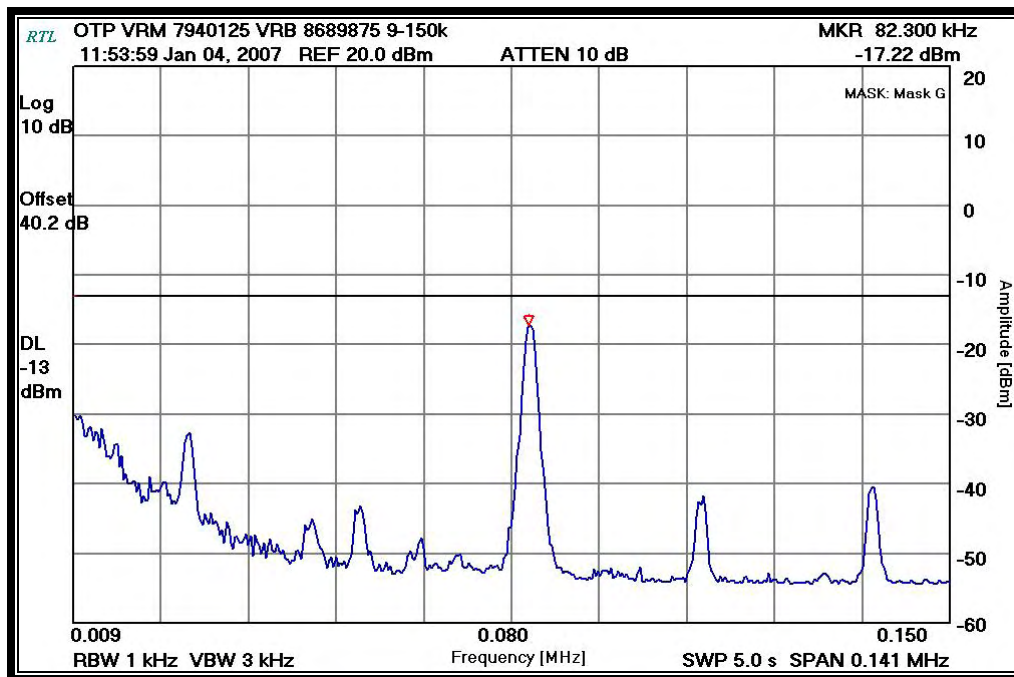
Plot 5-29: Conducted Spurious Emissions - OTP mode – VRM-794.0125/VRB-764.0125 (1 GHz–4 GHz)



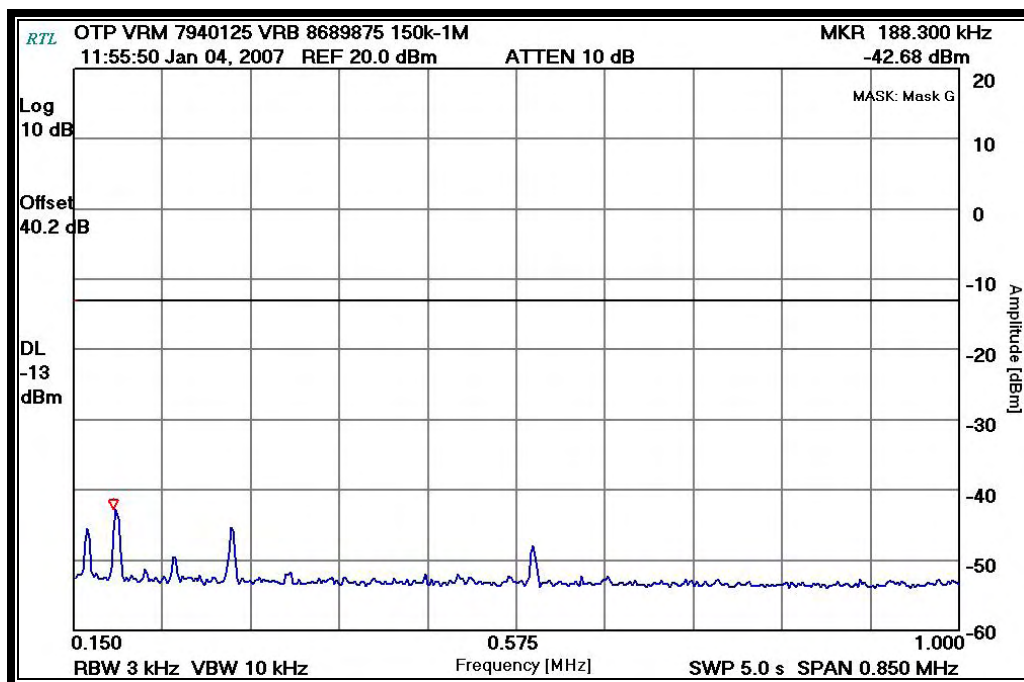
Plot 5-30: Conducted Spurious Emissions - OTP mode – VRM-794.0125/VRB-764.0125 (4 GHz–9 GHz)



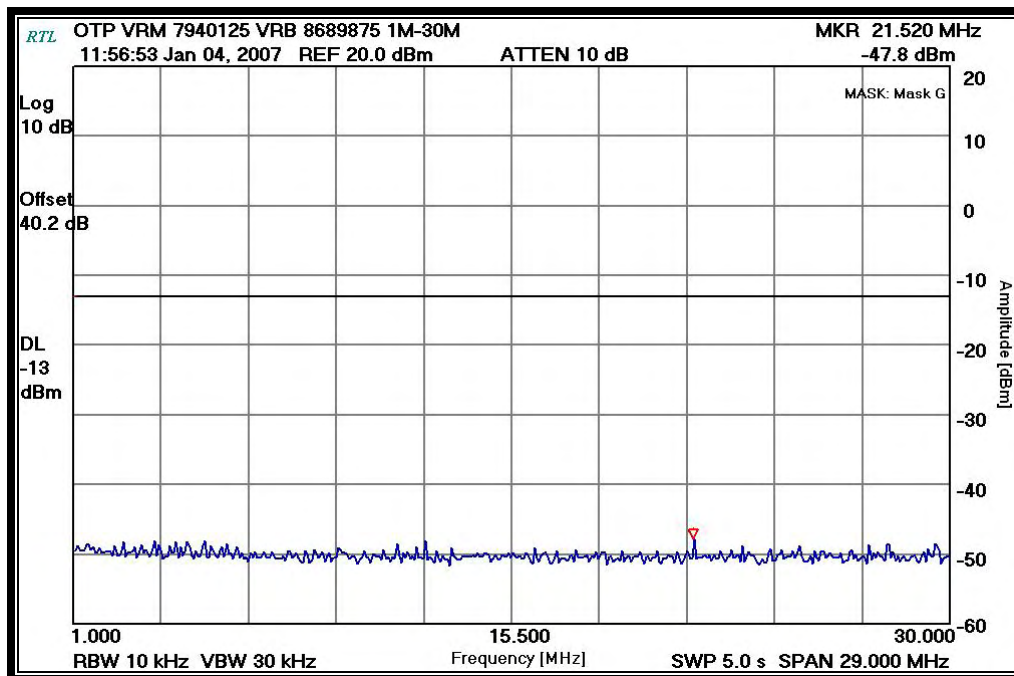
Plot 5-31: Conducted Spurious Emissions – OTP mode – VRM-794.0125/VRB-868.9875 (9 kHz–150 kHz)



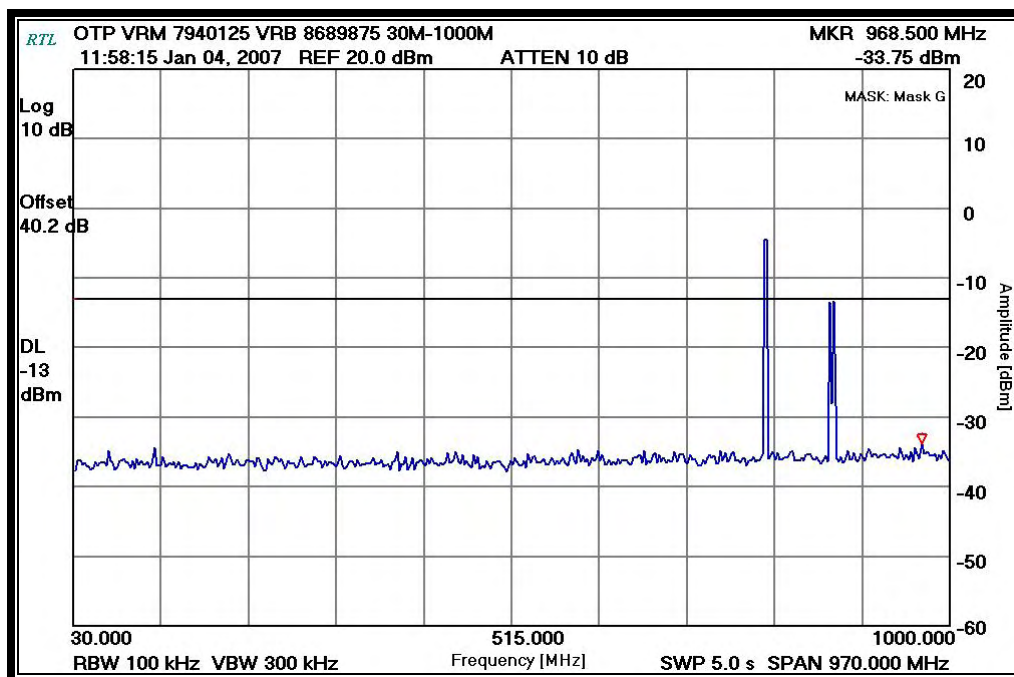
Plot 5-32: Conducted Spurious Emissions – OTP mode – VRM-794.0125/VRB-868.9875 (150 kHz – 1 MHz)



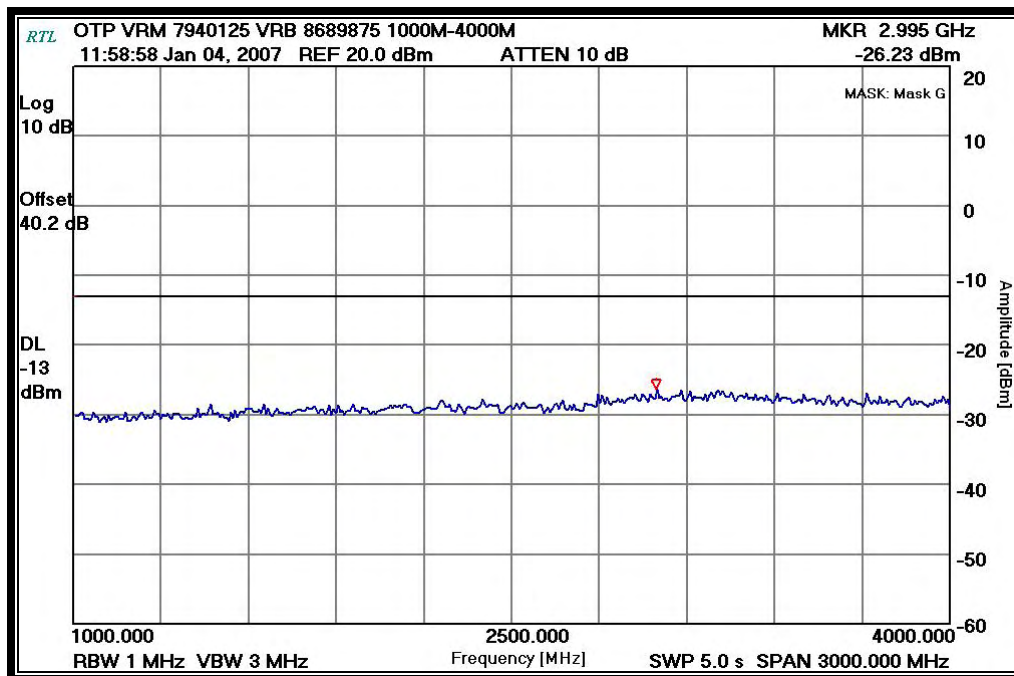
Plot 5-33: Conducted Spurious Emissions – OTP mode – VRM-794.0125/VRB-868.9875 (1 MHz–30 MHz)



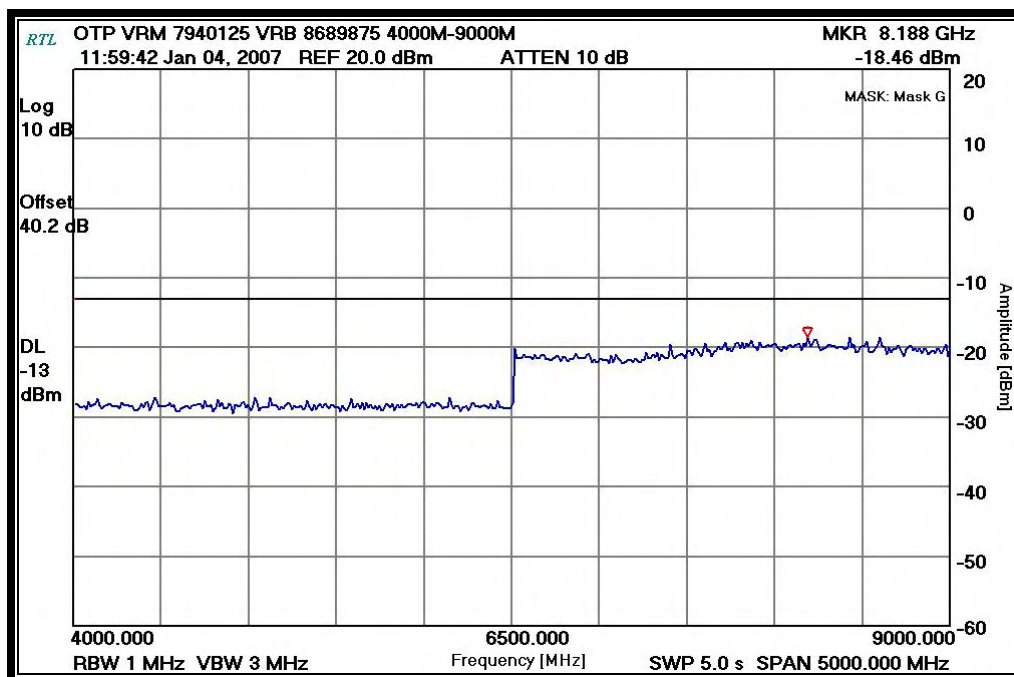
Plot 5-34: Conducted Spurious Emissions – OTP mode – VRM-794.0125/VRB-868.9875 (30 MHz–1 GHz)



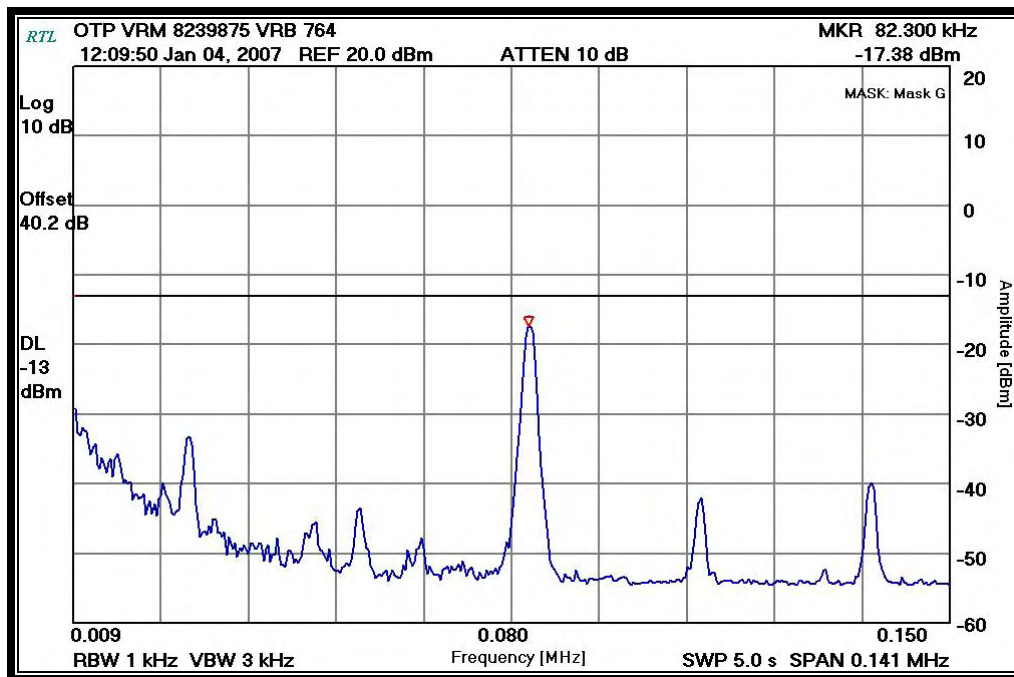
Plot 5-35: Conducted Spurious Emissions – OTP mode – VRM-794.0125/VRB-868.9875 (1 GHz–4 GHz)



Plot 5-36: Conducted Spurious Emissions – OTP mode – VRM-794.0125/VRB-868.9875 (4 GHz – 9 GHz)



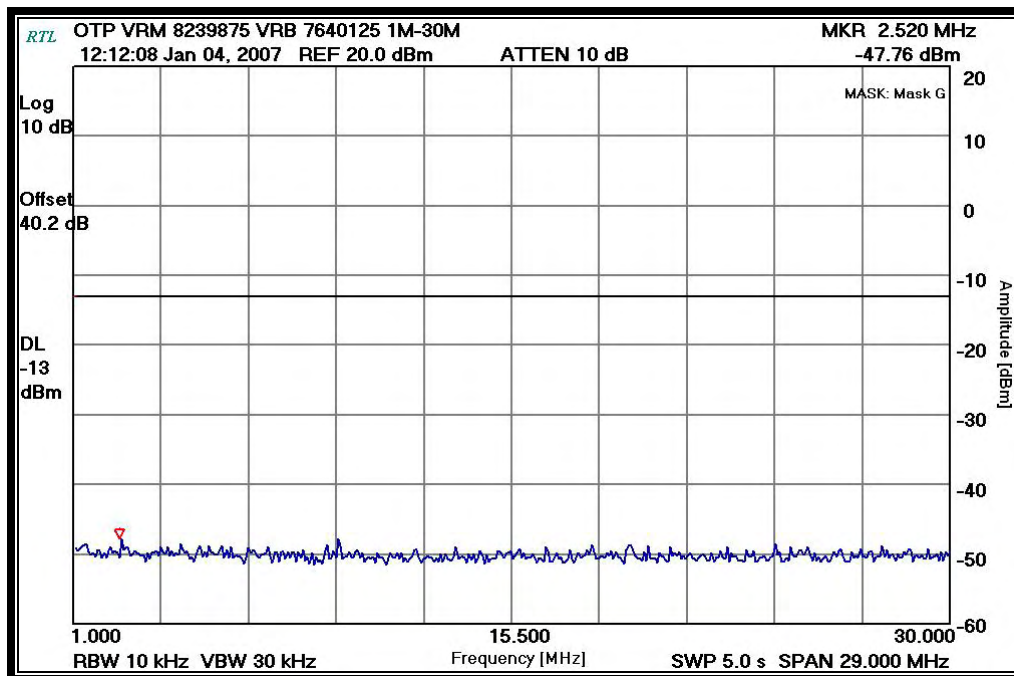
Plot 5-37: Conducted Spurious Emissions – OTP mode – VRM-823.9875/VRB-764.0125 (9 kHz – 150 kHz)



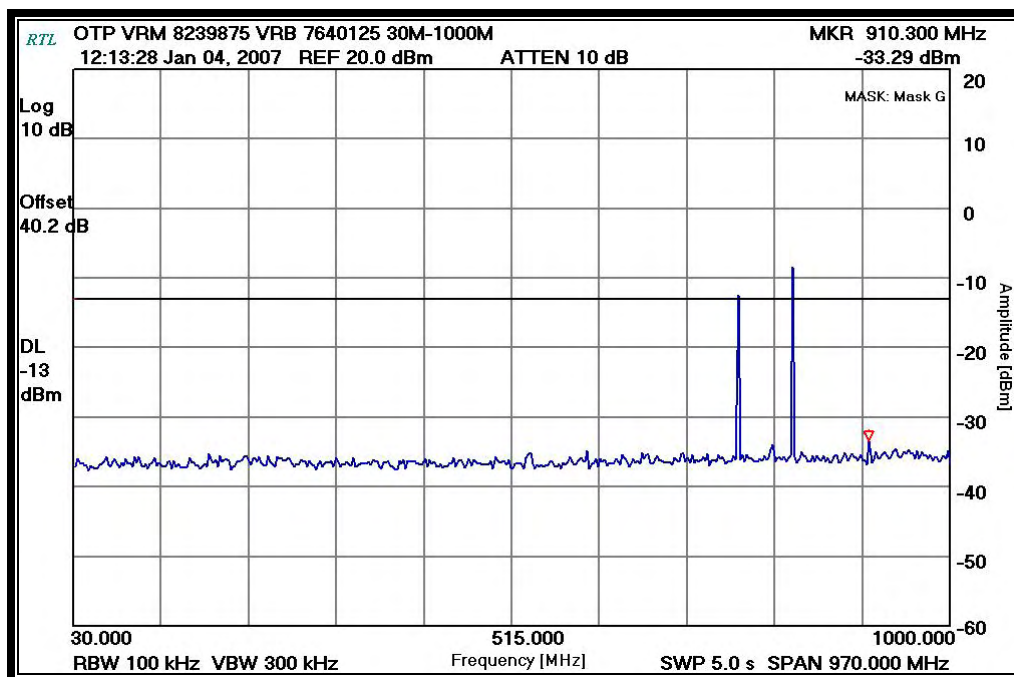
Plot 5-38: Conducted Spurious Emissions – OTP mode – VRM-823.9875/VRB-764.0125 (150 kHz – 1 MHz)



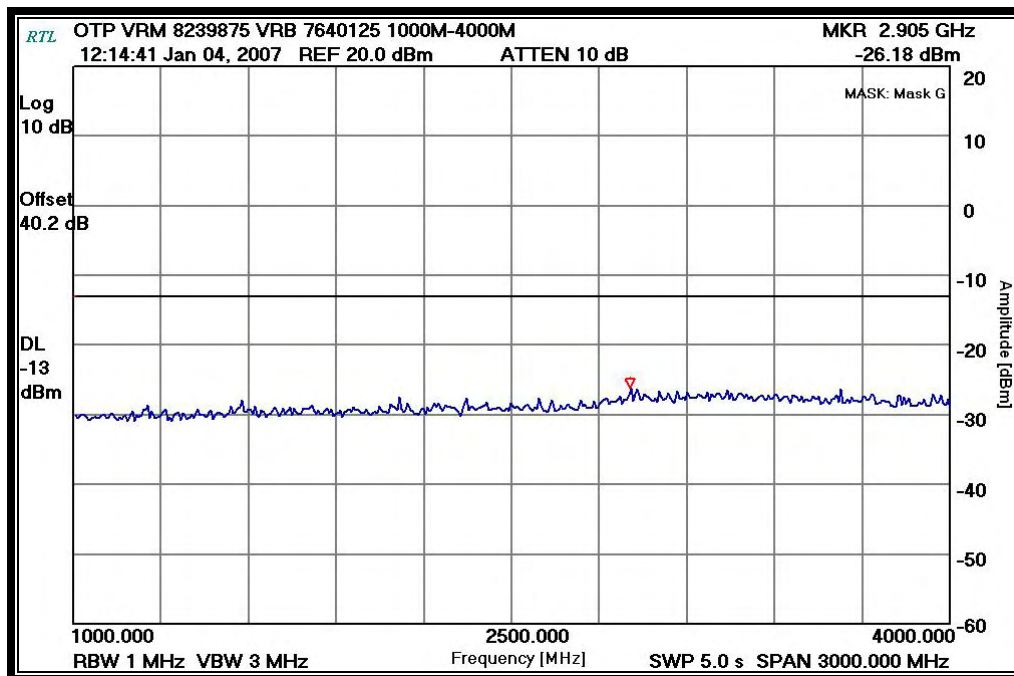
Plot 5-39: Conducted Spurious Emissions – OTP mode – VRM-823.9875/VRB-764.0125 (1 MHz – 30MHz)



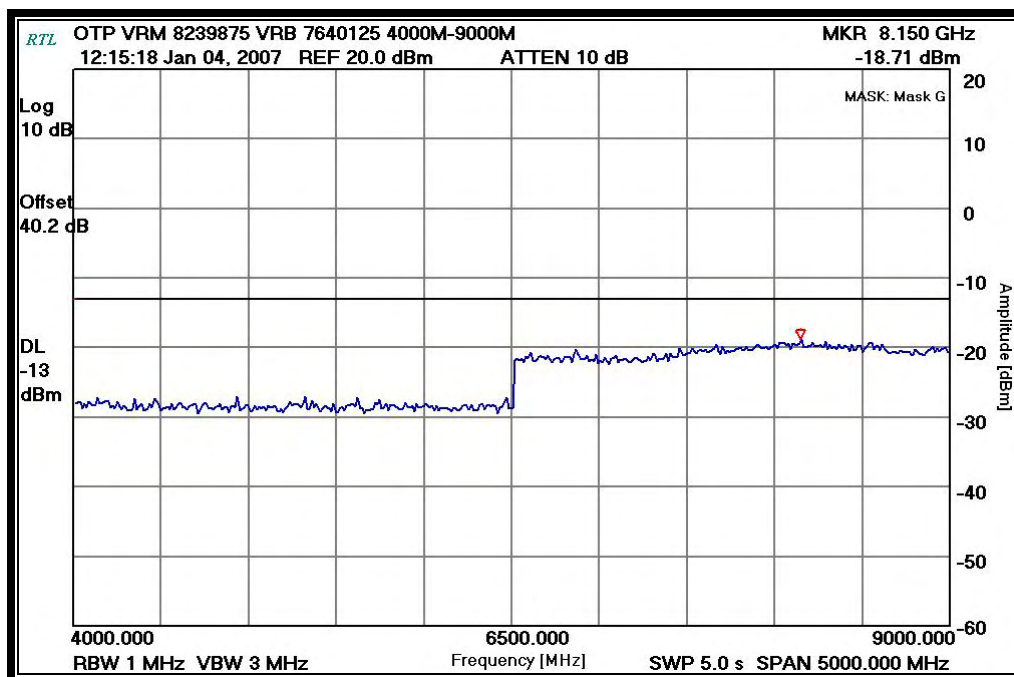
Plot 5-40: Conducted Spurious Emissions - OTP mode – VRM-823.9875/VRB-764.0125 (30 MHz– 1 GHz)



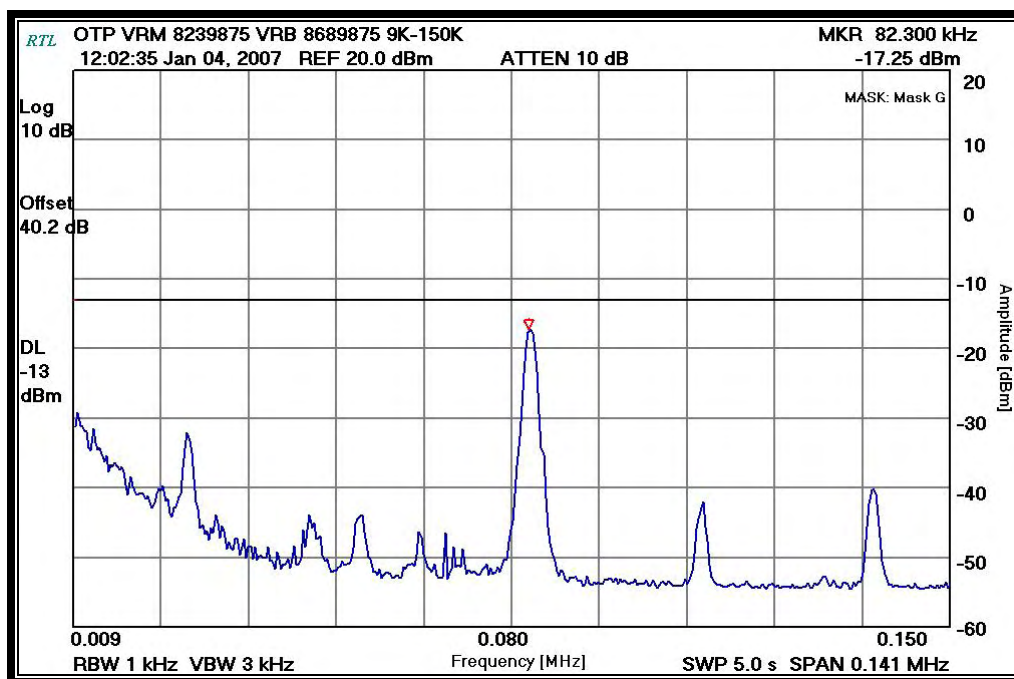
Plot 5-41: Conducted Spurious Emissions – OTP mode – VRM-823.9875/VRB-764.0125 (1 GHz–4 GHz)



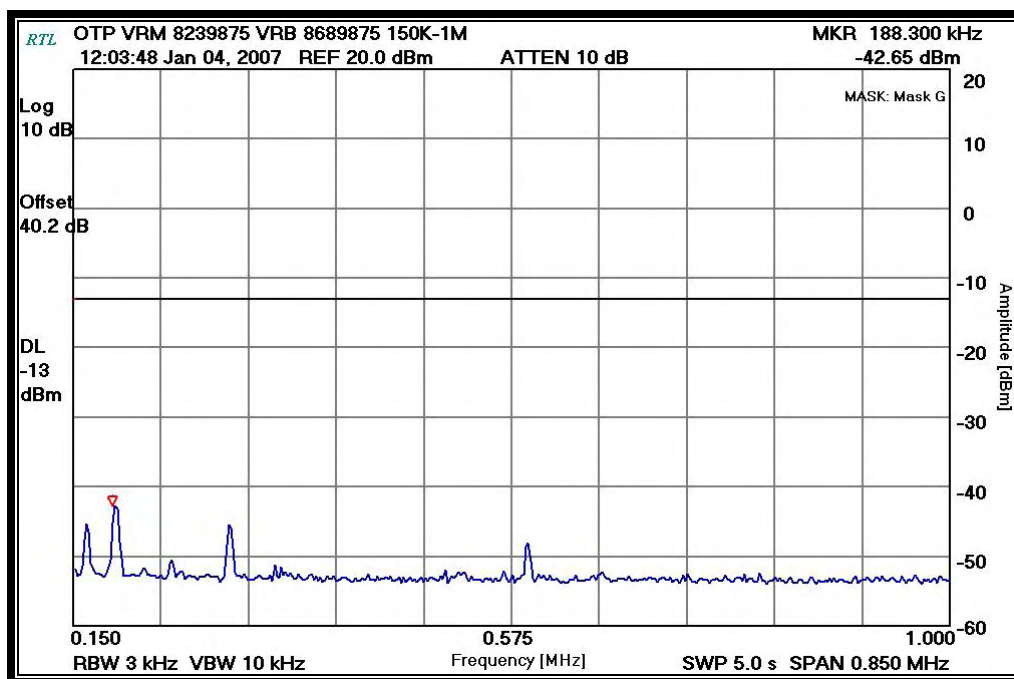
Plot 5-42: Conducted Spurious Emissions – OTP mode – VRM-823.9875/VRB-764.0125 (4 GHz–9 GHz)



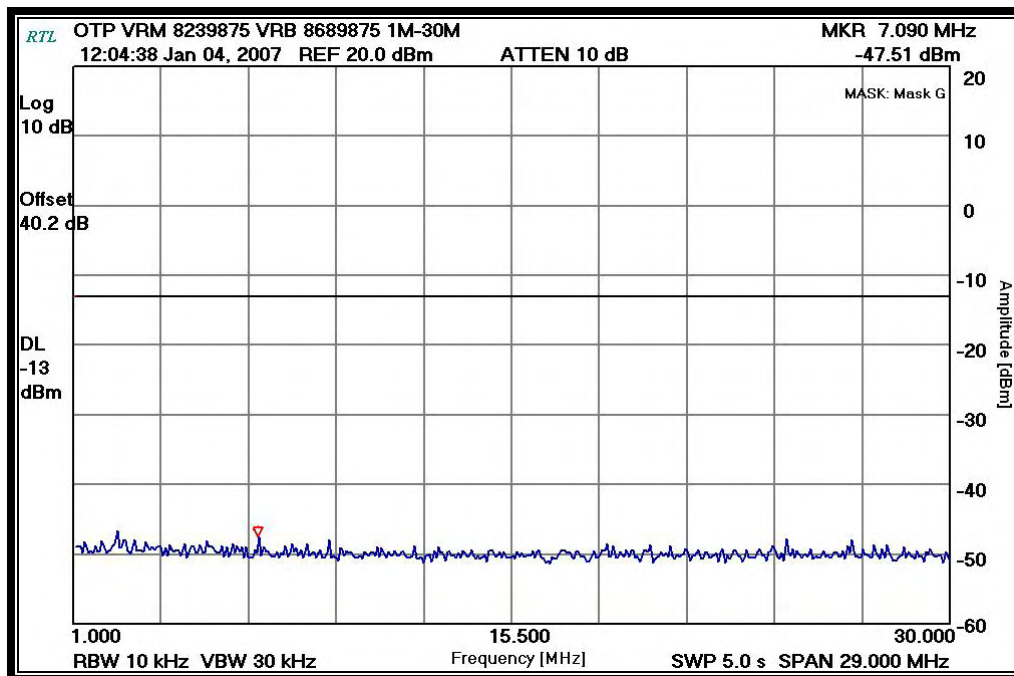
Plot 5-43: Conducted Spurious Emissions – OTP mode – VRM-823.9875/VRB-868.9875 (9 kHz – 150 kHz)



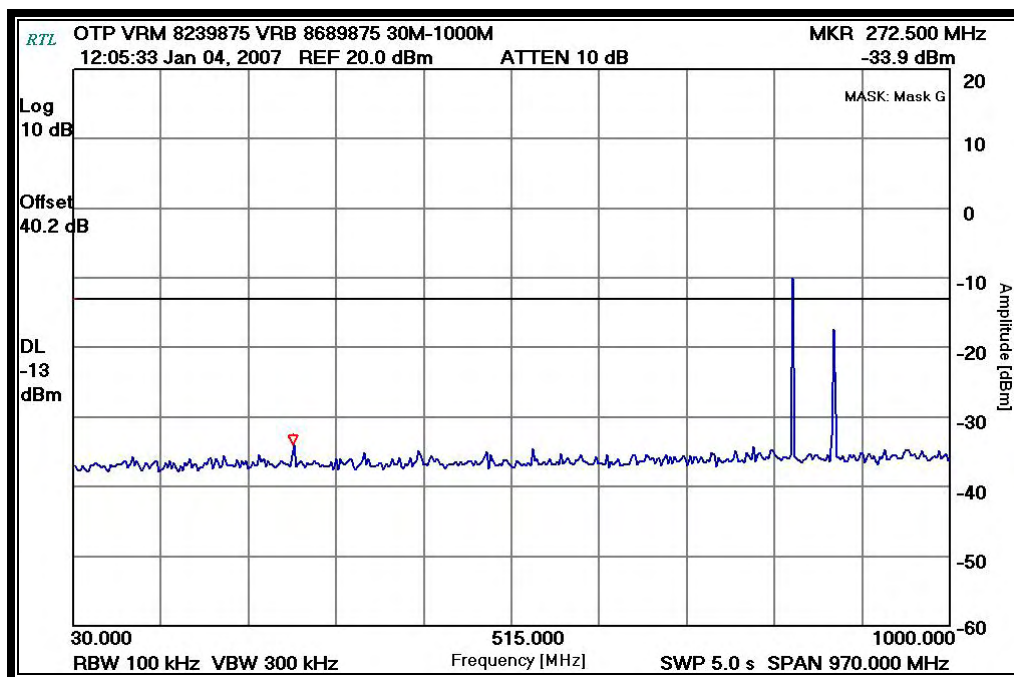
Plot 5-44: Conducted Spurious Emissions – OTP mode – VRM-823.9875/VRB-868.9875 (150 kHz – 1 MHz)



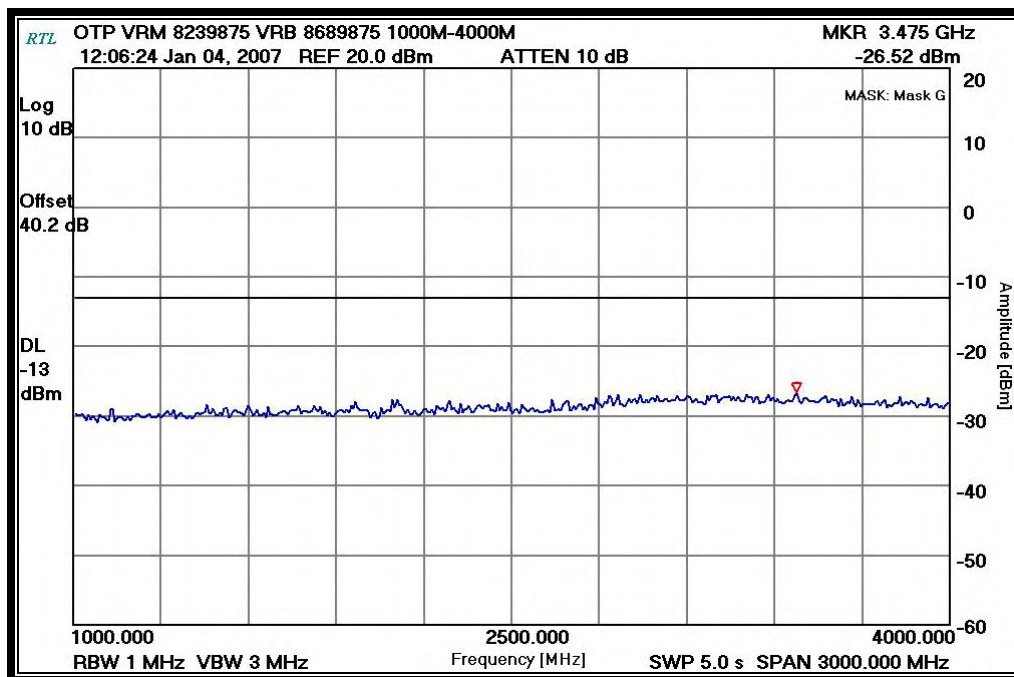
Plot 5-45: Conducted Spurious Emissions – OTP mode – VRM-823.9875/VRB-868.9875 (1 MHz – 30MHz)



Plot 5-46: Conducted Spurious Emissions - OTP mode – VRM-823.9875/VRB-868.9875 (30 MHz– 1 GHz)



Plot 5-47: Conducted Spurious Emissions – OTP mode – VRM-823.9875/VRB-868.9875 (1 GHz–4 GHz)



Plot 5-48: Conducted Spurious Emissions – OTP mode – VRM-823.9875/VRB-868.9875 (4 GHz–9 GHz)

