

**Annex acc. to FCC Title 47 CFR Part 15
relating to
s.m.s, smart microwave sensors GmbH
UMRR-12 Type 48**

Annex no. 11

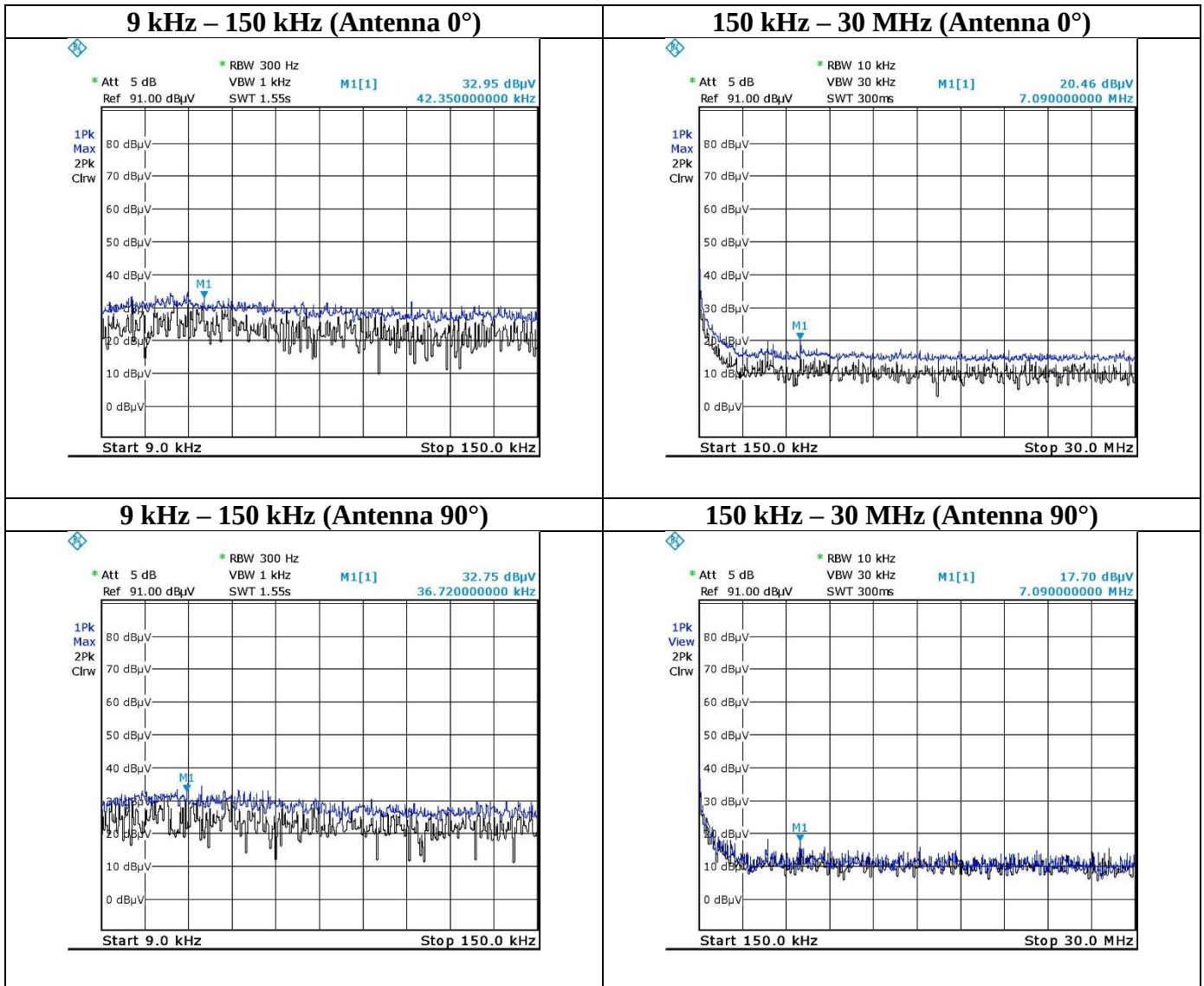
Spurious emissions

**Title 47 - Telecommunication
Part 15 - Radio Frequency Devices
Subpart C – Intentional Radiators
ANSI C63.4-2014
ANSI C63.10-2013**



Deutsche
Akkreditierungsstelle
D-PL-12053-01-03

**Plots of the test equipment (EUT) – Spurious emissions 9 kHz – 30 MHz
at 3 meter (without correction)**



field strength = receiver reading + cable + antenna factor – distance factor

Worst case emission below 150 kHz: at 42.35 kHz

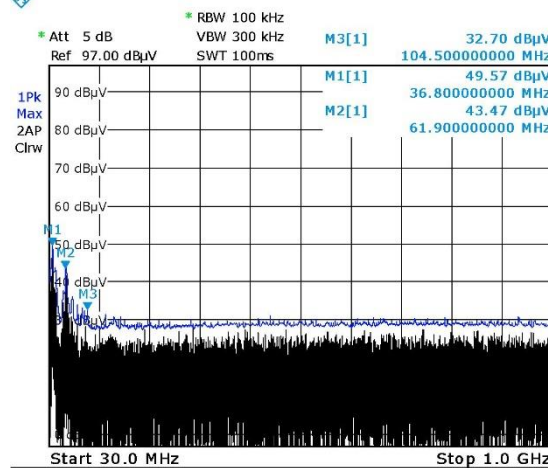
field strength = 32.95 dBμV + 0.2 dB + 19.1 dB/m -80 dB = -27.75 dBμV/m @ 300 meter

Worst case emission above 150 kHz and below 30 MHz: at 7.09 MHz

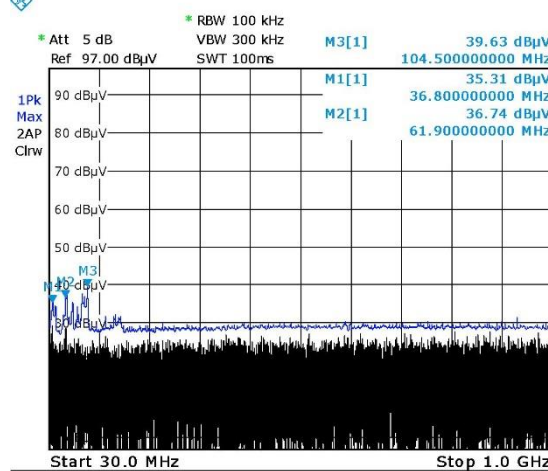
field strength = 20.46 dBμV + 0.3 dB + 19.1 dB/m -40 dB = -0.14 dBμV/m @ 30 meter

**Plots of the test equipment (EUT) – Spurious emissions 30 MHz – 1 GHz
at 3 meter**

Vertical (Peak)



Horizontal (Peak)



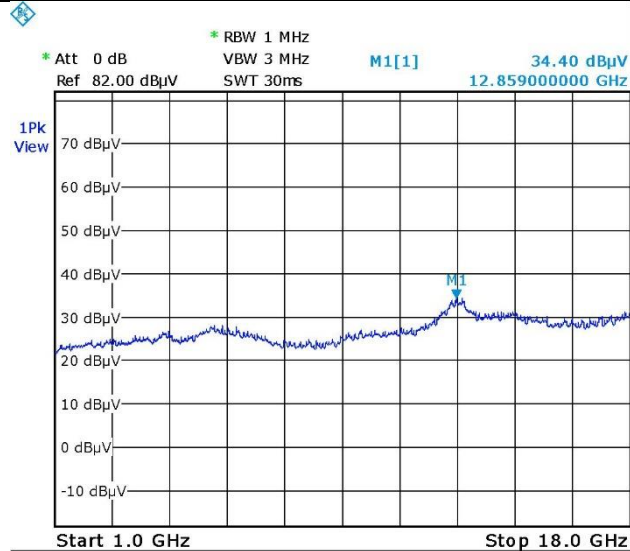
field strength = receiver reading + cable + antenna factor – amplifier gain

Worst case emission above 30 MHz and below 1 GHz: at 36.8 MHz

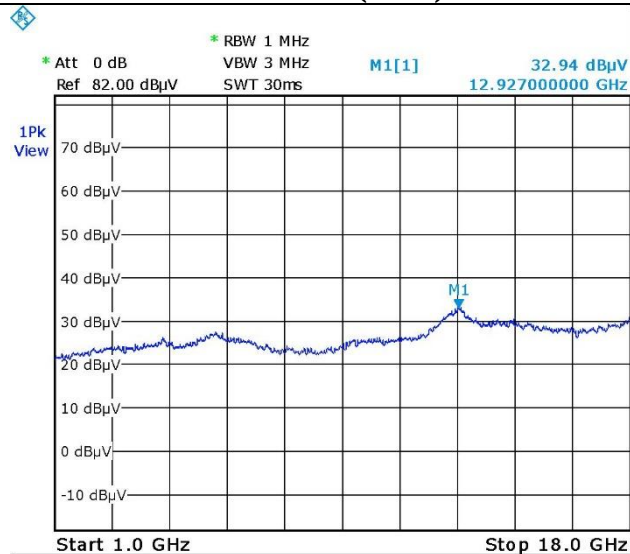
field strength = 49.57 dBμV + 0.39 dB + 12.98 dB/m -21.0 dB = 41.94 dBμV/m @ 3 meter Peak

**Plots of the test equipment (EUT) – Spurious emissions 1 GHz – 18 GHz
at 3 meter (without correction)**

Vertical (Peak)



Horizontal (Peak)



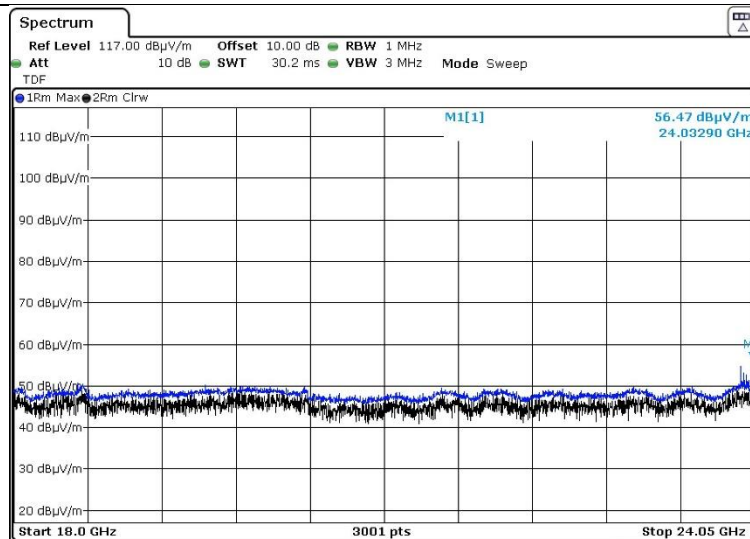
field strength = receiver reading + cable + antenna factor – amplifier gain

Worst case emission above 30 MHz and below 1 GHz: at 12.961078 GHz

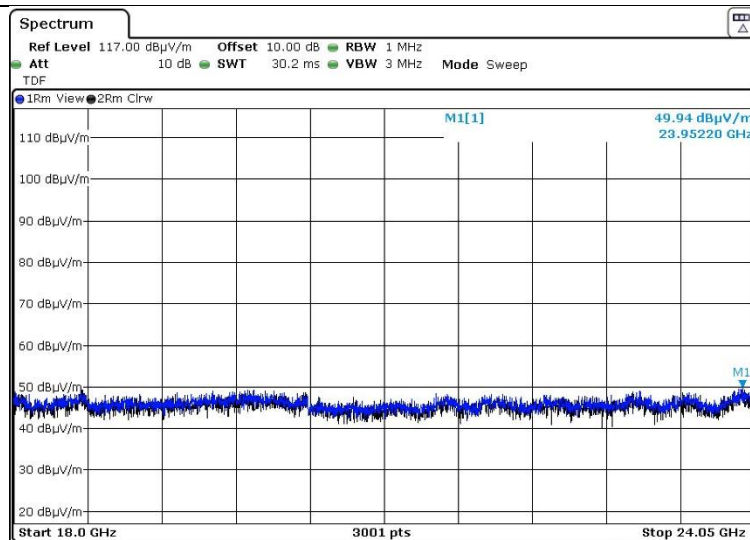
field strength = 34.40 dBμV + 10.11 dB + 43.62 dB/m -36.3 dB = 51.83 dBμV/m @ 3 meter Peak

**Plots of the test equipment (EUT) – Spurious emissions 18 GHz – 24.05 GHz
at 3 meter (with all corrections)**

Vertical

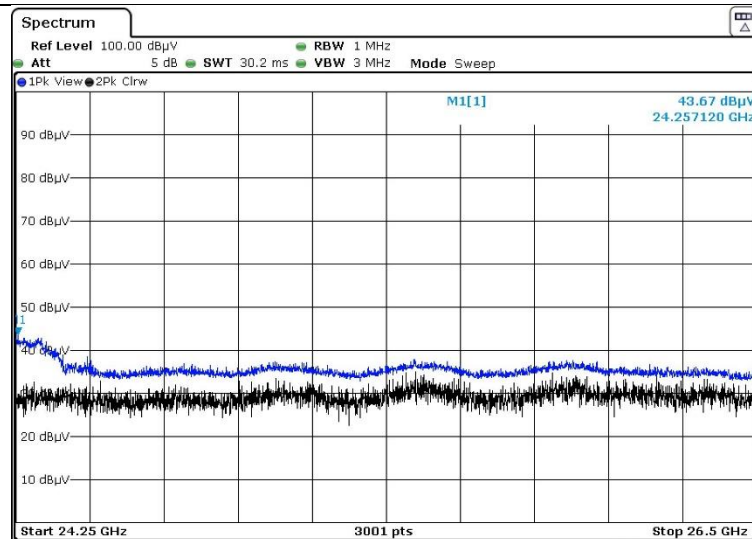


Horizontal

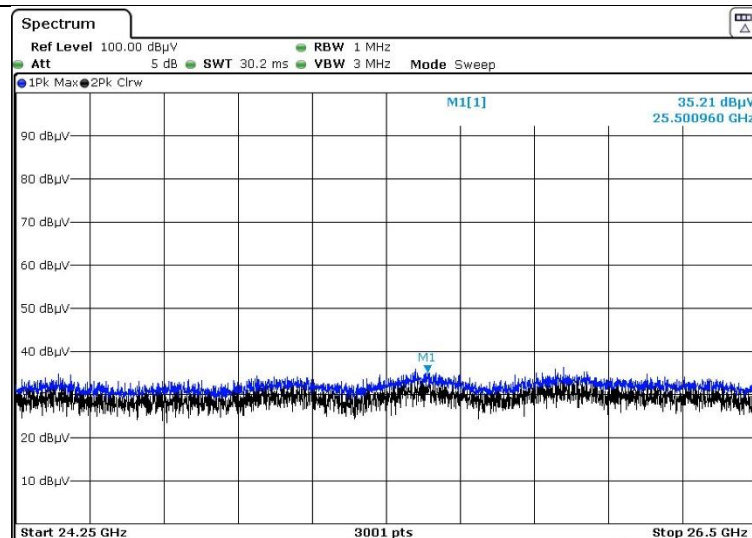


**Plots of the test equipment (EUT) – Spurious emissions 24.25 GHz – 26.5 GHz
at 3 meter (with all corrections)**

Vertical

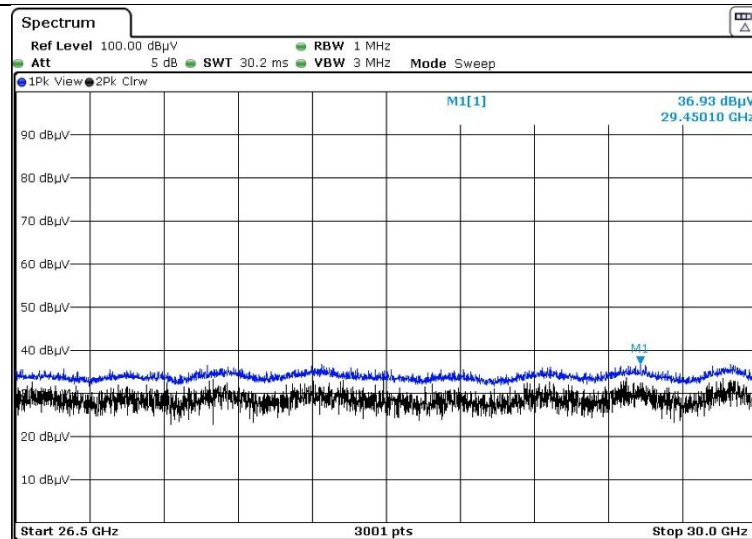


Horizontal

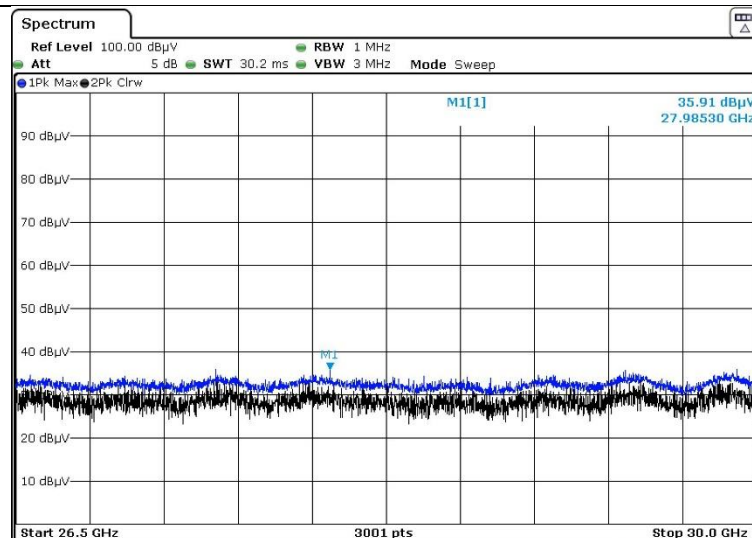


**Plots of the test equipment (EUT) – Spurious emissions 26.5 GHz – 30 GHz
at 3 meter (with all corrections)**

Vertical

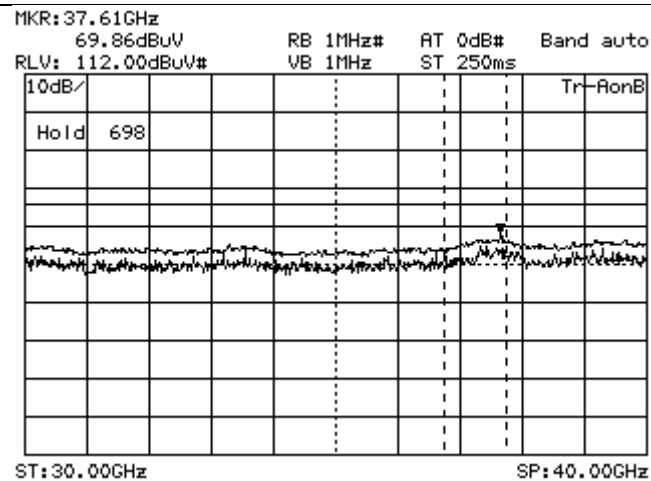


Horizontal

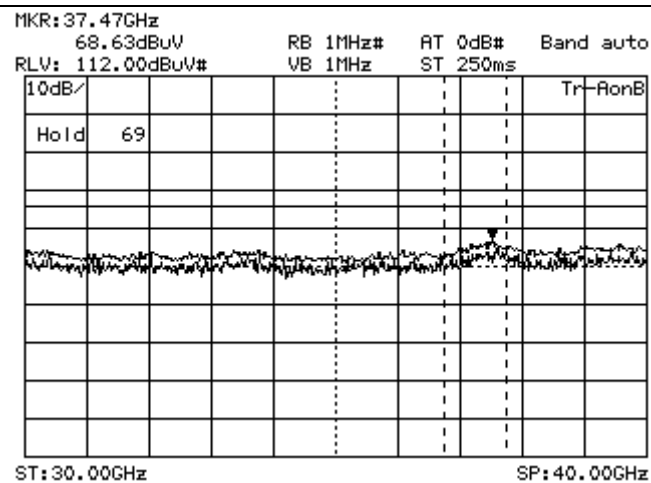


**Plots of the test equipment (EUT) – Spurious emissions 30 GHz – 40 GHz
at 3 meter (with all corrections)**

Vertical

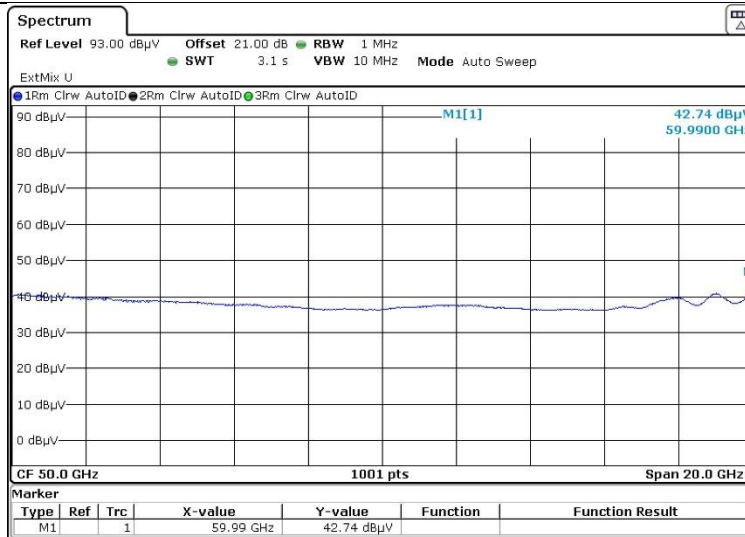


Horizontal

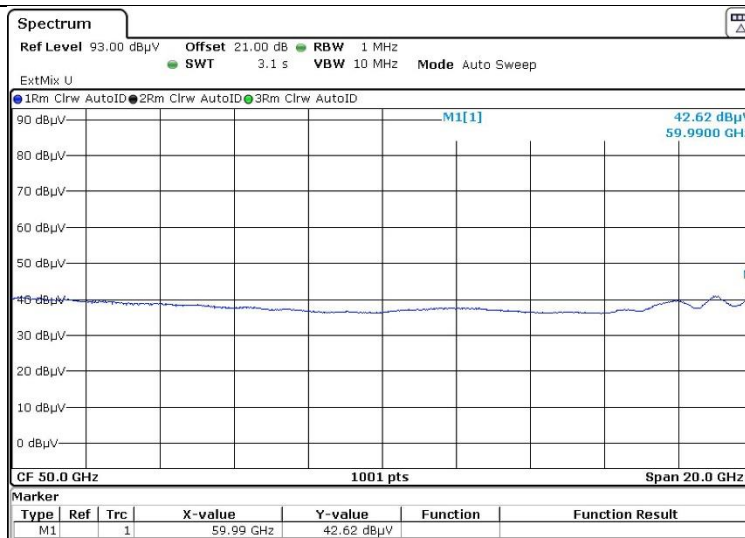


**Plots of the test equipment (EUT) – Spurious emissions 40 GHz – 60 GHz
at 1 meter (with all corrections)**

Vertical

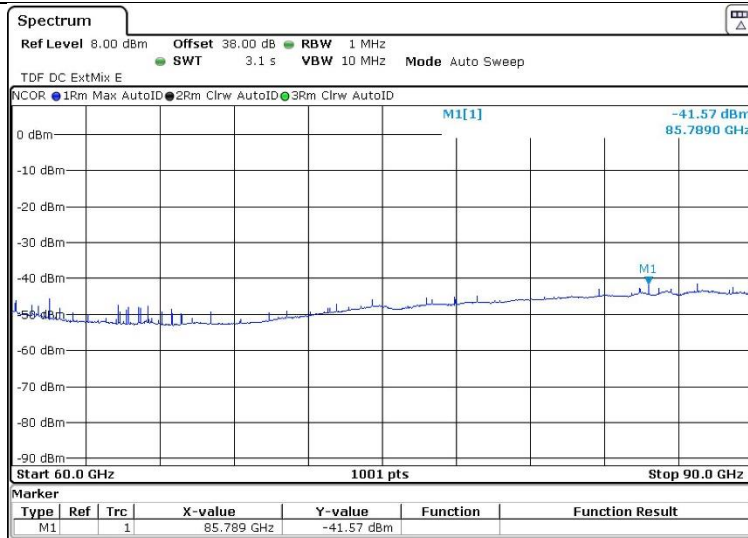


Horizontal

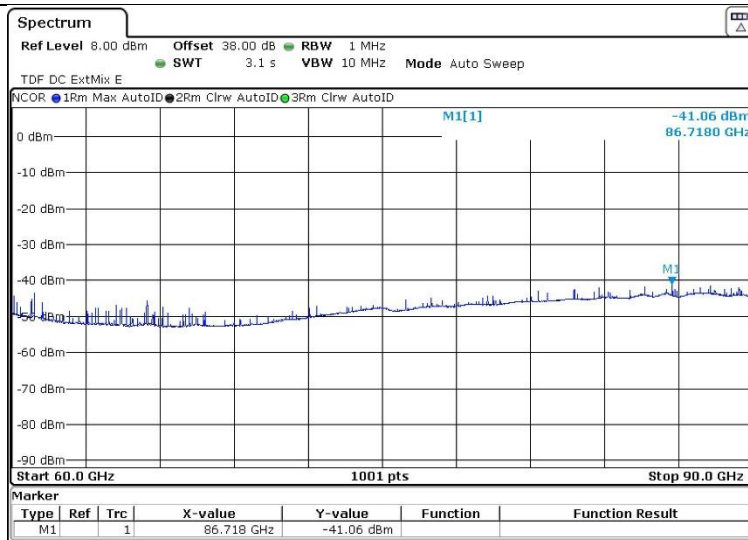


**Plots of the test equipment (EUT) – Spurious emissions 60 GHz – 90 GHz
at 1 meter (with all corrections)**

Vertical

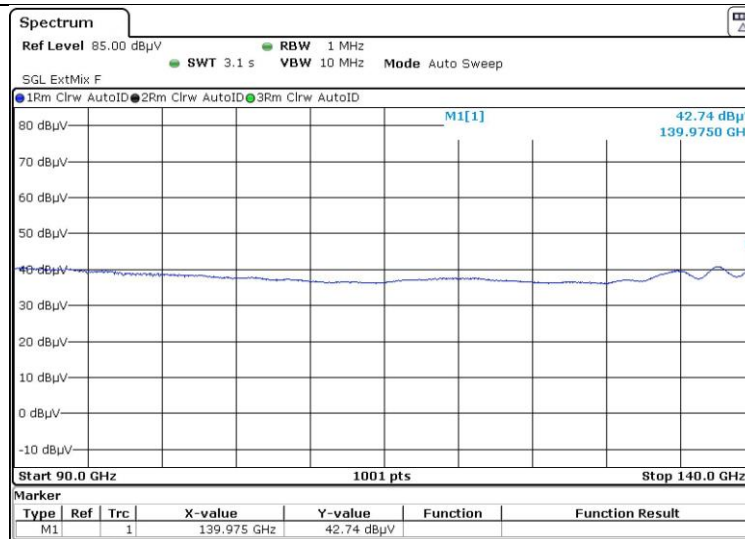


Horizontal

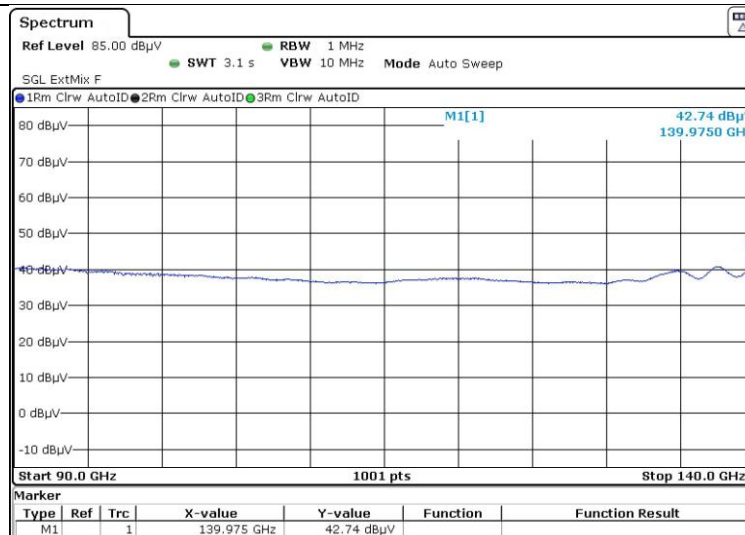


**Plots of the test equipment (EUT) – Spurious emissions 90 GHz – 140 GHz
at 1 meter (with all corrections)**

Vertical



Horizontal



Plots of the test equipment (EUT) – Out of band emission

