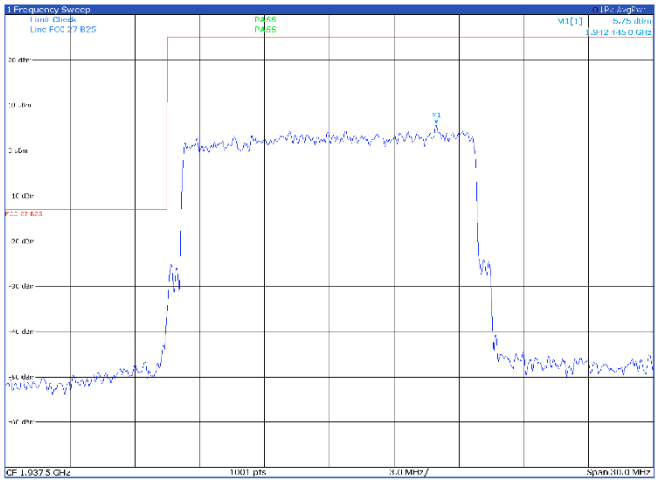
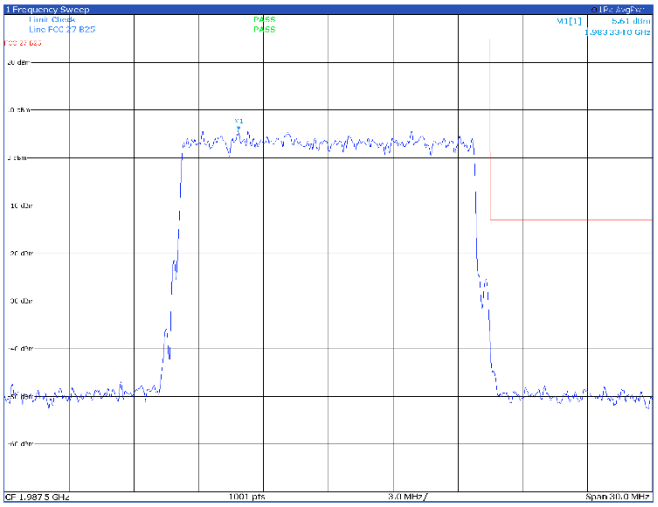
Band B25 – band edge Antenna port 1 **15 MHz**

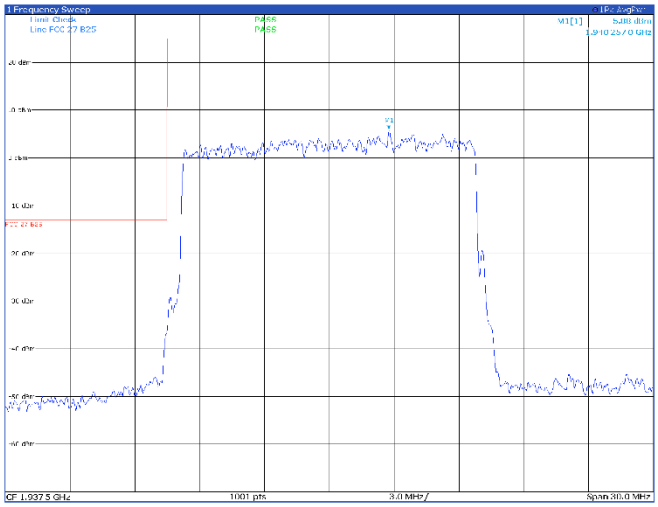
TM1.1, 15 MHz, low channel



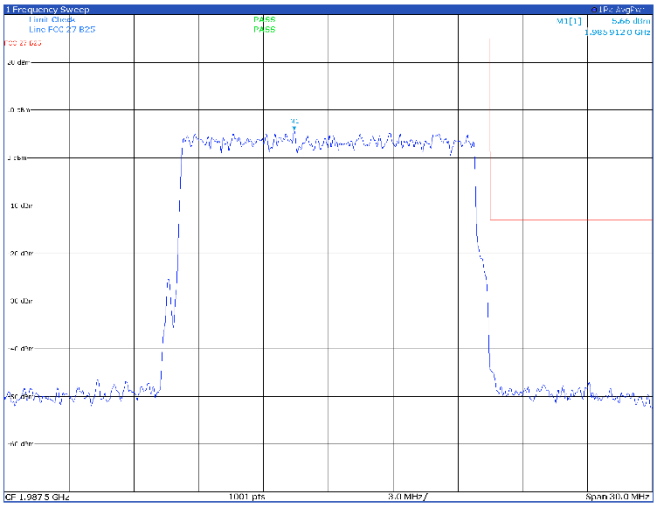
TM1.1, 15 MHz, high channel



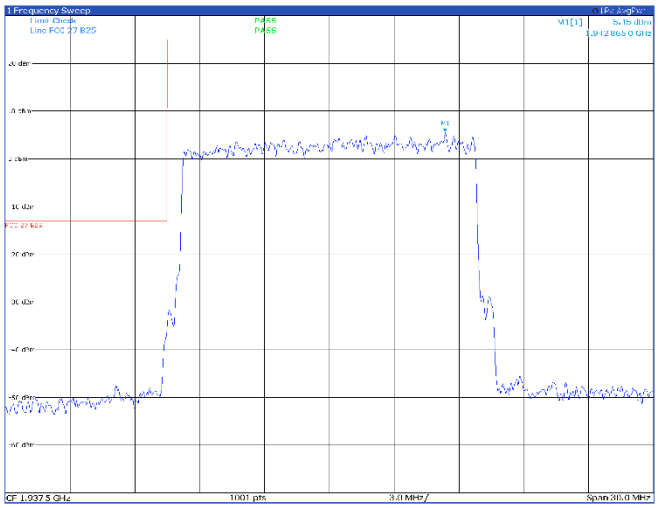
TM3p1, 15 MHz, low channel



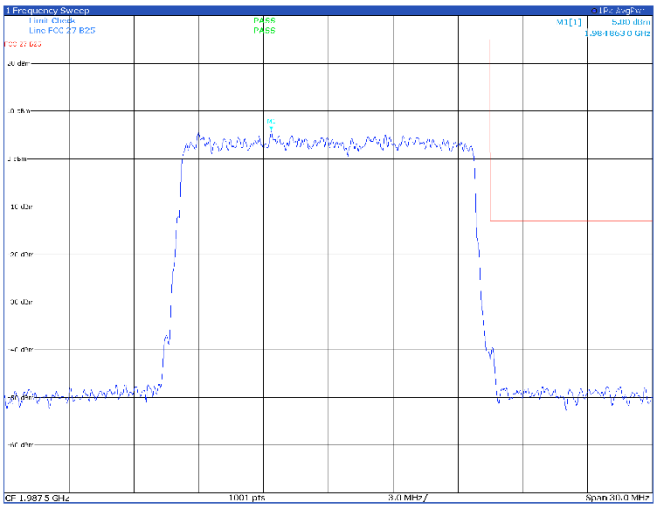
TM3p1, 15 MHz, high channel



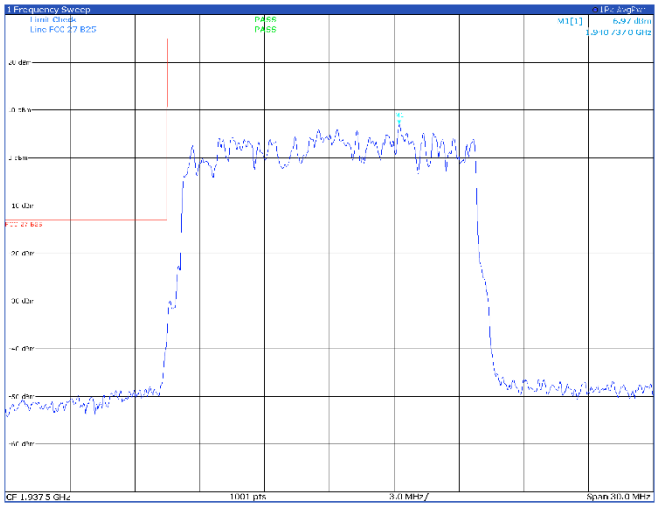
TM3p1a, 15 MHz, low channel



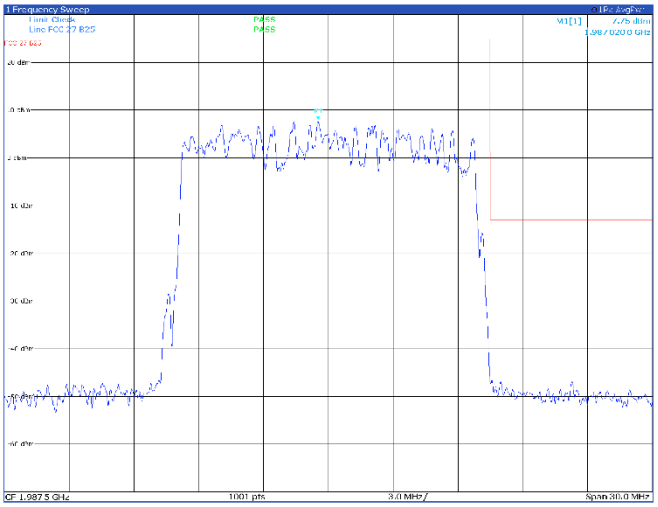
TM3p1a, 15 MHz, high channel



TM3p3, 15 MHz, low channel

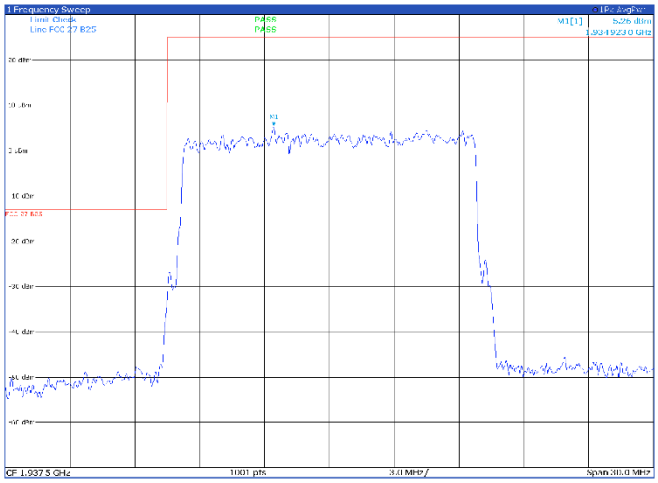


TM3p3, 15 MHz, high channel

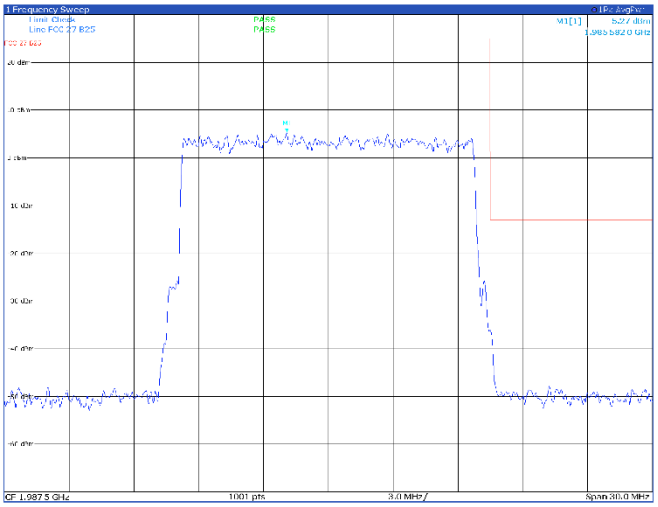


Band B25 – band edge Antenna port 2 **15 MHz**

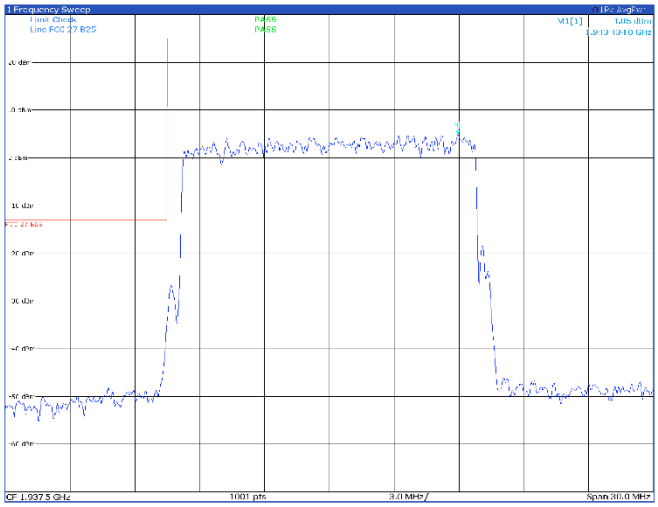
TM1.1, 15 MHz, low channel



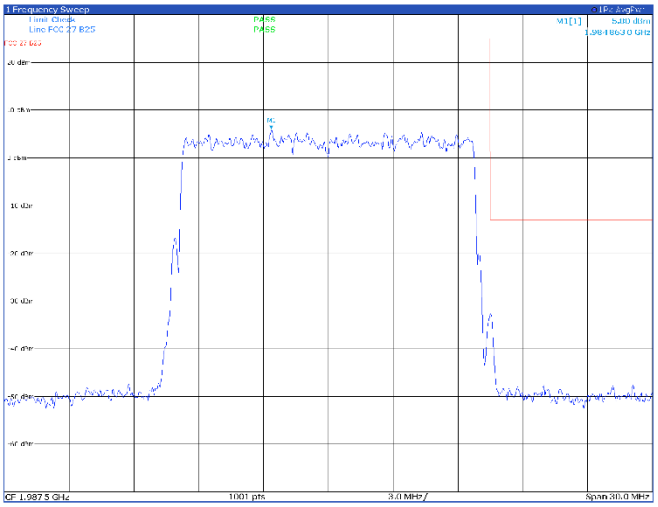
TM1.1, 15 MHz, high channel



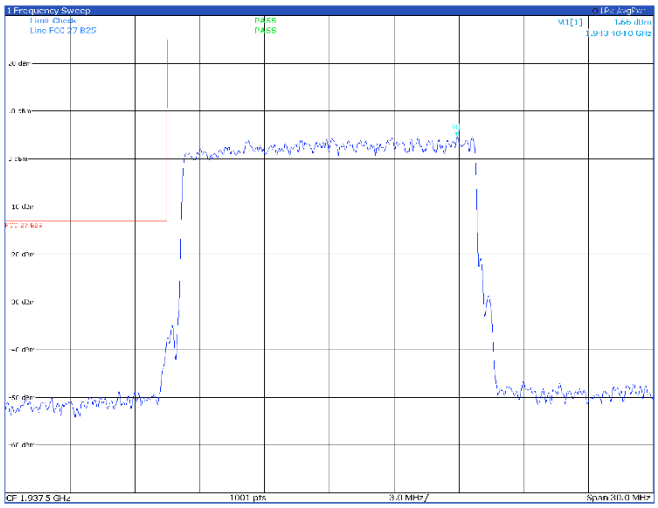
TM3p1, 15 MHz, low channel



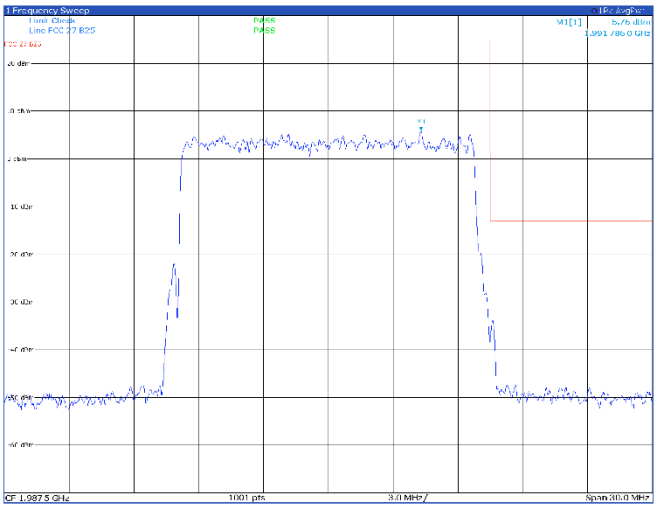
TM3p1, 15 MHz, high channel



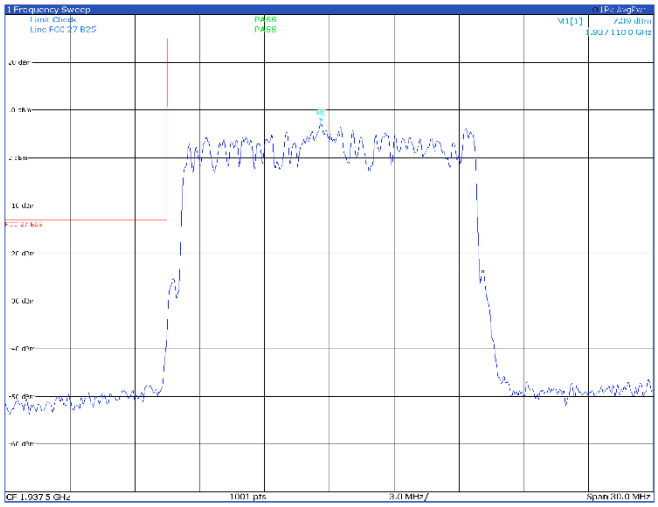
TM3p1a, 15 MHz, low channel



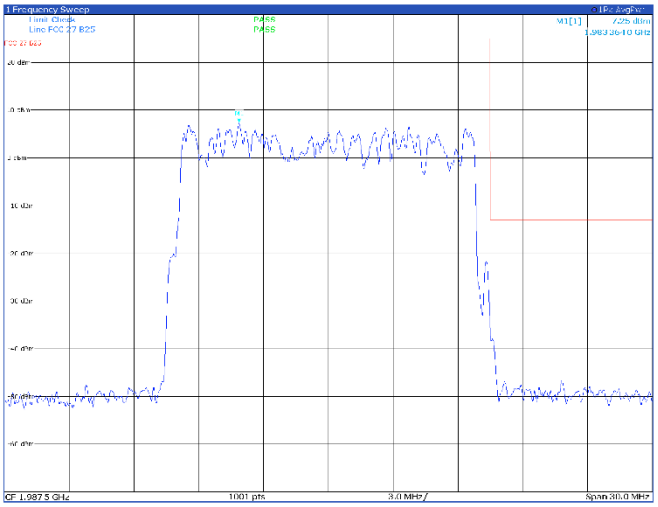
TM3p1a, 15 MHz, high channel



TM3p3, 15 MHz, low channel

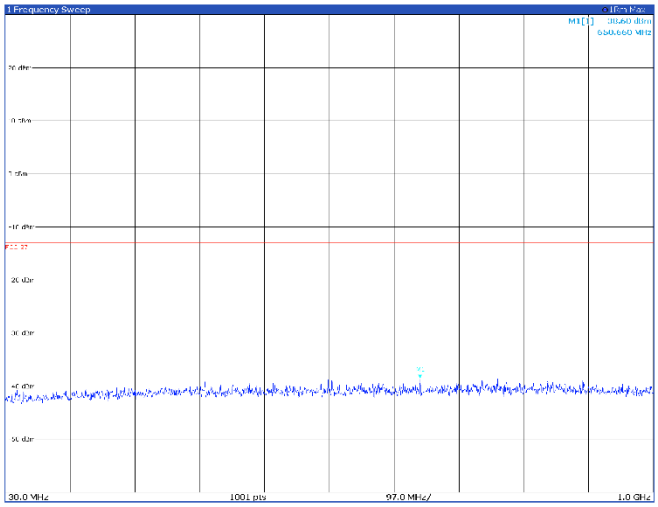


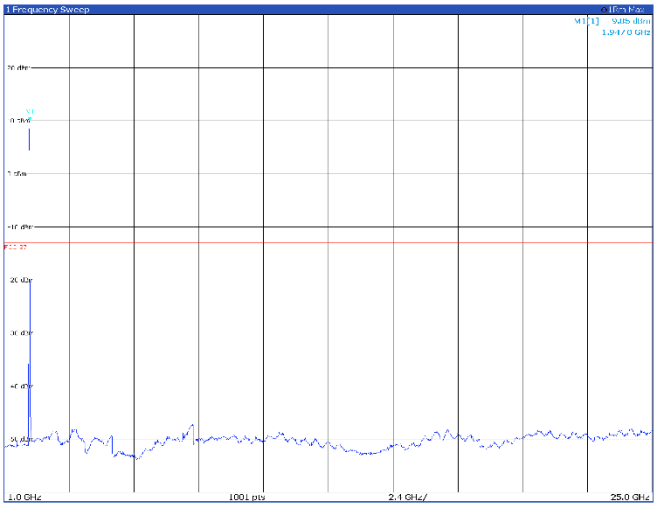
TM3p3, 15 MHz, high channel



Band B25 – conducted emissions Antenna port 1 **20 MHz**

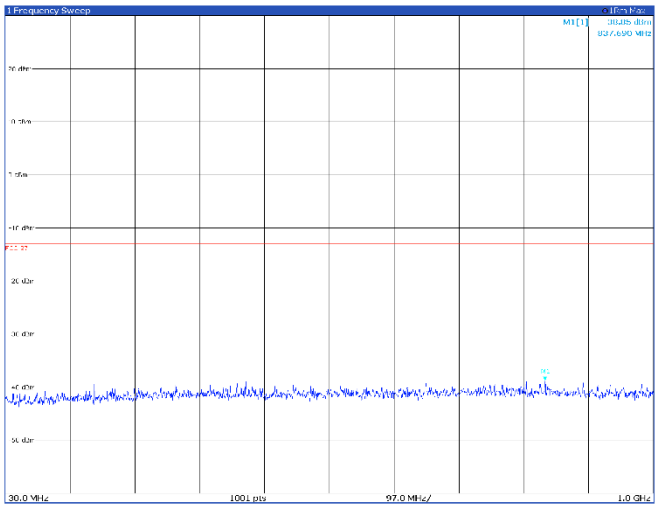
TM1.1, 20 MHz, low channel

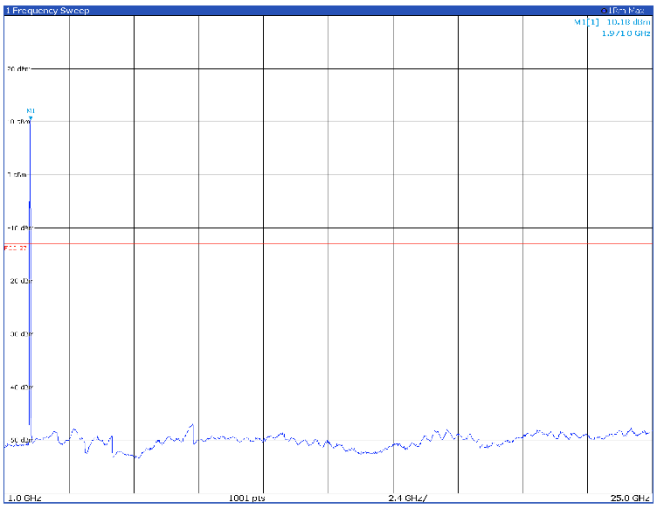




Limit exceeded by the carrier

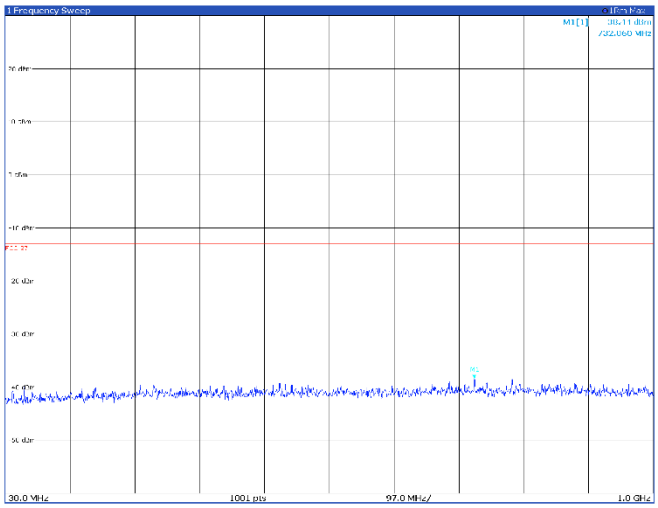
TM1.1, 20 MHz, mid channel

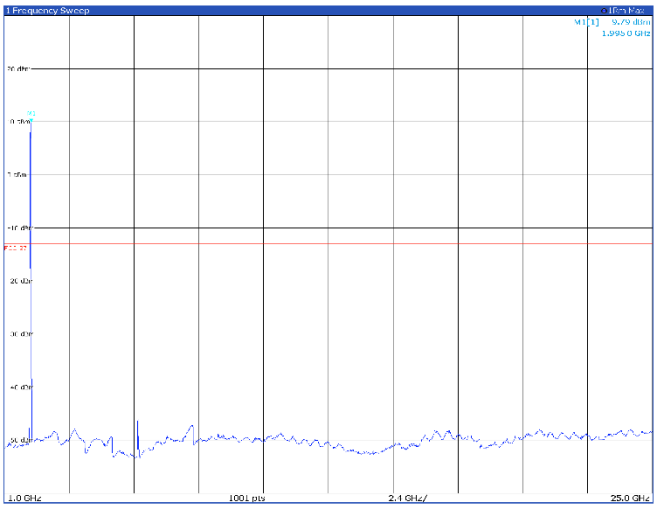




Limit exceeded by the carrier

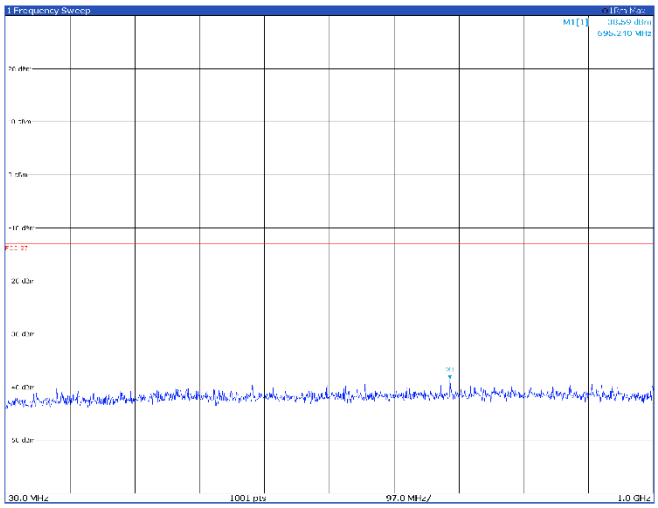
TM1.1, 20 MHz, high channel

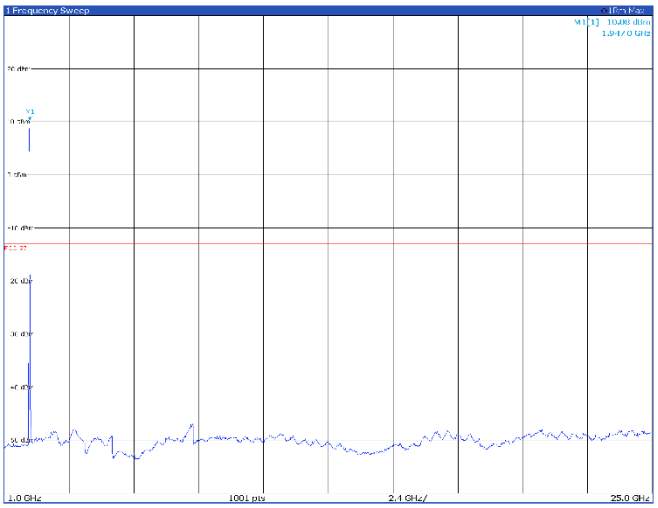




Limit exceeded by the carrier

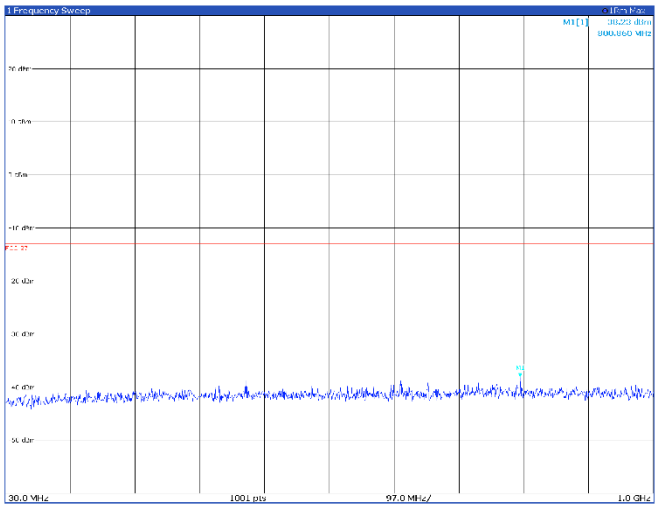
TM3p1, 20 MHz, low channel

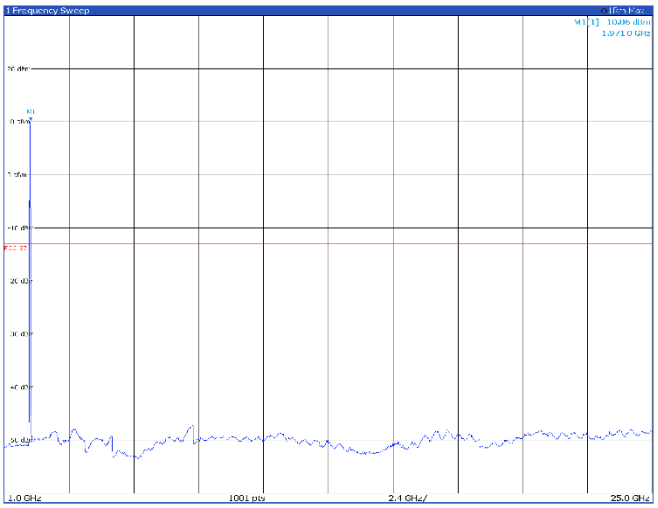




Limit exceeded by the carrier

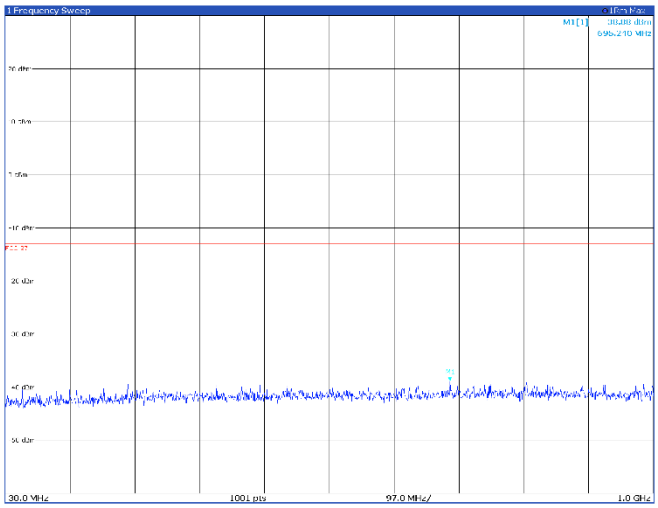
TM3p1, 20 MHz, mid channel

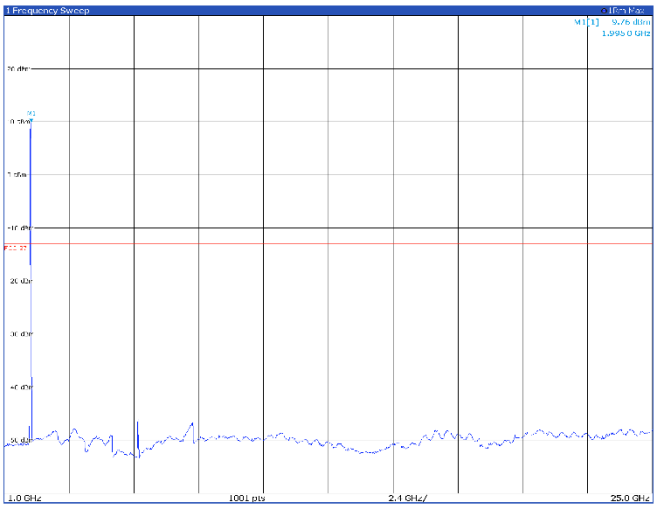




Limit exceeded by the carrier

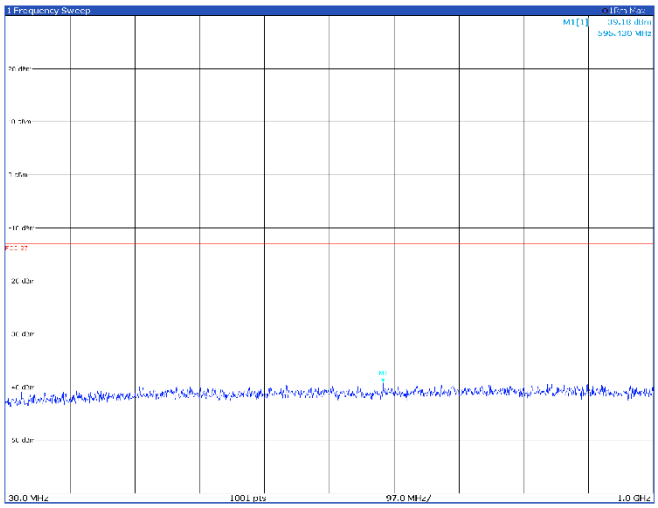
TM3p1, 20 MHz, high channel

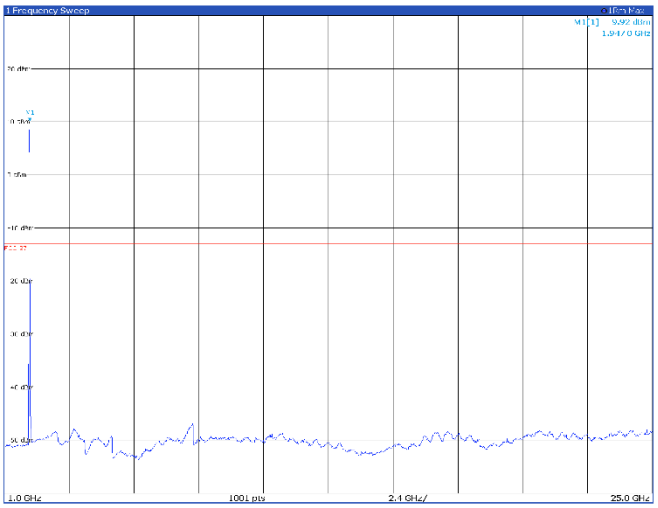




Limit exceeded by the carrier

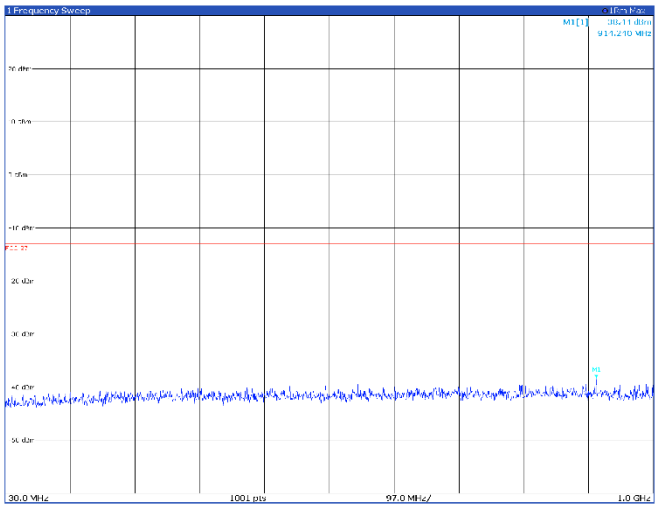
TM3p1a, 20 MHz, low channel

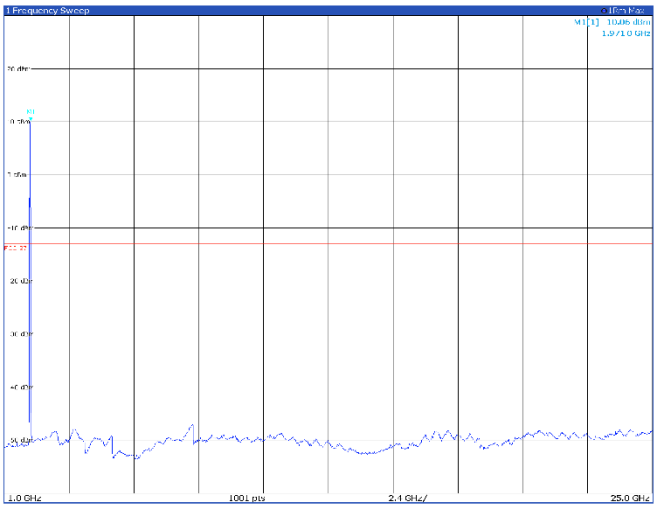




Limit exceeded by the carrier

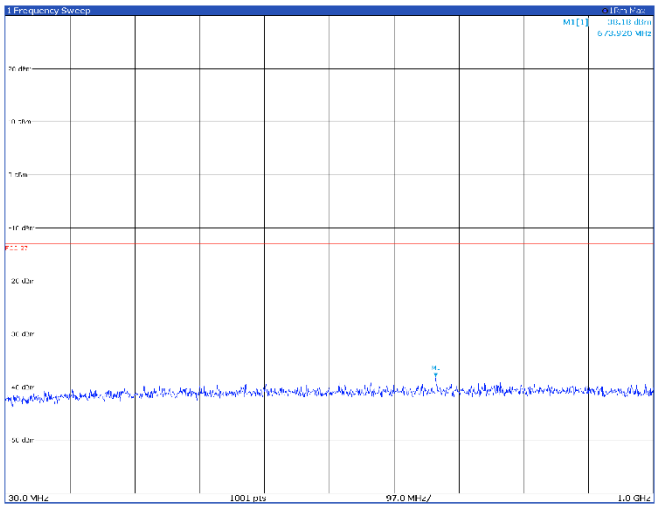
TM3p1a, 20 MHz, mid channel

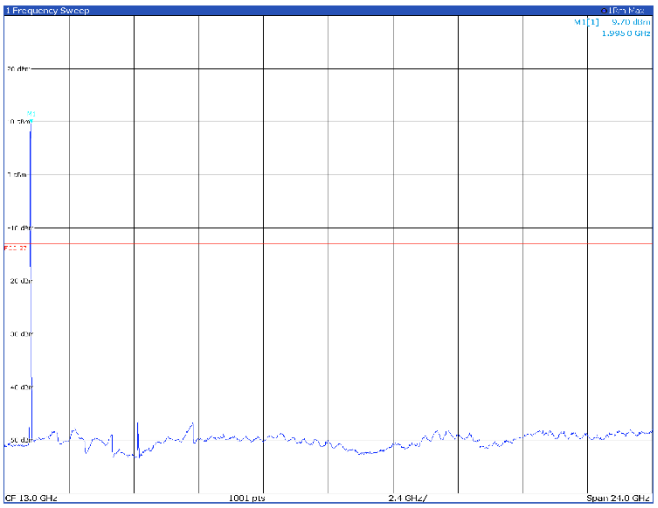




Limit exceeded by the carrier

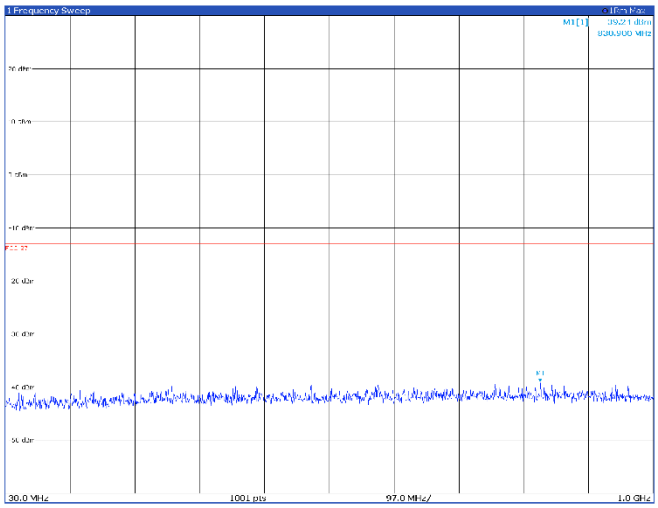
TM3p1a, 20 MHz, high channel

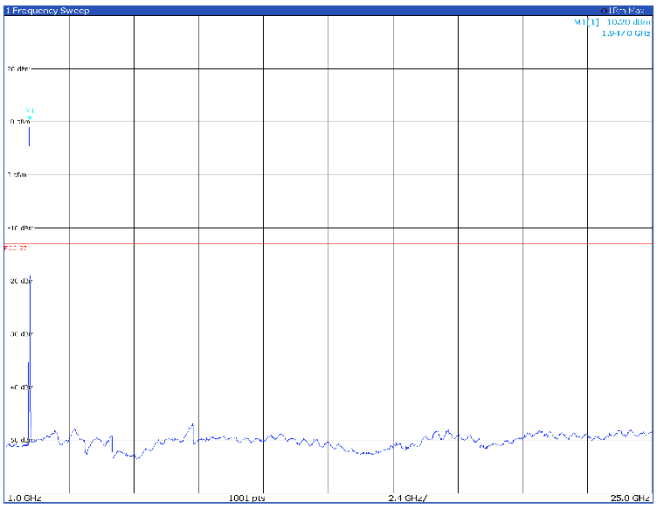




Limit exceeded by the carrier

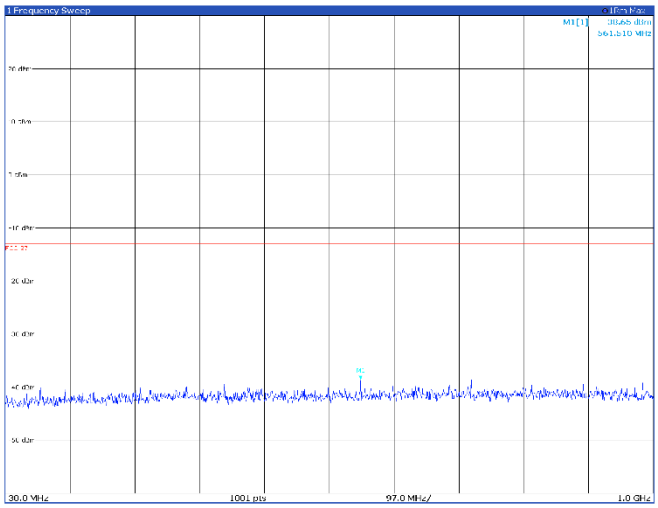
TM3p3, 20 MHz, low channel

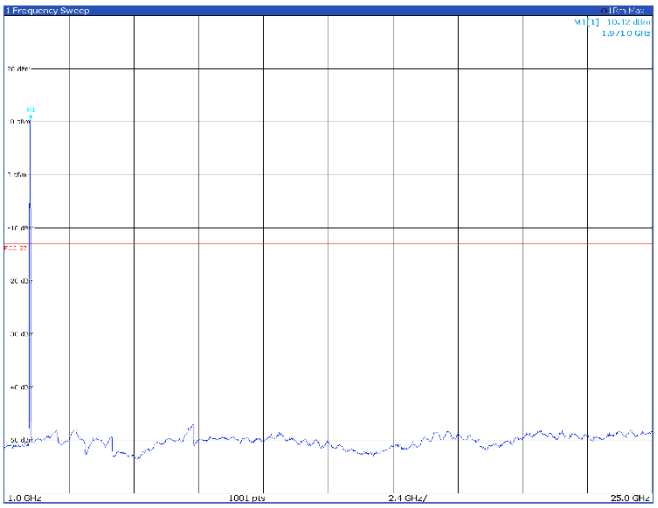




Limit exceeded by the carrier

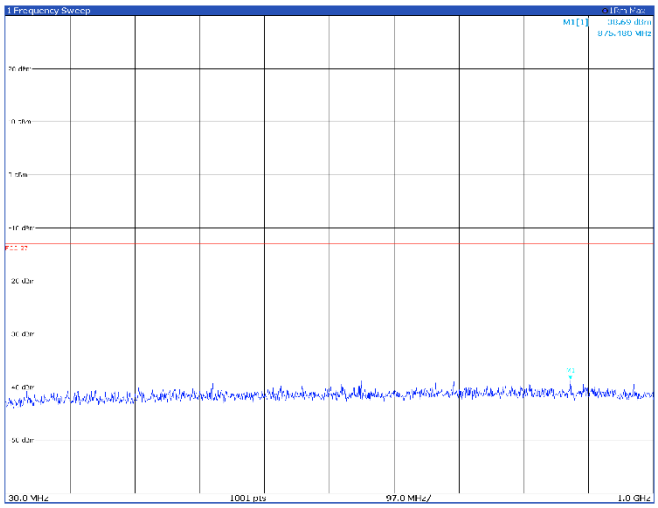
TM3p3, 20 MHz, mid channel

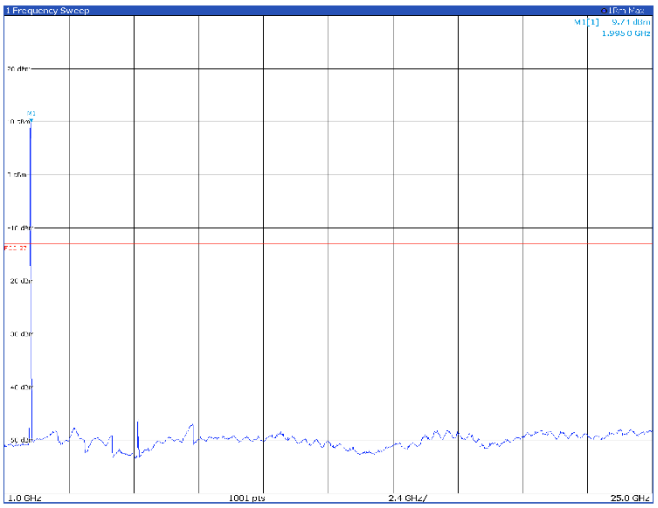




Limit exceeded by the carrier

TM3p3, 20 MHz, high channel

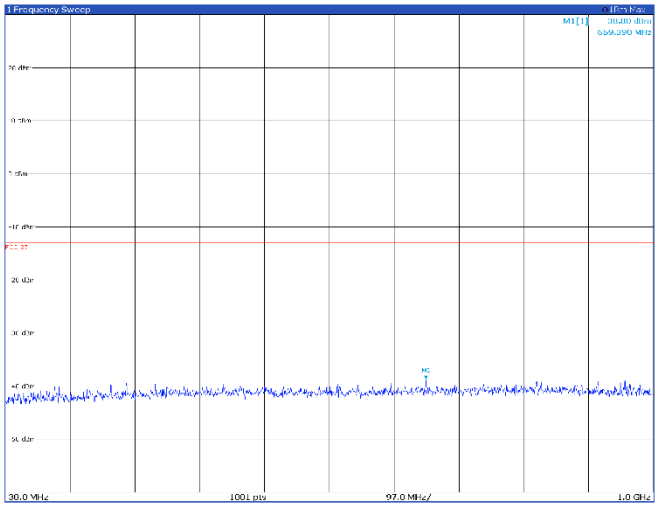


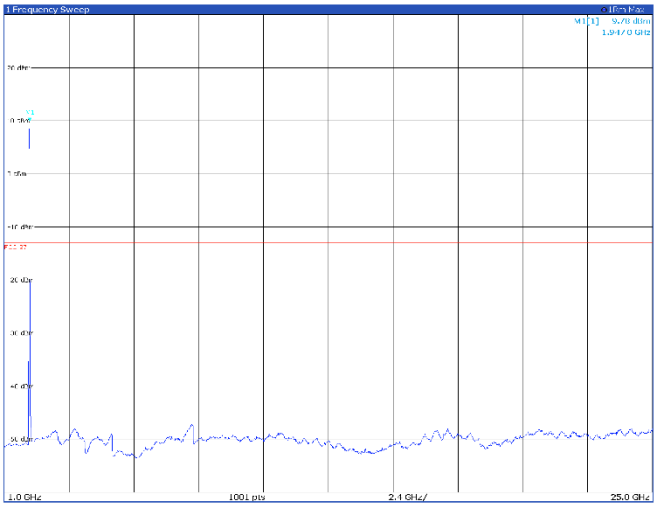


Limit exceeded by the carrier

Band B25 – conducted emissions Antenna port 2 **20 MHz**

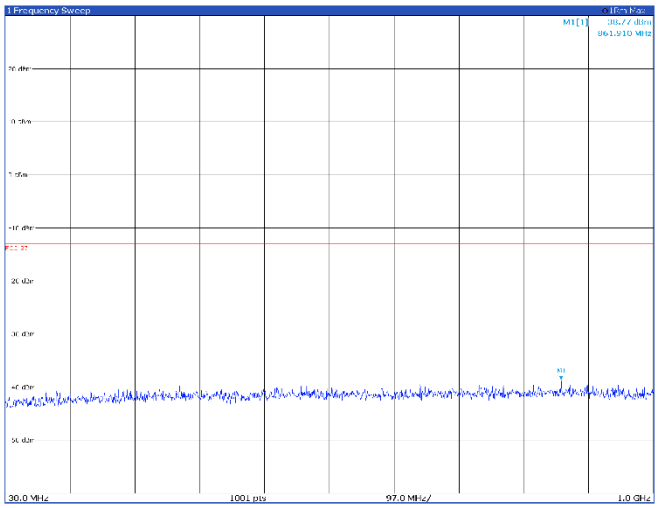
TM1.1, 20 MHz, low channel

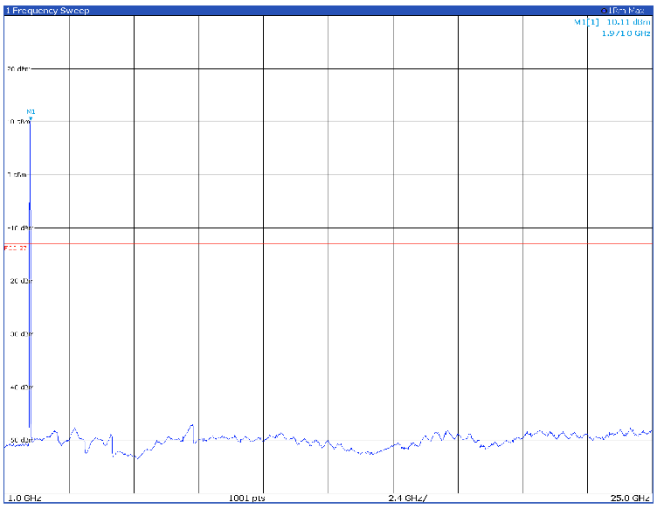




Limit exceeded by the carrier

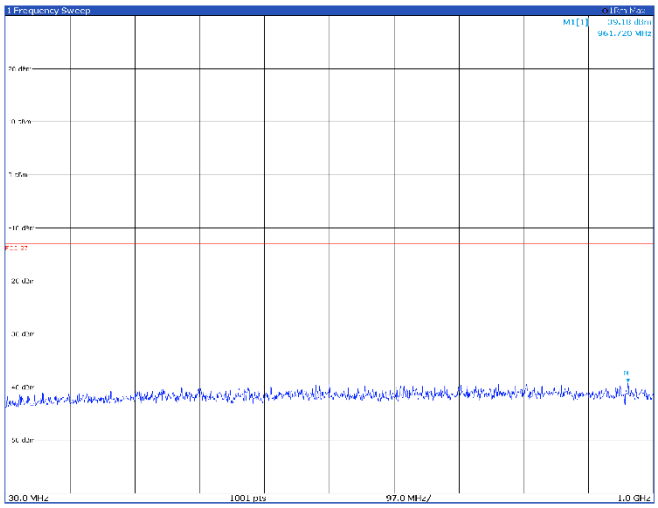
TM1.1, 20 MHz, mid channel

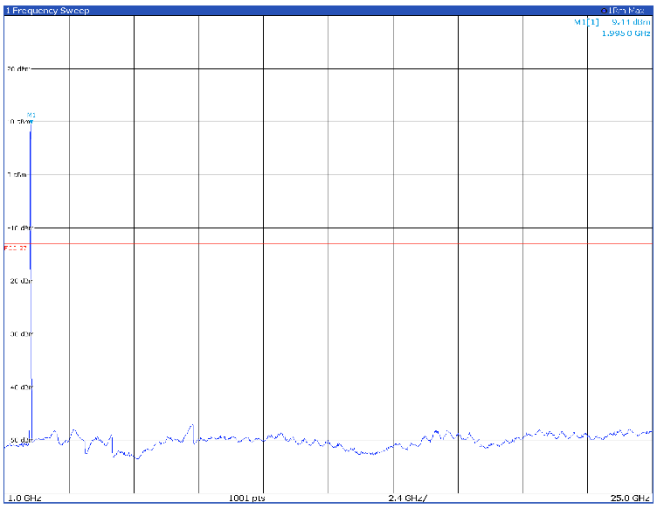




Limit exceeded by the carrier

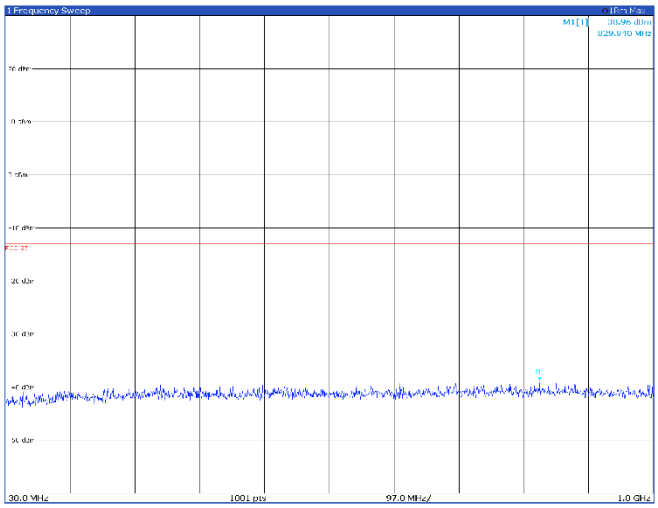
TM1.1, 20 MHz, high channel

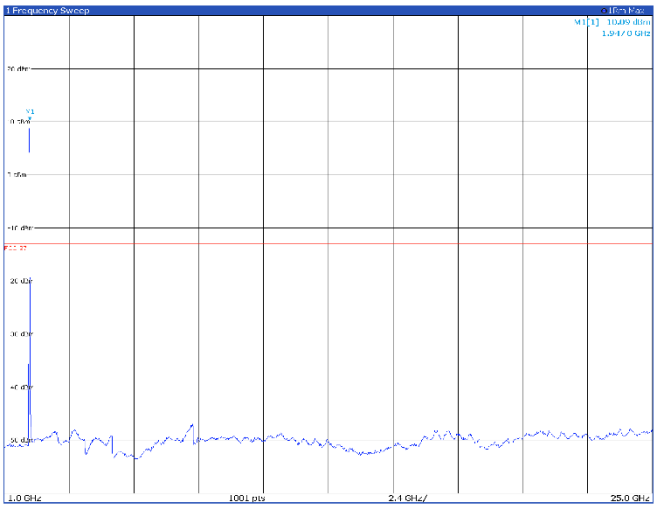




Limit exceeded by the carrier

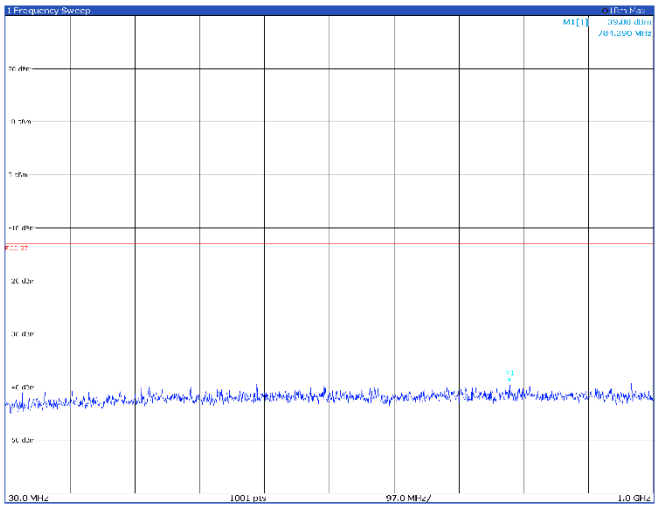
TM3p1, 20 MHz, low channel

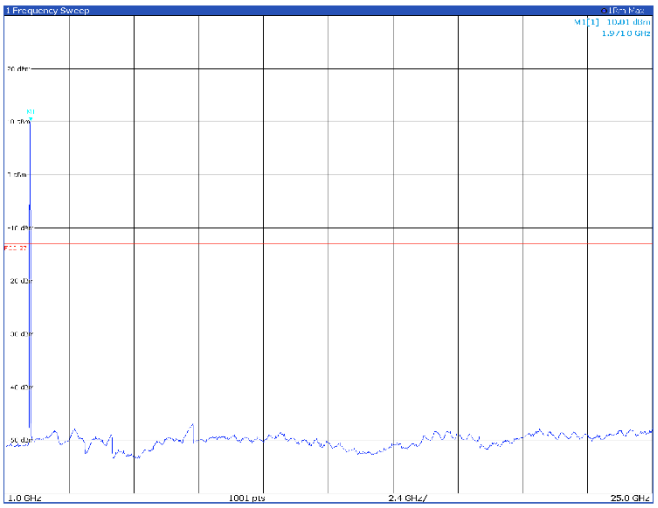




Limit exceeded by the carrier

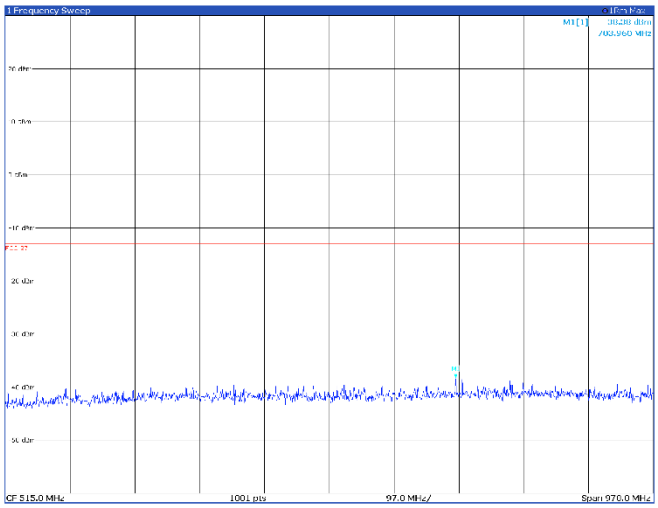
TM3p1, 20 MHz, mid channel

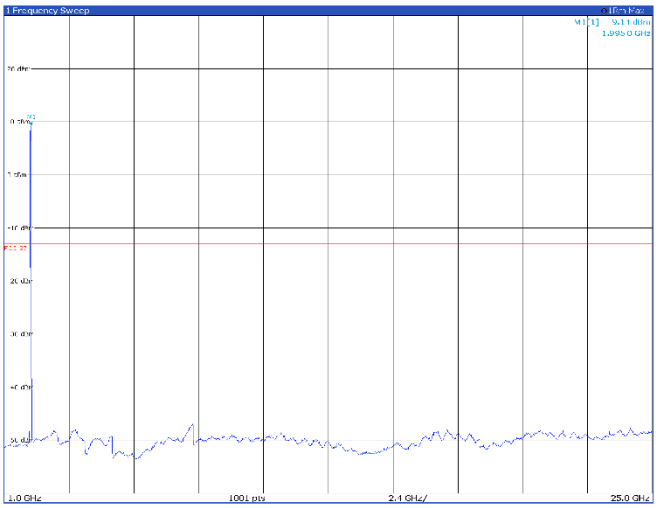




Limit exceeded by the carrier

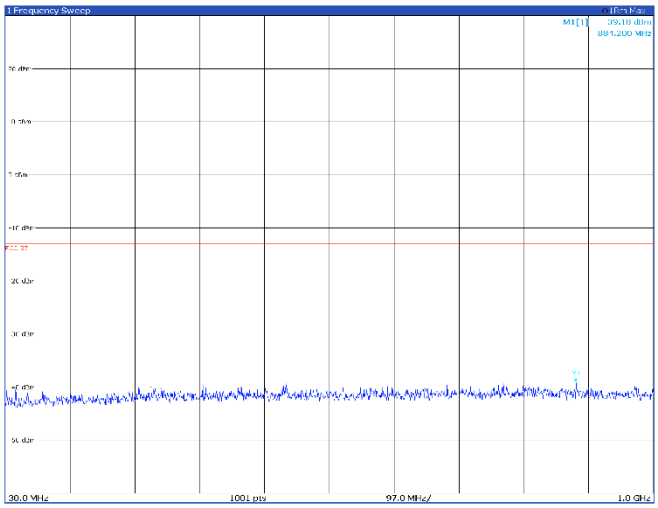
TM3p1, 20 MHz, high channel

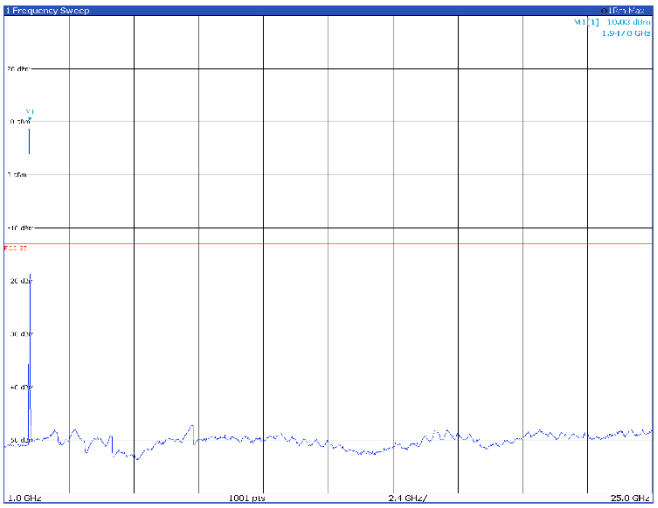




Limit exceeded by the carrier

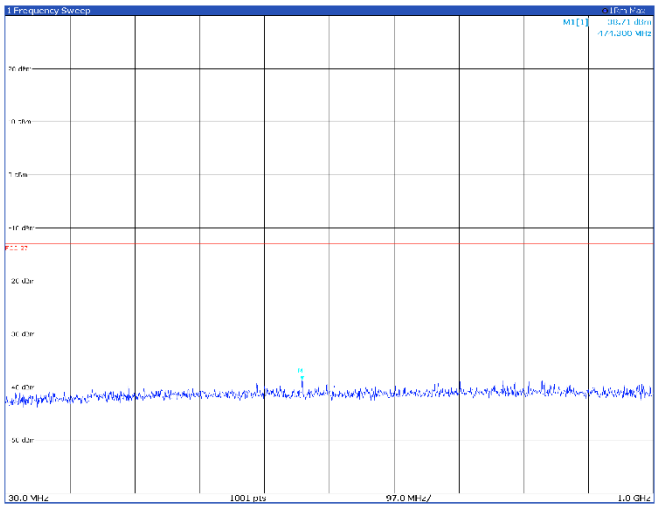
TM3p1a, 20 MHz, low channel

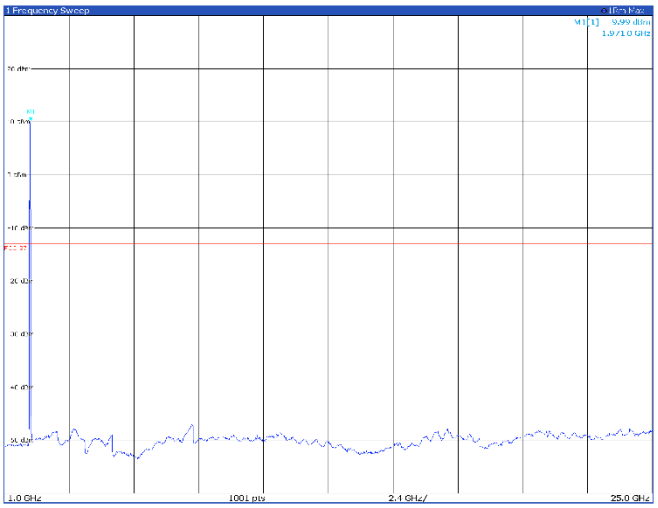




Limit exceeded by the carrier

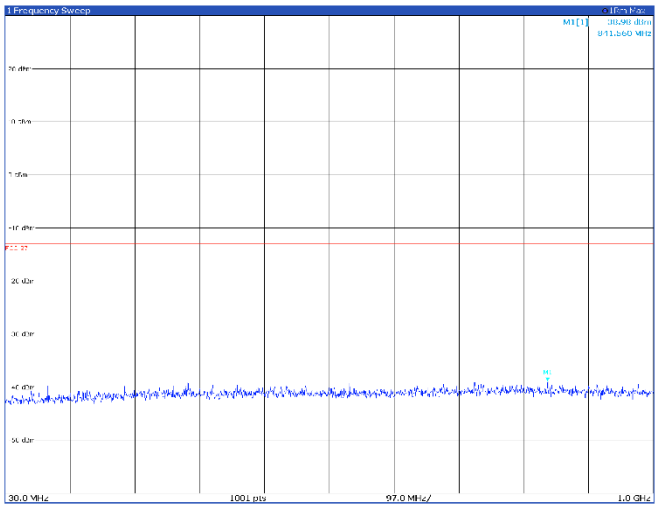
TM3p1a, 20 MHz, mid channel

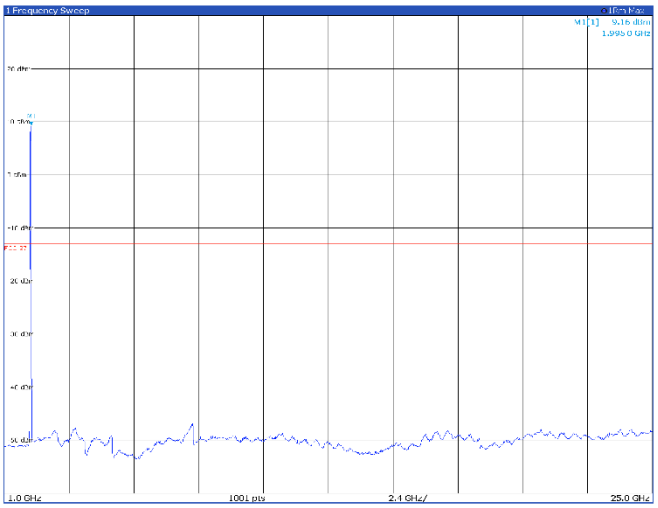




Limit exceeded by the carrier

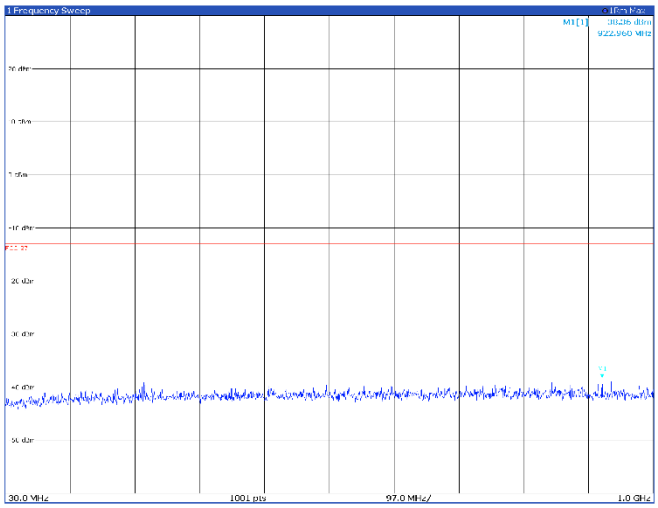
TM3p1a, 20 MHz, high channel

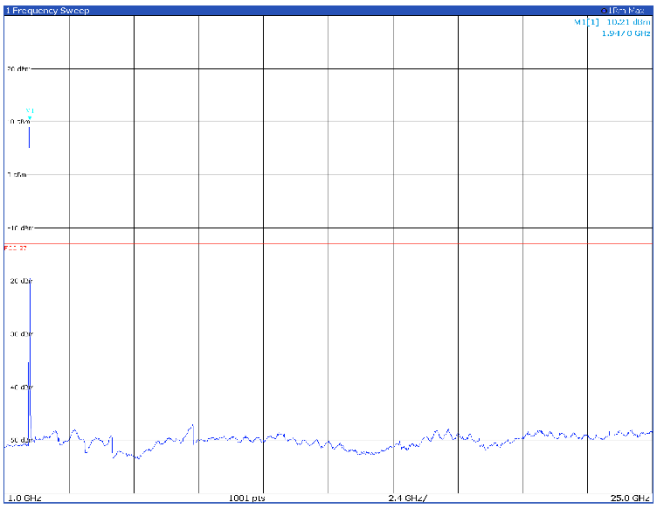




Limit exceeded by the carrier

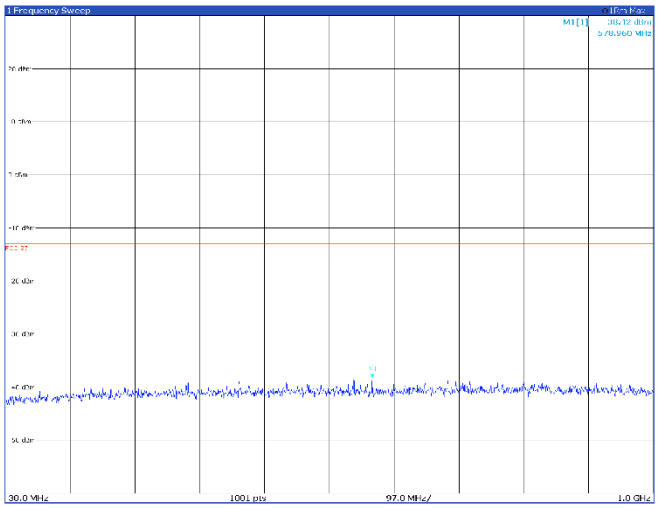
TM3p3, 20 MHz, low channel

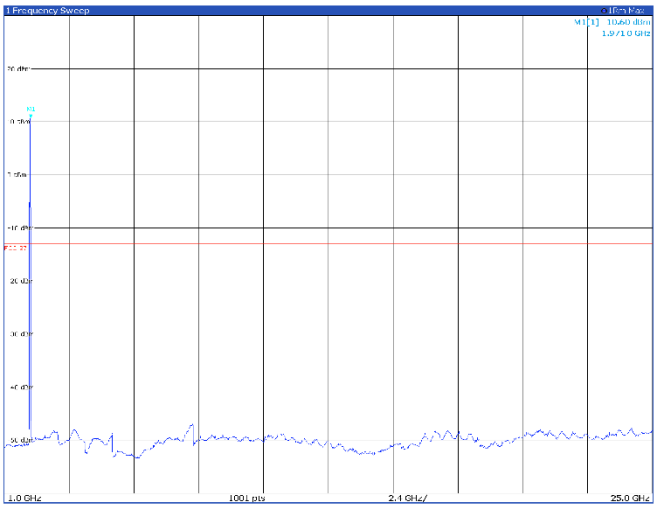




Limit exceeded by the carrier

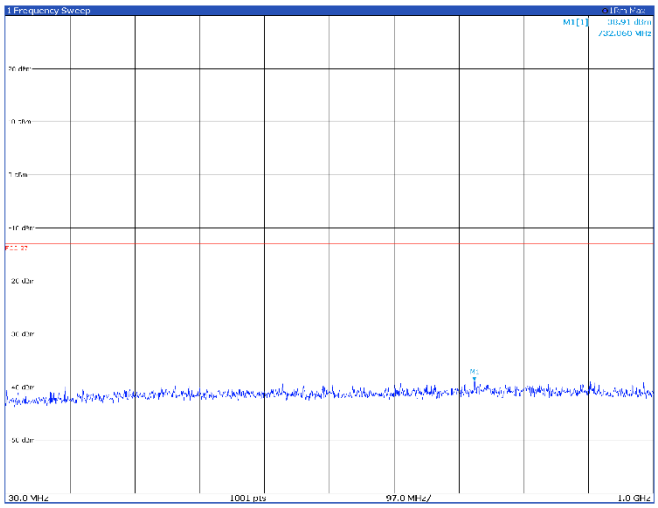
TM3p3, 20 MHz, mid channel

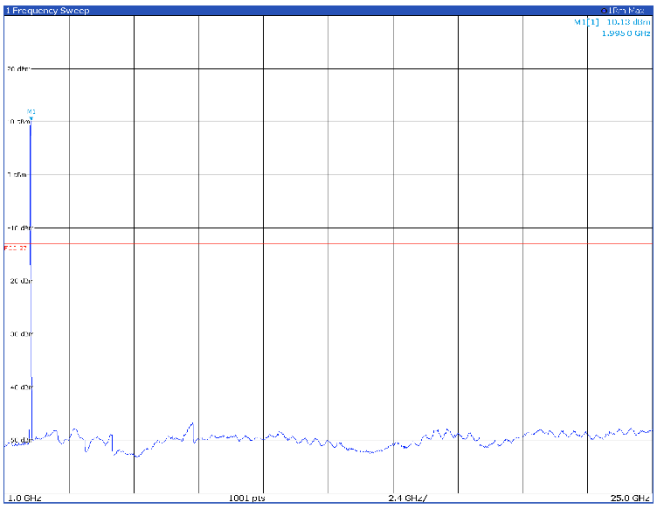




Limit exceeded by the carrier

TM3p3, 20 MHz, high channel

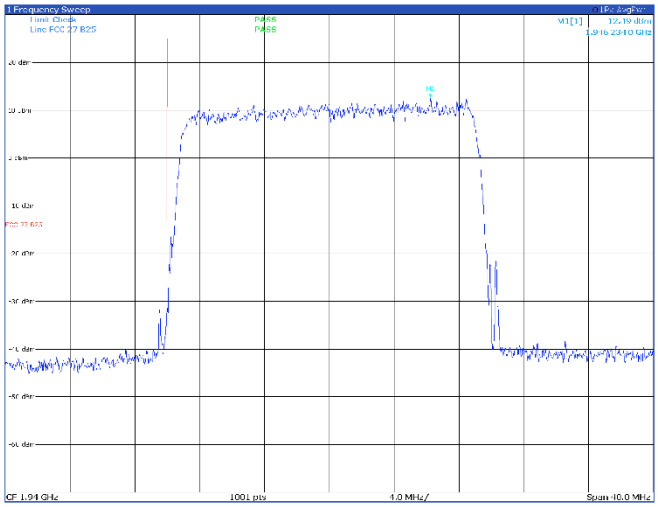




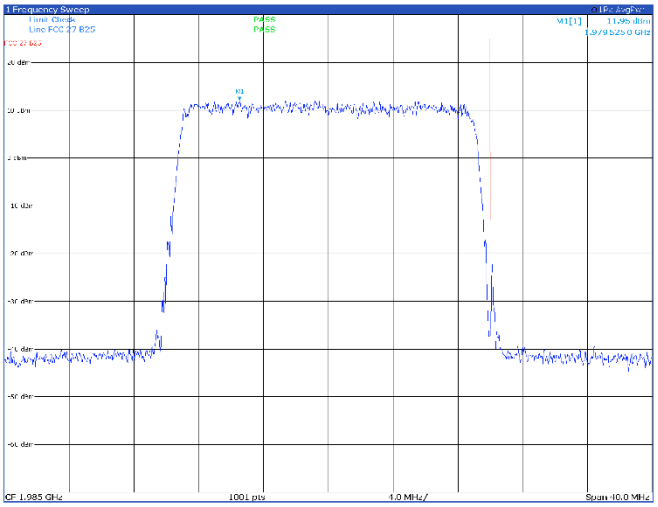
Limit exceeded by the carrier

Band B25 – band edge Antenna port 1 **20 MHz**

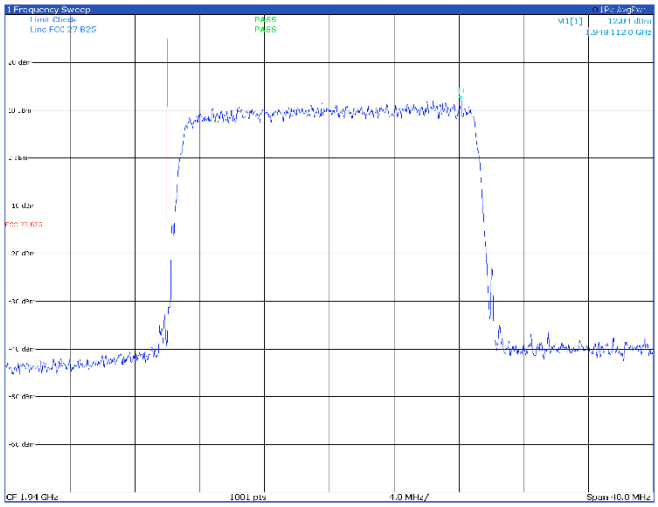
TM1.1, 20 MHz, low channel



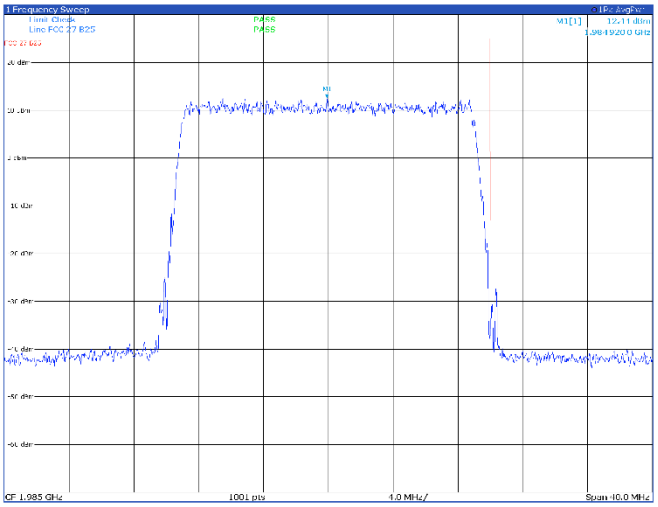
TM1.1, 20 MHz, high channel



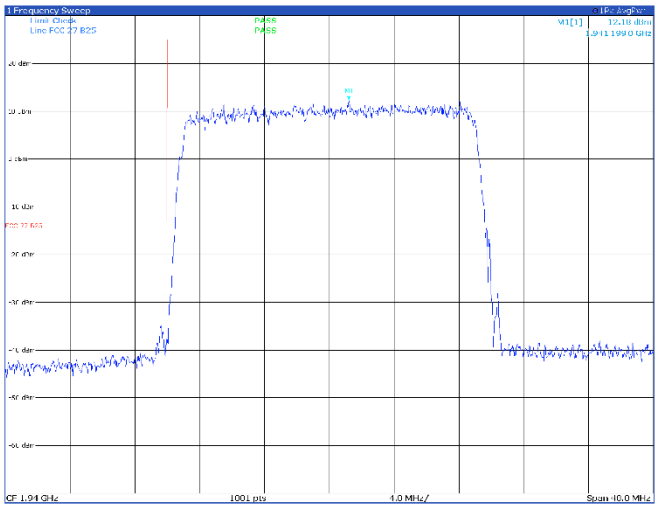
TM3p1, 20 MHz, low channel



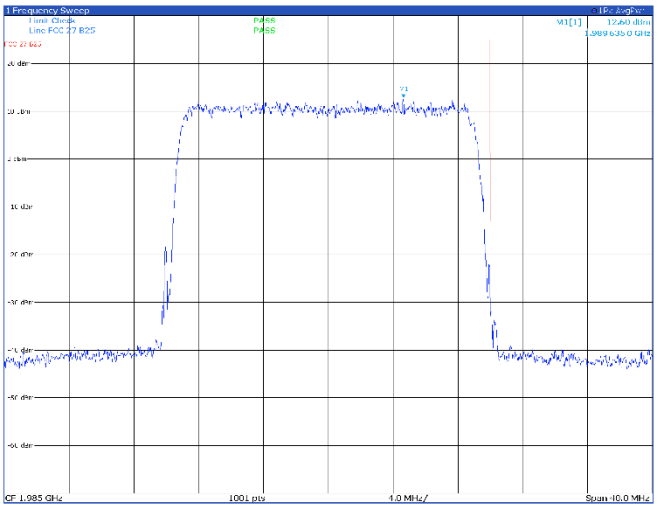
TM3p1, 20 MHz, high channel



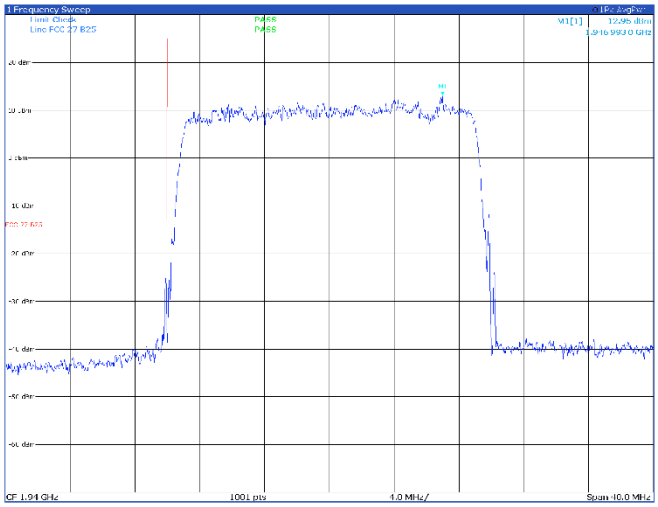
TM3p1a, 20 MHz, low channel



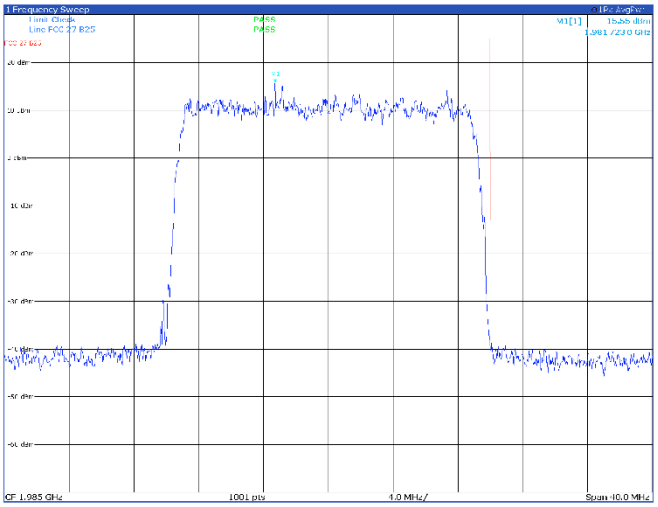
TM3p1a, 20 MHz, high channel



TM3p3, 20 MHz, low channel

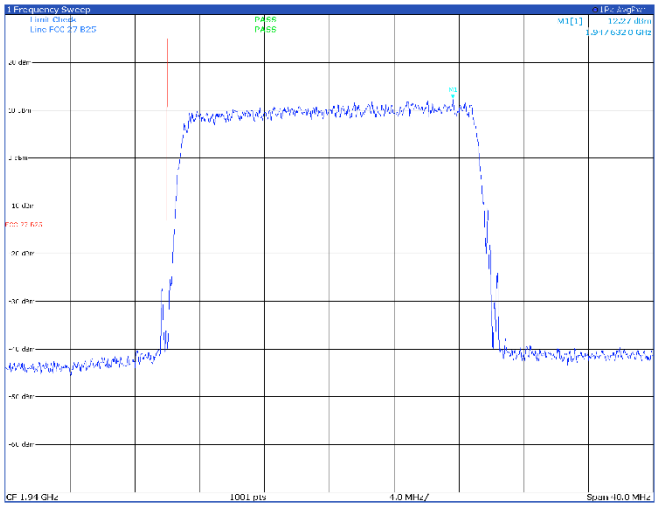


TM3p3, 20 MHz, high channel

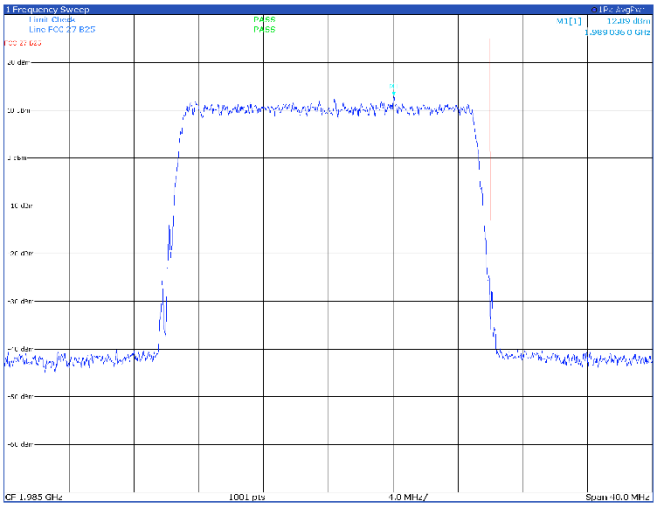


Band B25 – band edge Antenna port 2 **20 MHz**

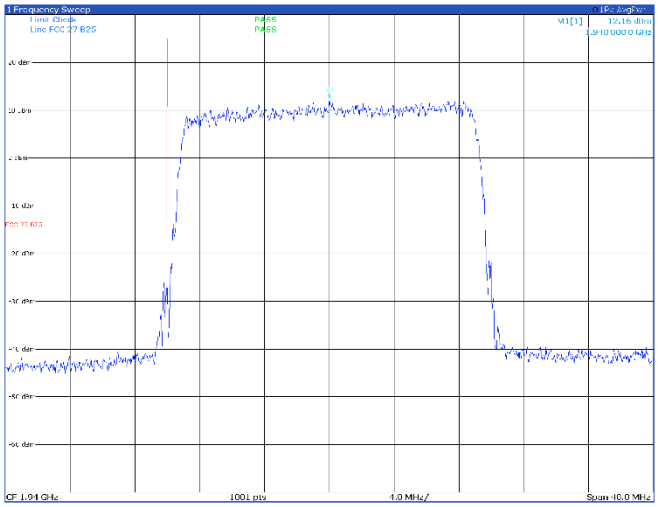
TM1.1, 20 MHz, low channel



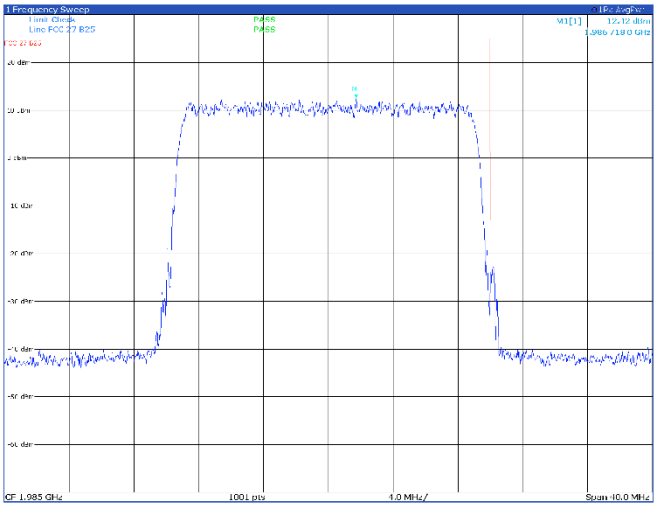
TM1.1, 20 MHz, high channel



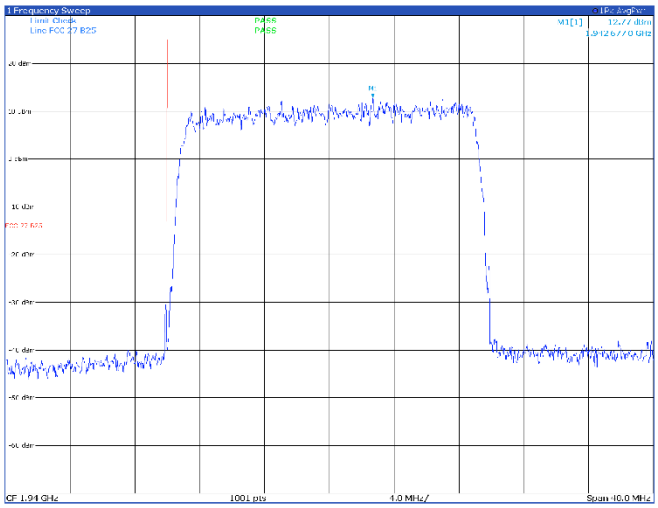
TM3p1, 20 MHz, low channel



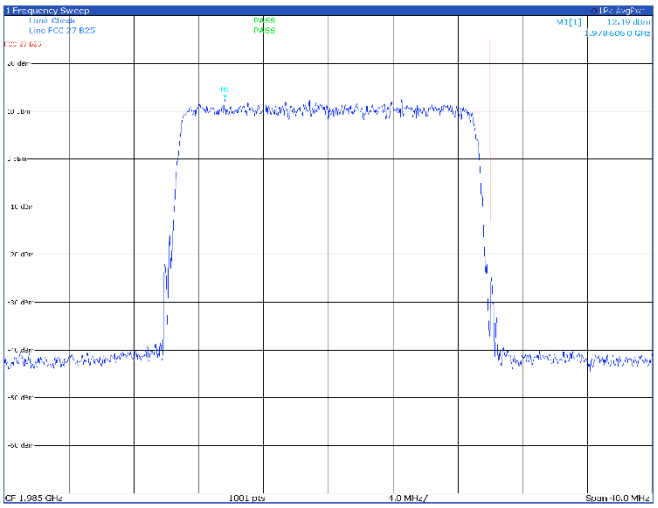
TM3p1, 20 MHz, high channel



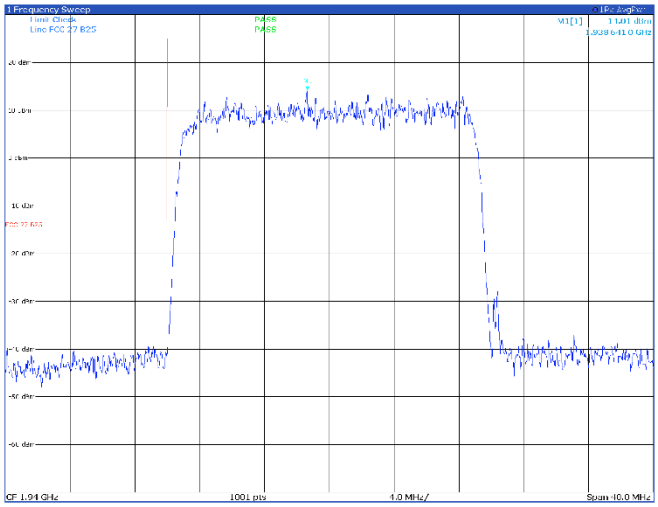
TM3p1a, 20 MHz, low channel



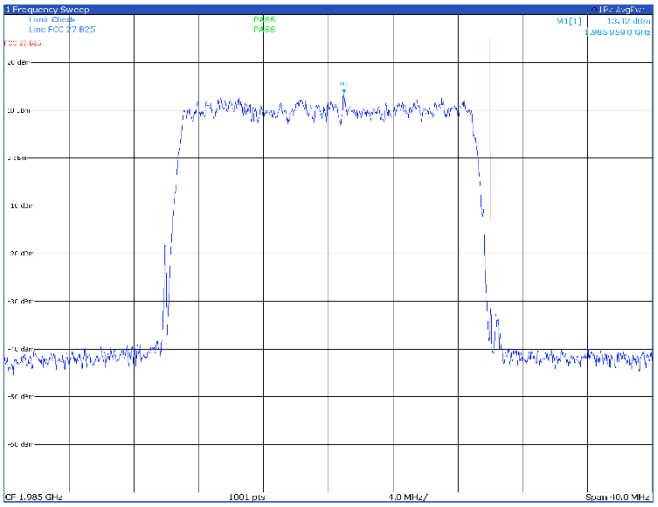
TM3p1a, 20 MHz, high channel

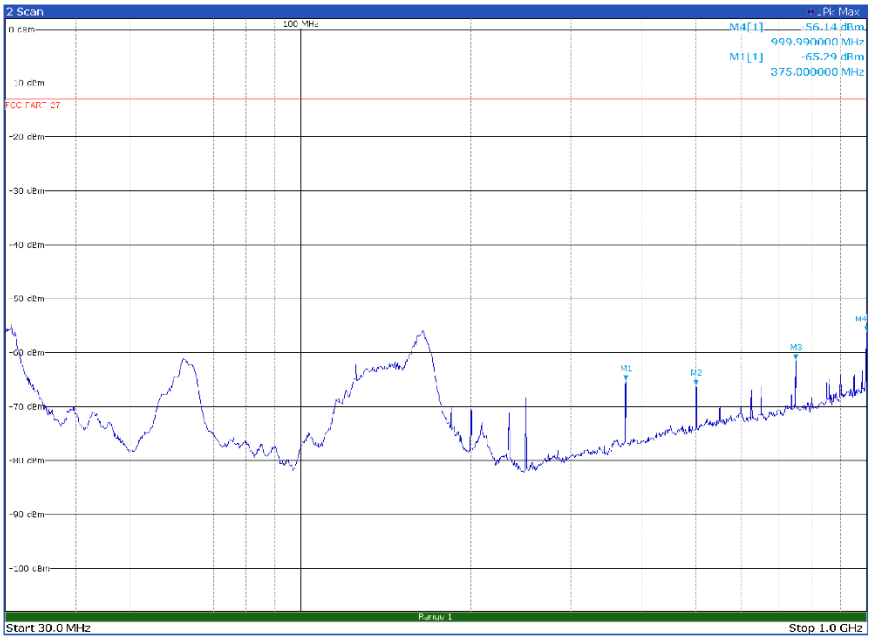


TM3p3, 20 MHz, low channel



TM3p3, 20 MHz, high channel

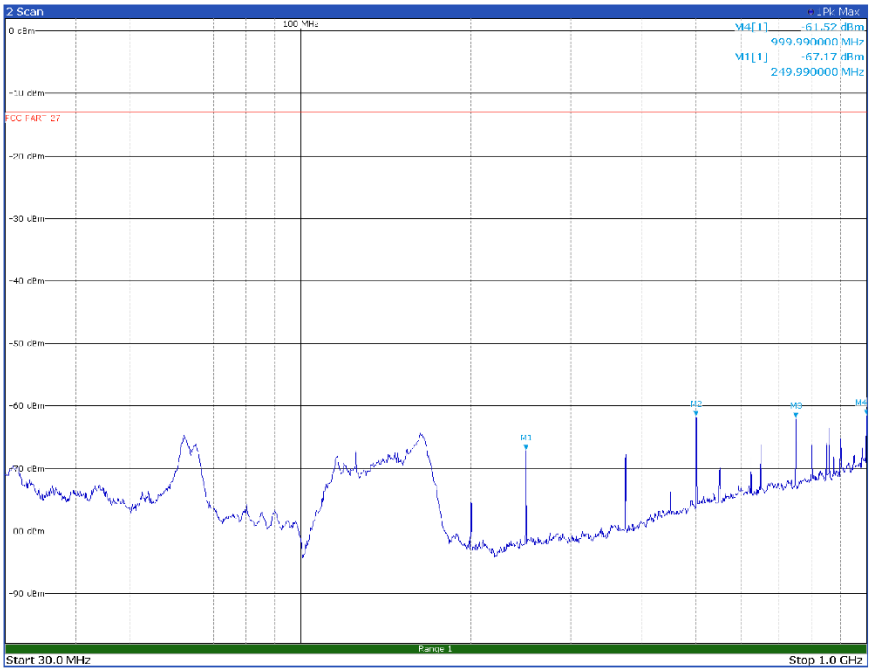




3 Marker Table

Wnd	Type	Ref	Trc	X-value	Y-value
Scan	M1		1	375.0 MHz	-65.29 dBm
Scan	M2		1	500.01 MHz	-66.18 dBm
Scan	M3		1	750.0 MHz	-61.39 dBm
Scan	M4		1	999.99 MHz	-56.14 dBm

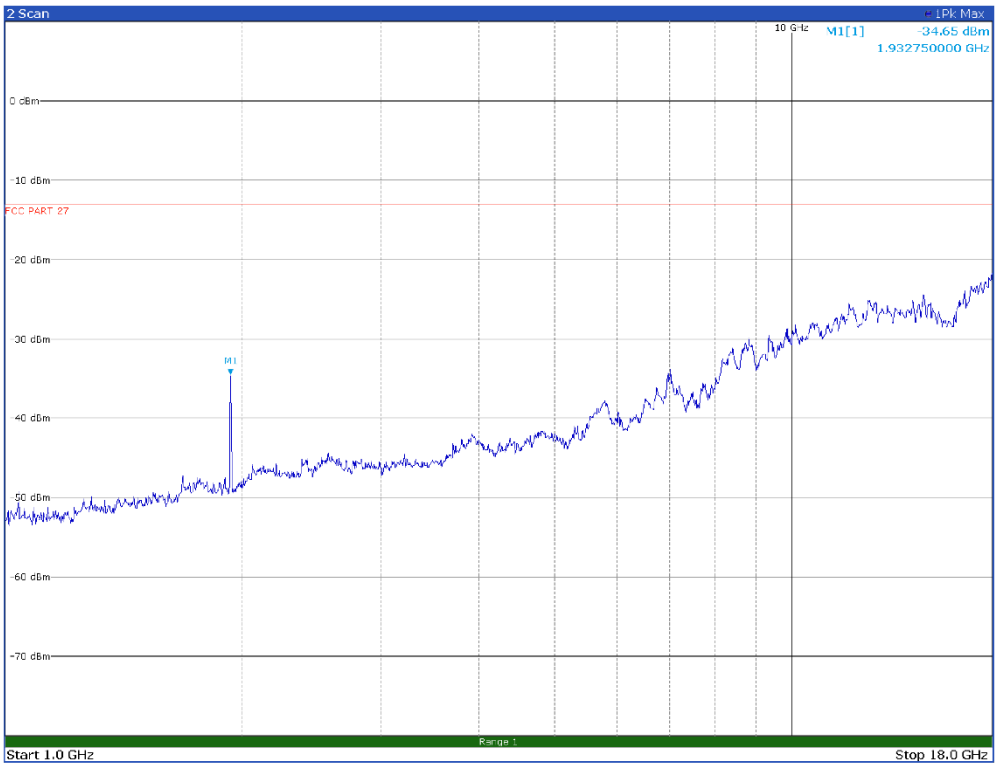
Radiated emissions spectral plot (30 MHz - 1 GHz), vertical polarization, low channel, TM1.1 modulation



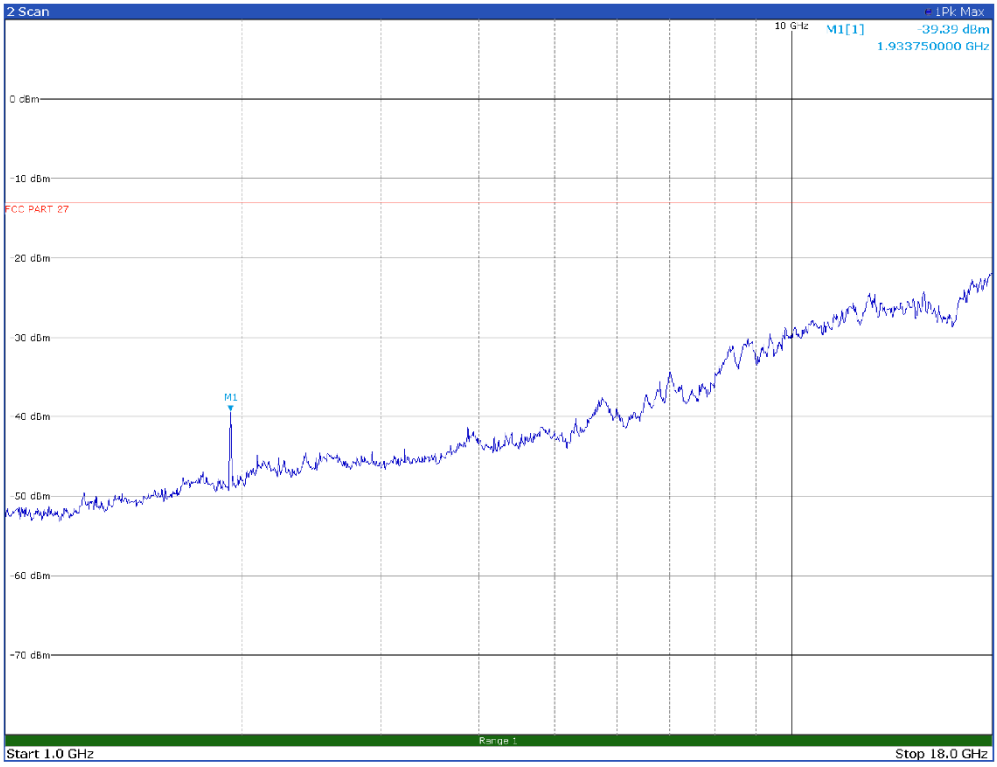
1 Marker Table

Wnd	Type	Ref	Trc	X-value	Y-value
Scan	M1		1	249.99 MHz	-67.17 dBm
Scan	M2		1	500.01 MHz	-61.69 dBm
Scan	M3		1	750.0 MHz	-62.04 dBm
Scan	M4		1	999.99 MHz	-61.52 dBm

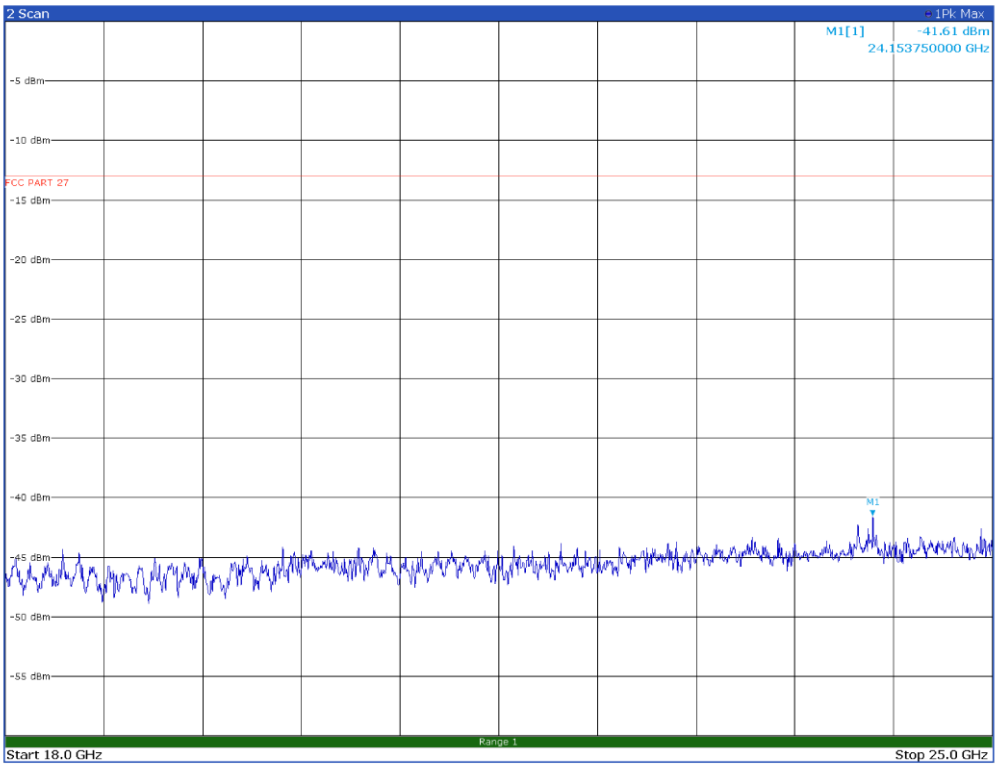
Radiated emissions spectral plot (30 MHz - 1 GHz), horizontal polarization, low channel, TM1.1 modulation



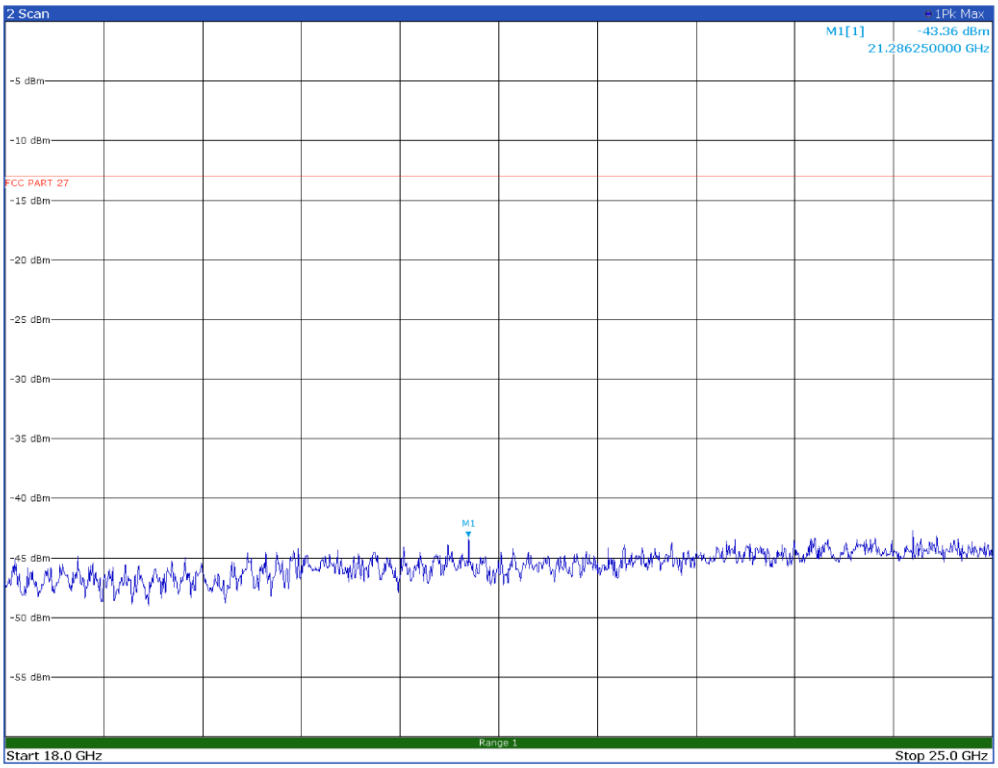
Radiated emissions spectral plot (1 GHz - 18 GHz), vertical polarization, low channel, TM1.1 modulation



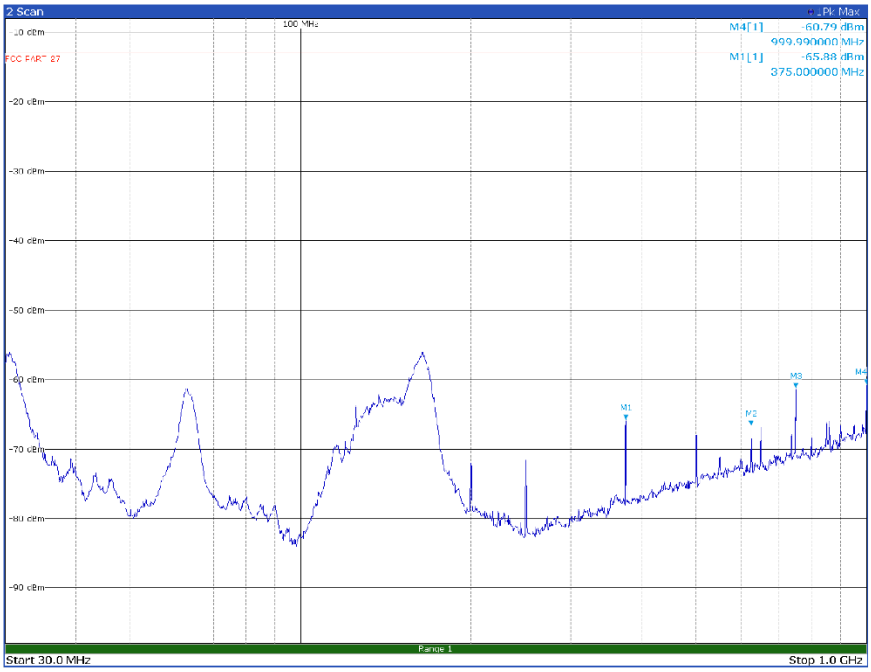
Radiated emissions spectral plot (1 GHz - 18 GHz), horizontal polarization, low channel, TM1.1 modulation



Radiated emissions spectral plot (18 GHz - 25 GHz), vertical polarization, low channel, TM1.1 modulation



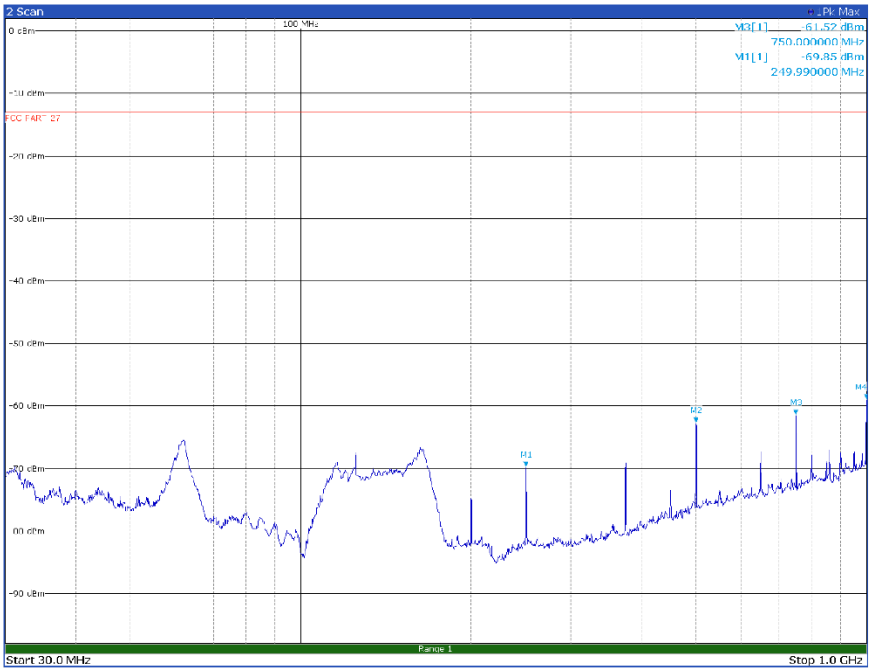
Radiated emissions spectral plot (18 GHz - 25 GHz), horizontal polarization, low channel, TM1.1 modulation



3 Marker Table

Wnd	Type	Ref	Trc	X-value	Y-value
Scan	M1		1	375.0 MHz	-65.88 dBm
Scan	M2		1	624.99 MHz	-66.73 dBm
Scan	M3		1	750.0 MHz	-61.33 dBm
Scan	M4		1	999.99 MHz	-60.79 dBm

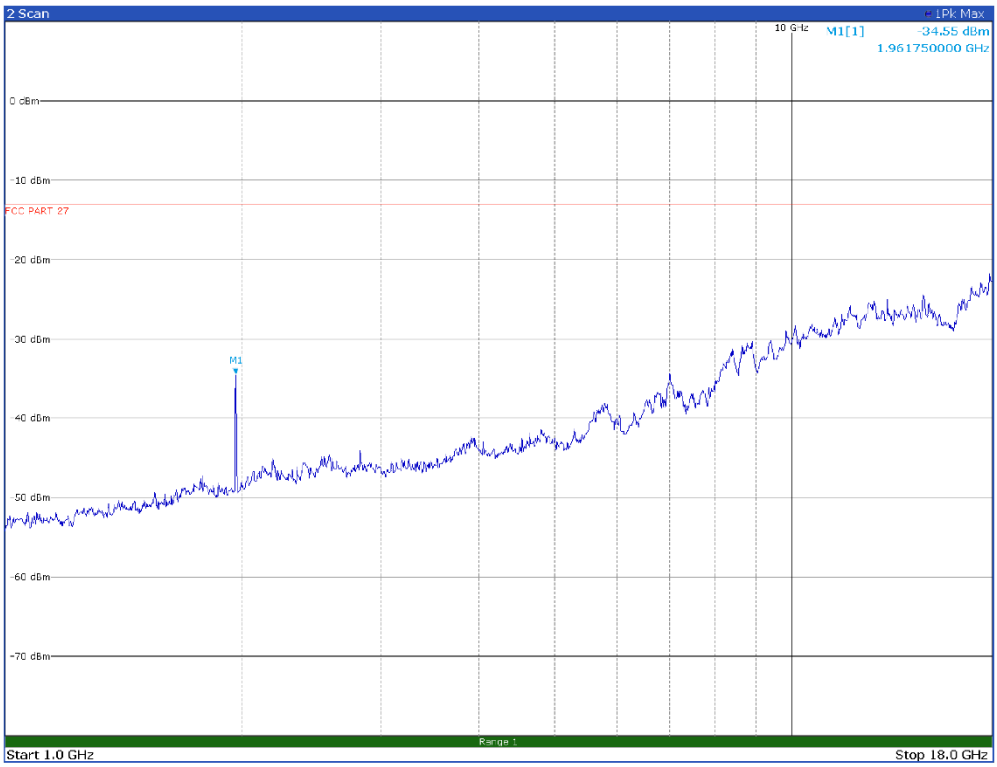
Radiated emissions spectral plot (30 MHz - 1 GHz), vertical polarization, mid channel, TM1.1 modulation



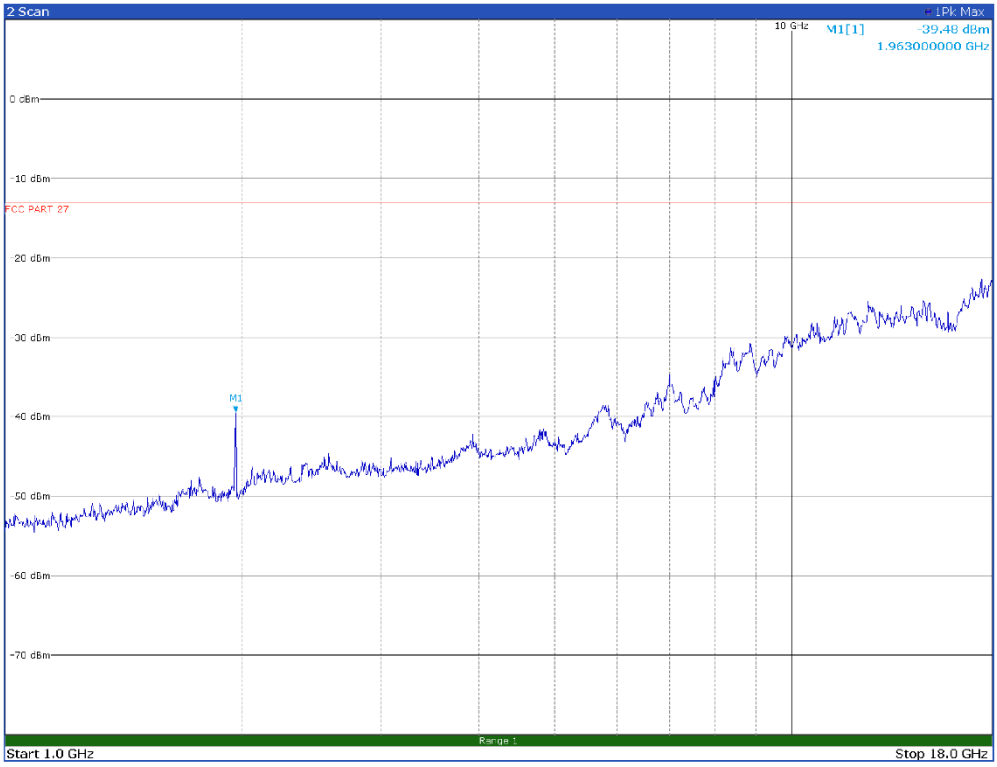
1 Marker Table

Wnd	Type	Ref	Trc	X-value	Y-value
Scan	M1		1	249.99 MHz	-69.85 dBm
Scan	M2		1	500.01 MHz	-62.76 dBm
Scan	M3		1	750.0 MHz	-61.52 dBm
Scan	M4		1	999.99 MHz	-59.06 dBm

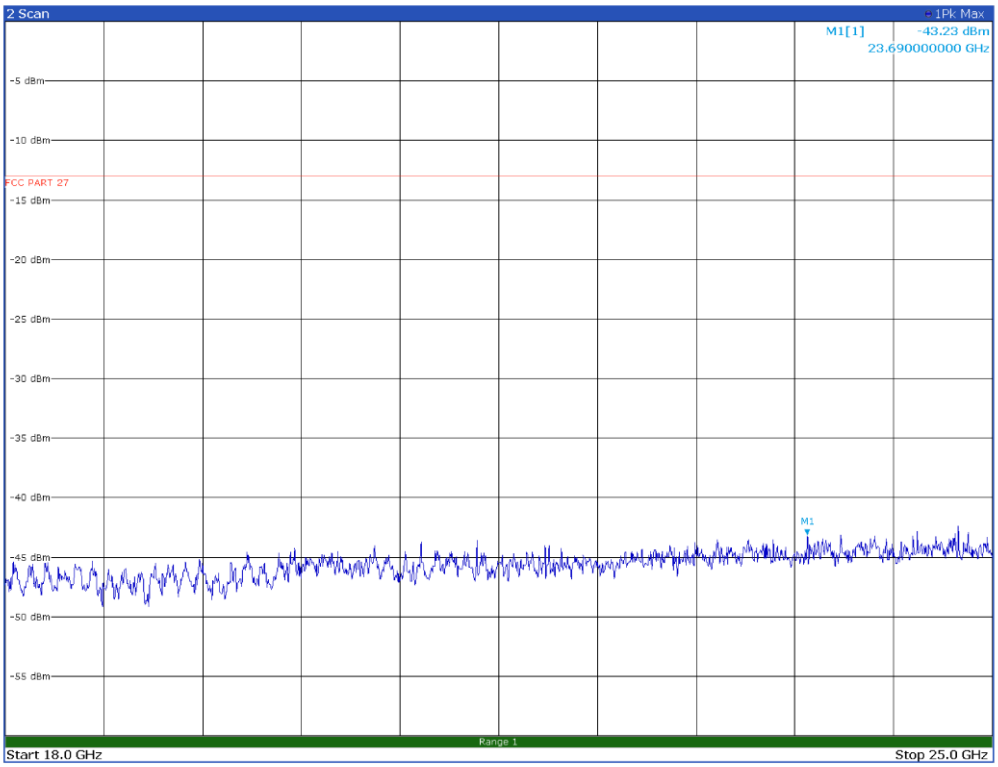
Radiated emissions spectral plot (30 MHz - 1 GHz), horizontal polarization, mid channel, TM1.1 modulation



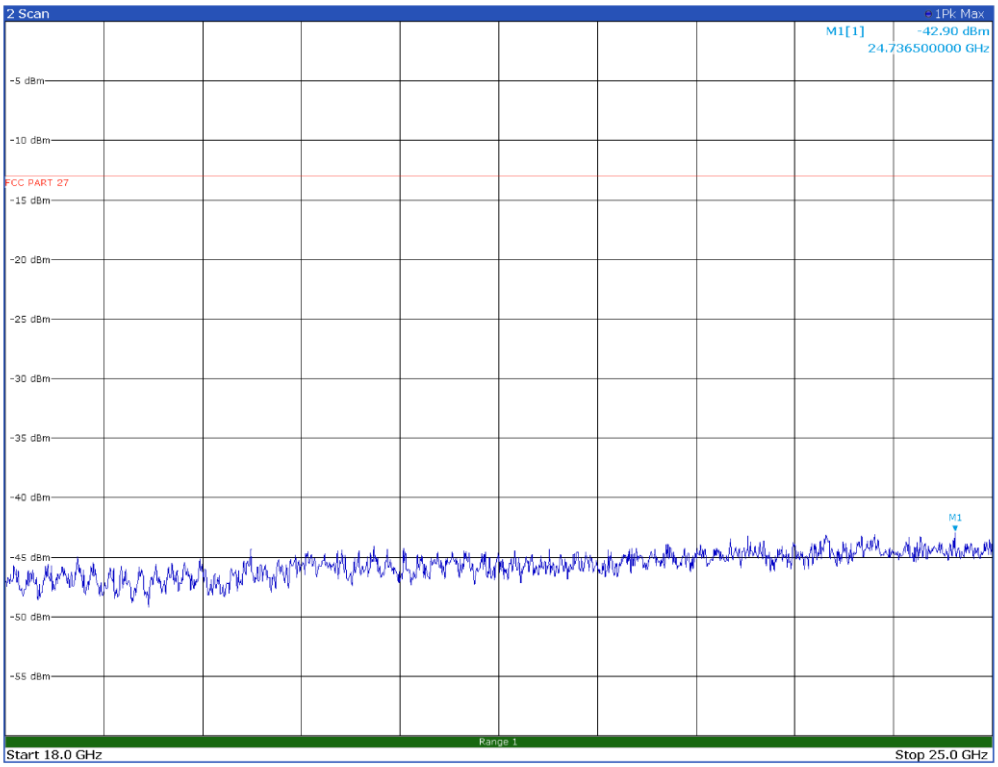
Radiated emissions spectral plot (1 GHz - 18 GHz), vertical polarization, mid channel, TM1.1 modulation



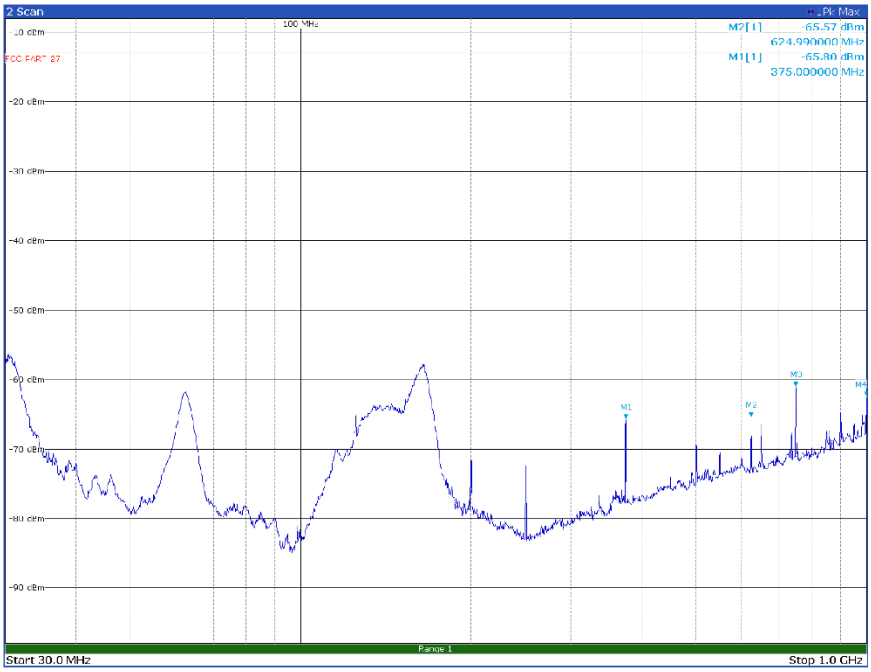
Radiated emissions spectral plot (1 GHz - 18 GHz), horizontal polarization, mid channel, TM1.1 modulation



Radiated emissions spectral plot (18 GHz - 25 GHz), vertical polarization, mid channel, TM1.1 modulation



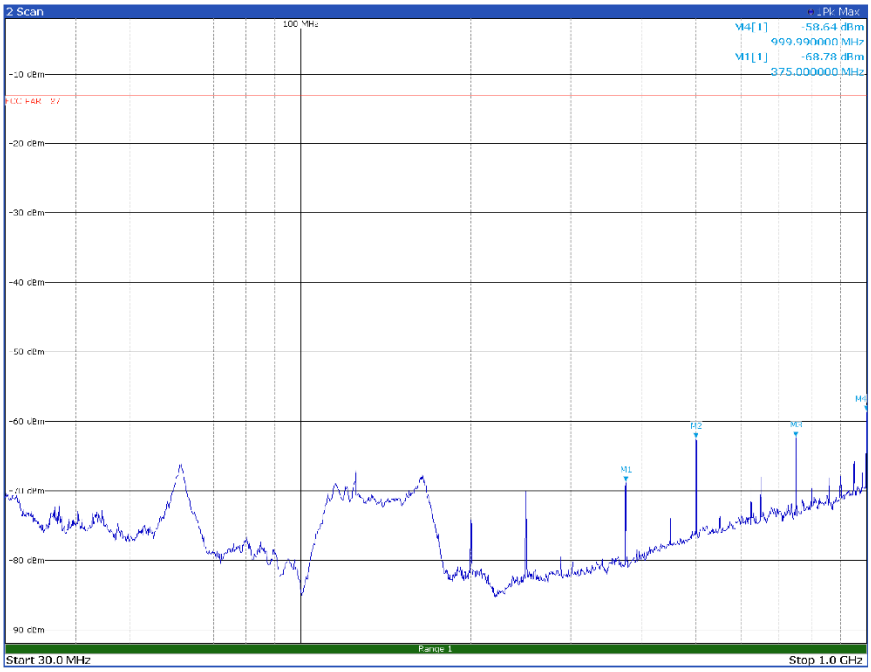
Radiated emissions spectral plot (18 GHz - 25 GHz), horizontal polarization, mid channel, TM1.1 modulation



3 Marker Table

Wnd	Type	Ref	Trc	X-value	Y-value
Scan	M1		1	375.0 MHz	-65.8 dBm
Scan	M2		1	624.99 MHz	-65.57 dBm
Scan	M3		1	750.0 MHz	-61.13 dBm
Scan	M4		1	999.99 MHz	-62.5 dBm

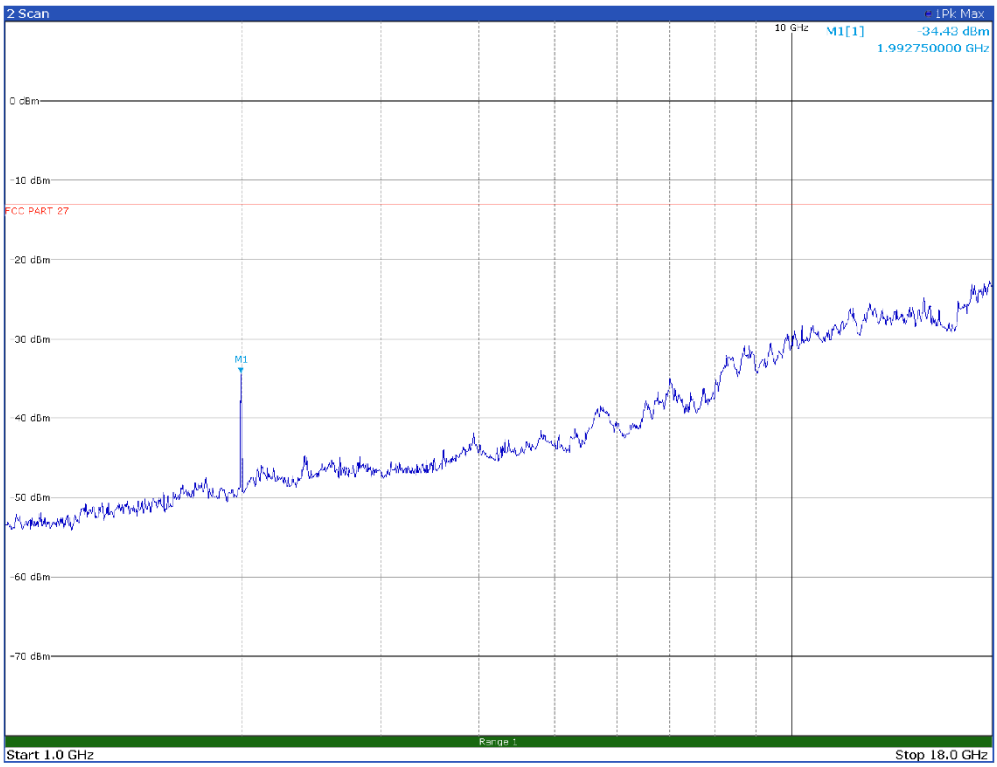
Radiated emissions spectral plot (30 MHz - 1GHz), vertical polarization, high channel, TM1.1 modulation



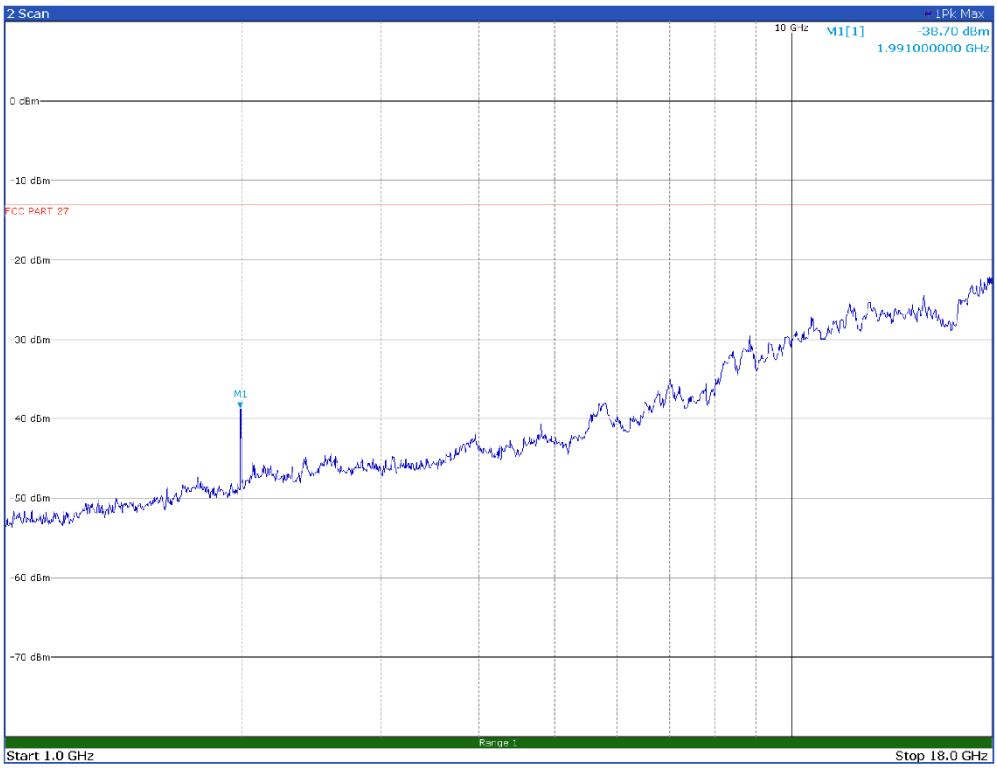
1 Marker Table

Wnd	Type	Ref	Trc	X-value	Y-value
Scan	M1		1	375.0 MHz	-68.78 dBm
Scan	M2		1	500.01 MHz	-62.5 dBm
Scan	M3		1	750.0 MHz	-62.36 dBm
Scan	M4		1	999.99 MHz	-58.64 dBm

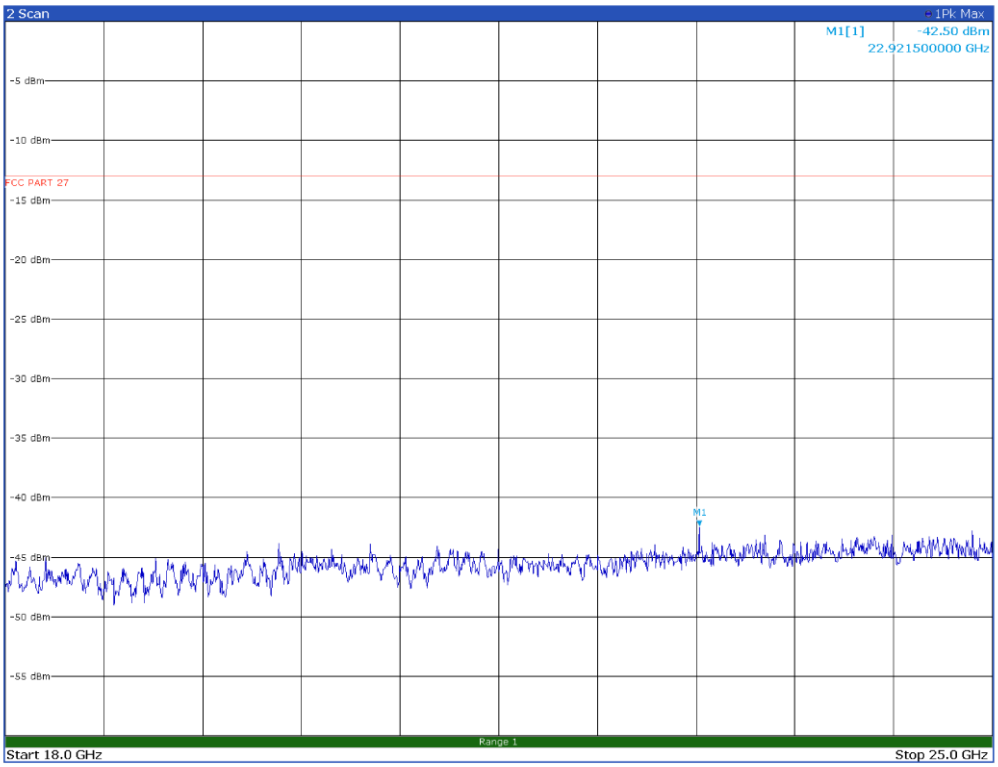
Radiated emissions spectral plot (30 MHz - 1GHz), horizontal polarization, high channel, TM1.1 modulation



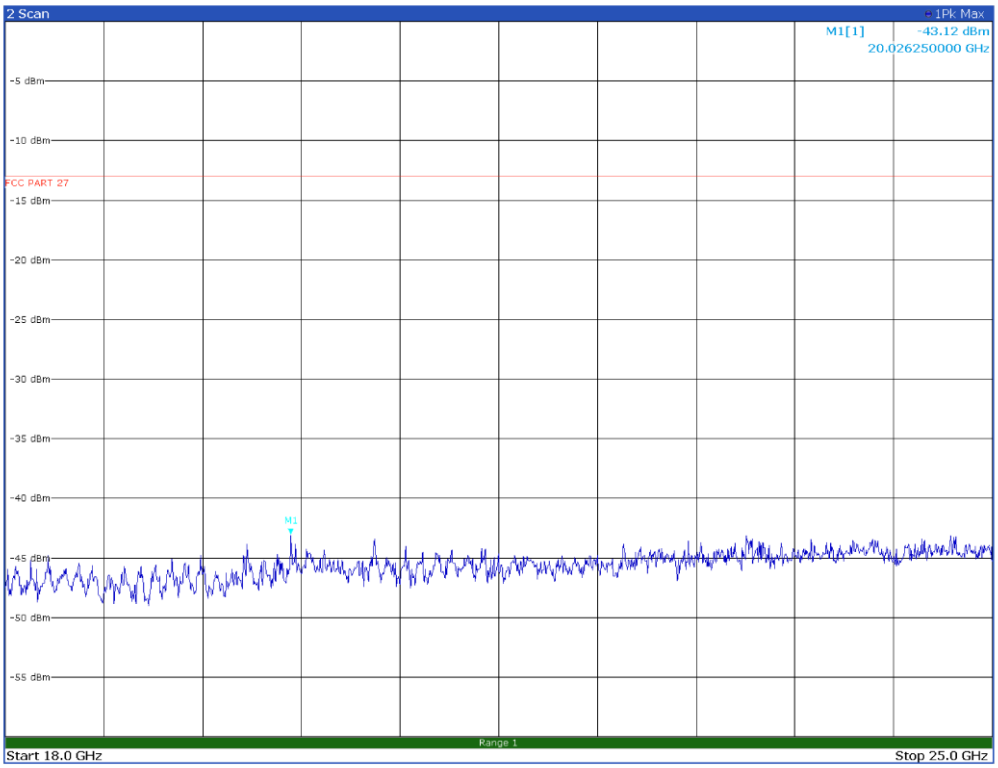
Radiated emissions spectral plot (1 GHz - 18 GHz), vertical polarization, high channel, TM1.1 modulation



Radiated emissions spectral plot (1 GHz - 18 GHz), horizontal polarization, high channel, TM1.1 modulation



Radiated emissions spectral plot (18 GHz – 25 GHz), vertical polarization, high channel, TM1.1 modulation



Radiated emissions spectral plot (18 GHz – 25 GHz), horizontal polarization, high channel, TM1.1 modulation

8.7 FCC 24.235 Frequency Stability

8.7.1 Definitions and limits

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block..

8.7.2 Test summary

Test date	September 6, 2024	Temperature	21 °C
Test engineer	O. Frau	Air pressure	1005 mbar
Verdict	Pass	Relative humidity	64%

8.7.3 Observations, settings and special notes

The EUT was configured to continuously transmit an un-modulated continuous wave signal. The frequency measurement was performed using the marker-signal count functionality of the spectrum analyzer. The only requirement from Part 24 is that the carrier stays within the allocated band.

8.7.4 Test data

Band B25:

Table 1: Frequency stability results, band B25

Test conditions	Frequency, Hz	Drift, Hz	Drift, ppm
+50 °C, Nominal	1962502349	2354	1.20
+40 °C, Nominal	1962501687	1692	0.86
+30 °C, Nominal	1962500877	882	0.45
+20 °C, +15%	1962500059	64	0.03
+20 °C, Nominal	1962499995	Reference	Reference
+20 °C, -15%	1962499875	-120	-0.06
+10 °C, Nominal	1962500088	93	0.05
0 °C, Nominal	1962499935	-60	-0.03
-10 °C, Nominal	1962501400	1405	0.72
-20 °C, Nominal	1962501927	1932	0.98
-30 °C, Nominal	1962502200	2205	1.12

Section 9. Block diagrams of test setups

9.1 Conducted emissions set-up

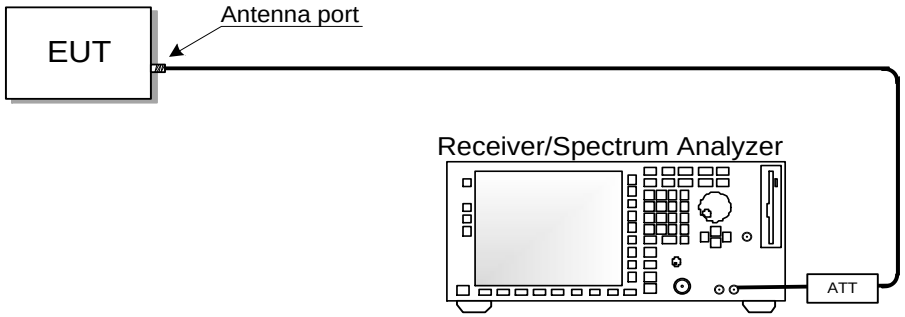


Figure 9.1-1: Conducted setup

9.2 Radiated emissions set-up

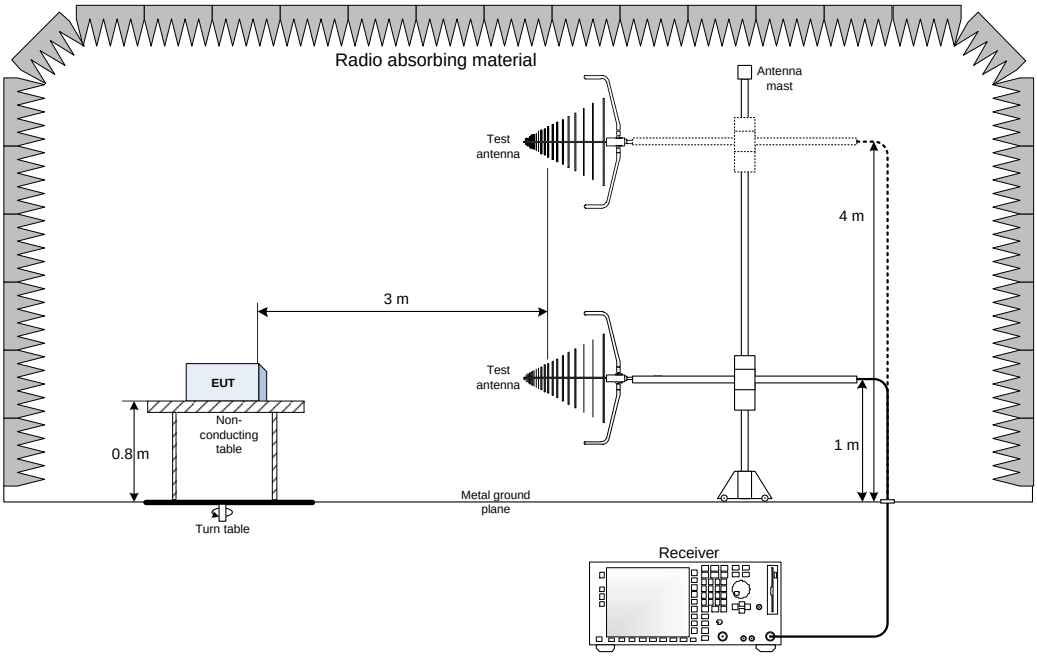


Figure 9.2-1: Below 1 GHz setup

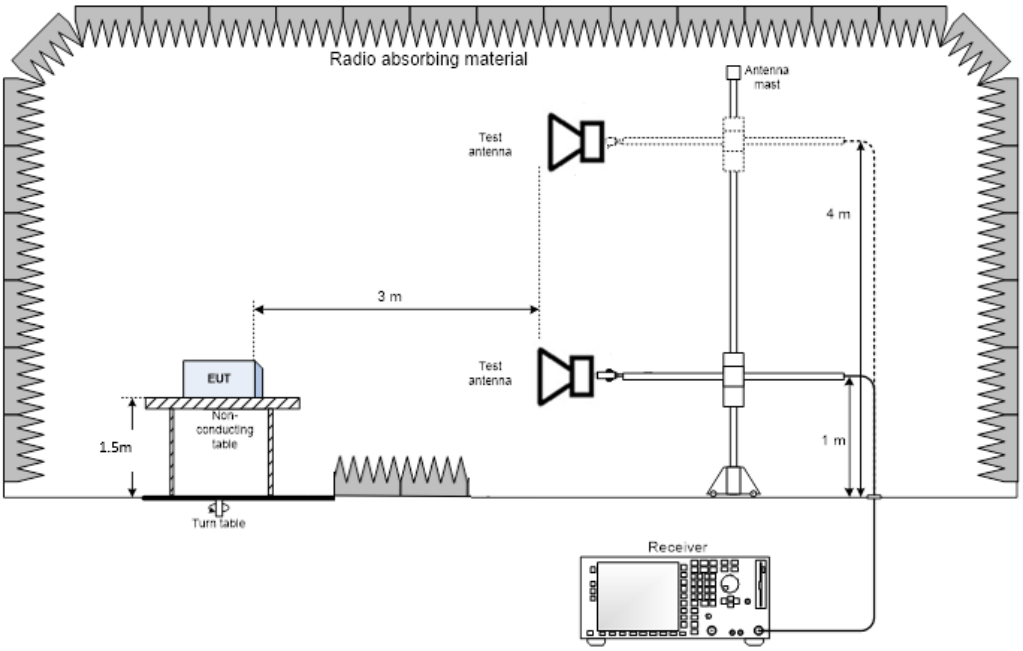


Figure 9.2-2: Above 1GHz setup

End of Report