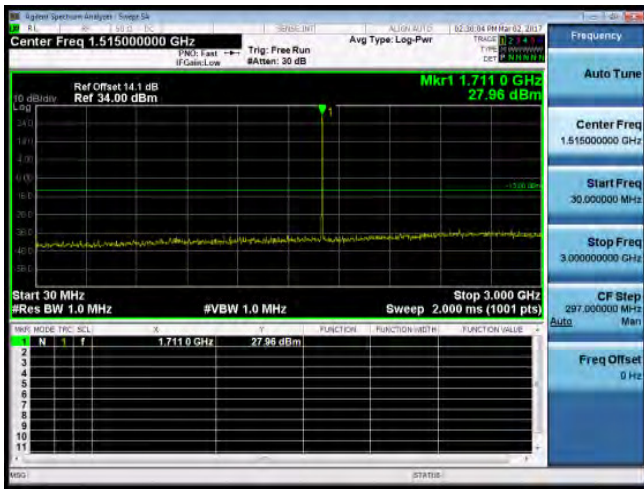
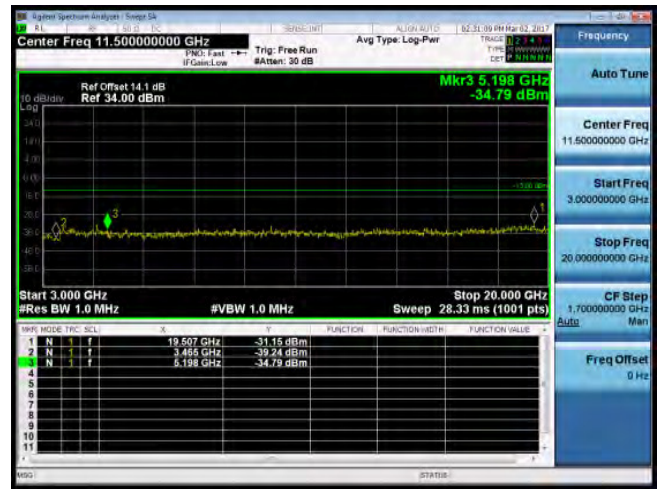


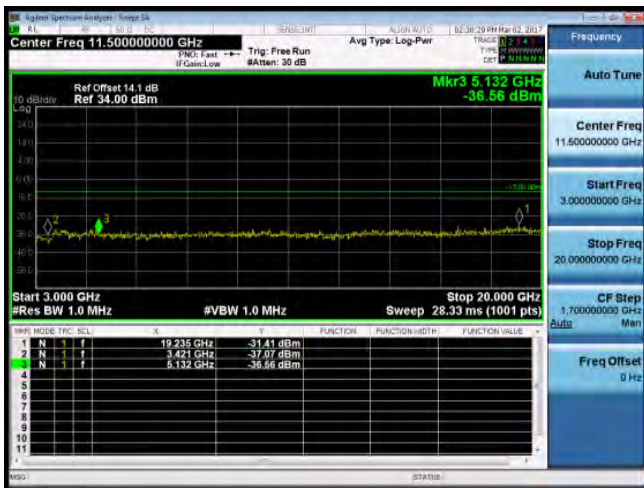
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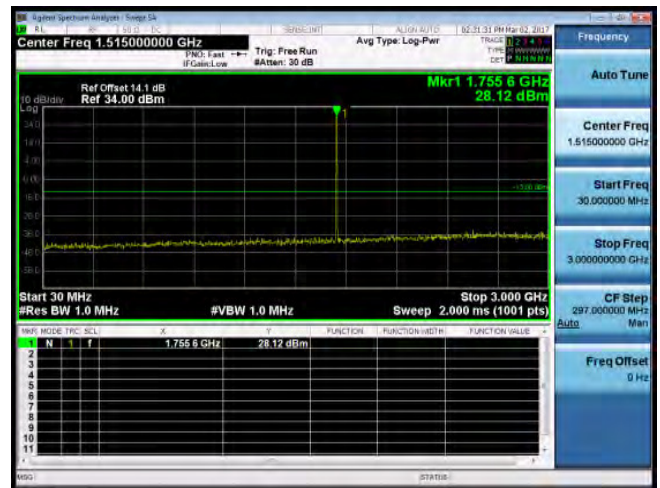
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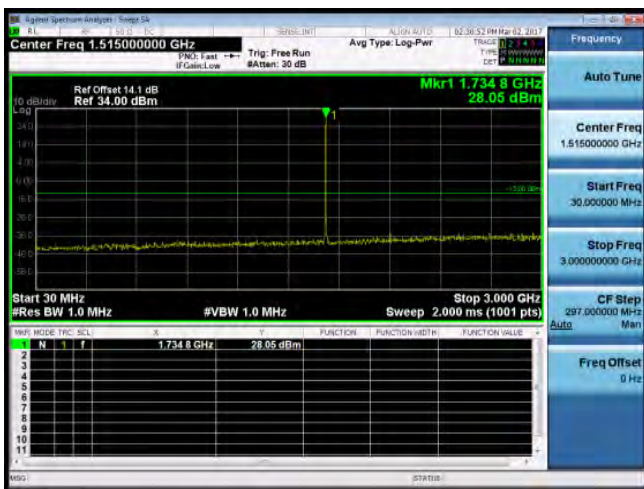
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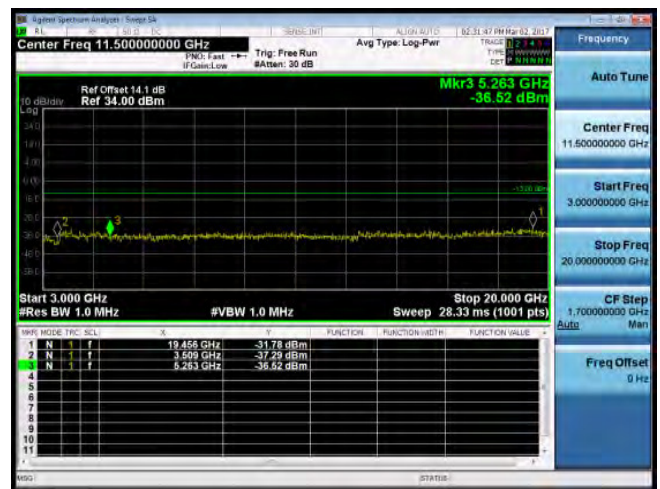
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30MHz-3GHz_Band4_1.4MHz_QPSK_1_0_MidCH20175-1732.5



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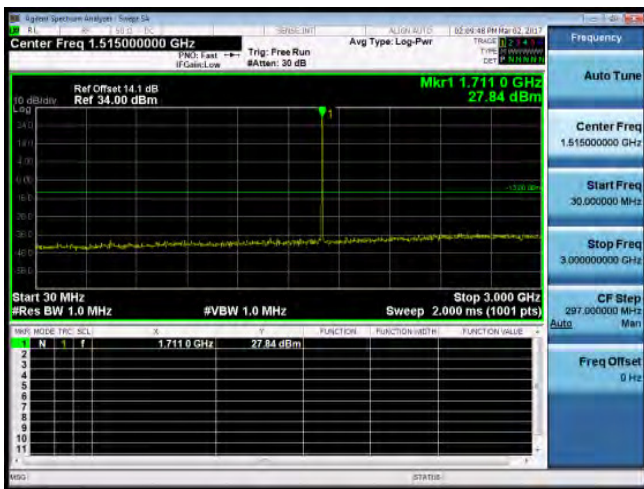


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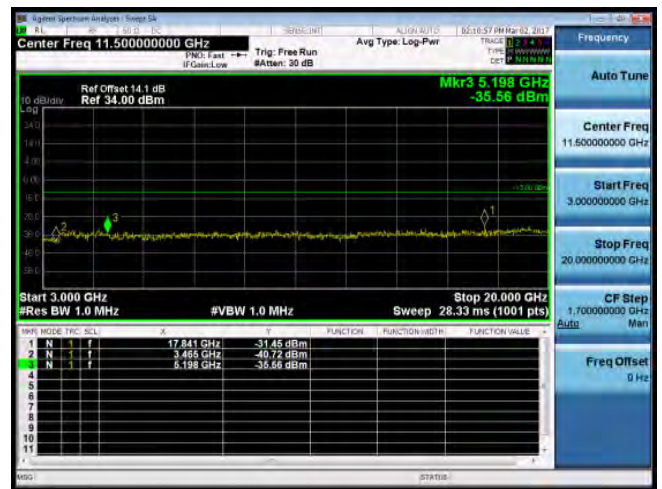
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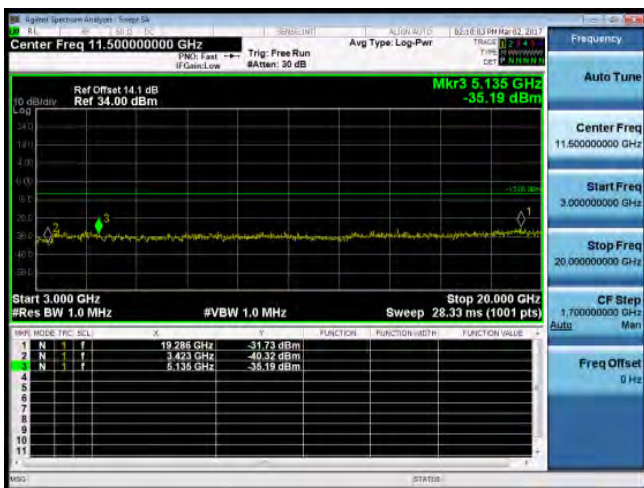
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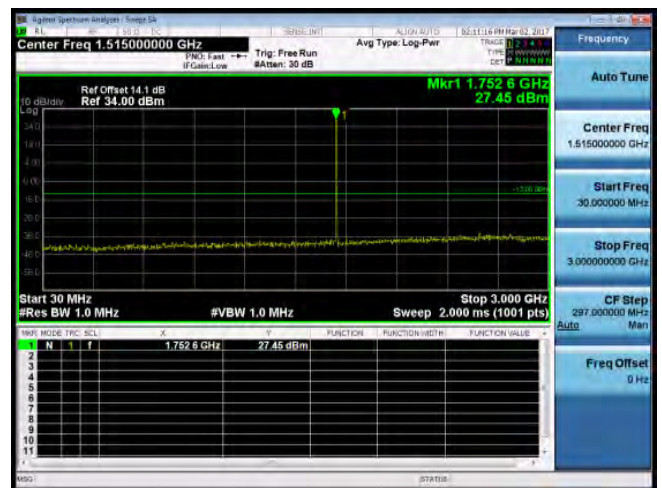
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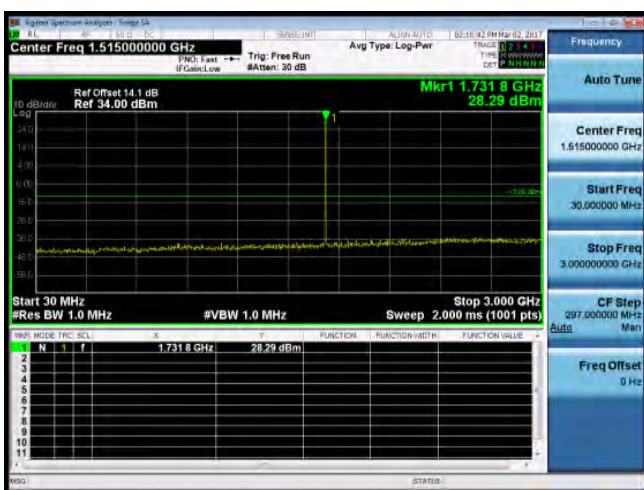
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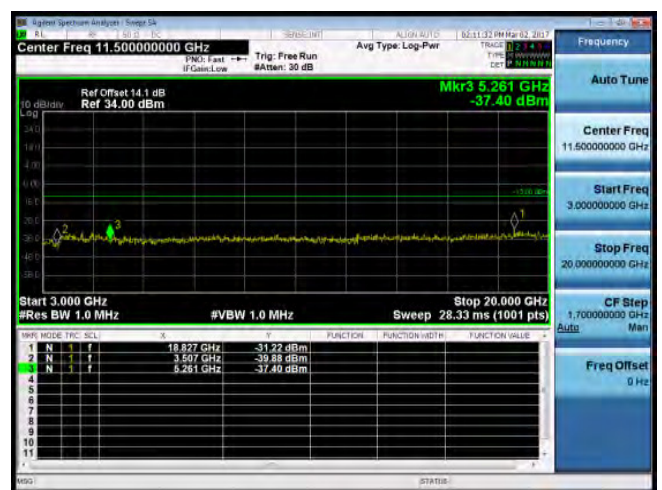
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30MHz~3GHz_Band4_3MHz_QPSK_1_0_MidCH20175-1732.5



3GHz~10GHz_Band4_3MHz_QPSK_1_0_HighCH20385-1753.5

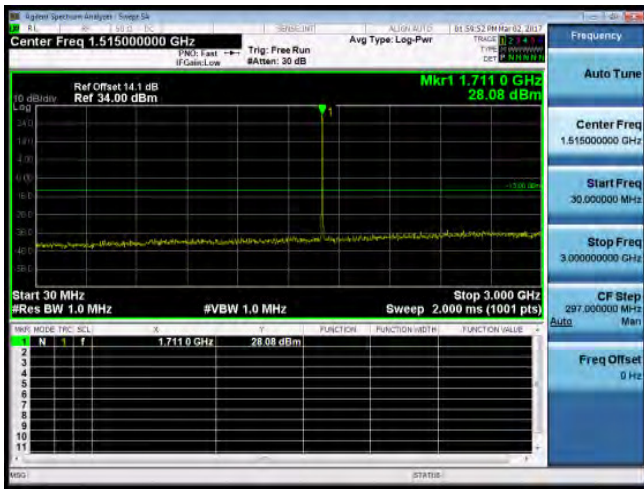


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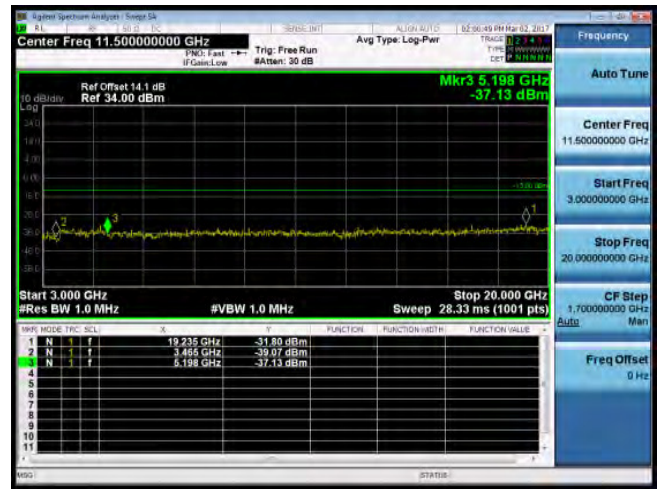
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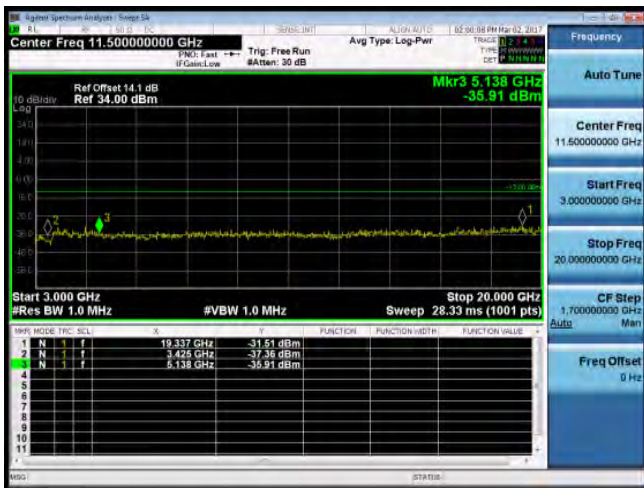
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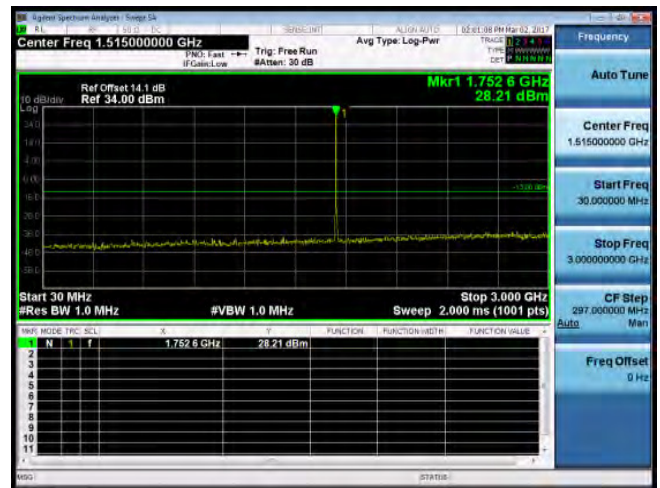
3GHz~10GHz_Band4_5MHz_QPSK_1_0_MidCH20175-1732.5



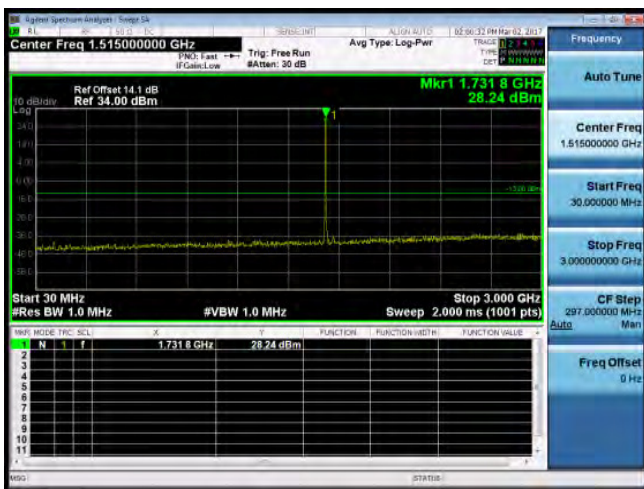
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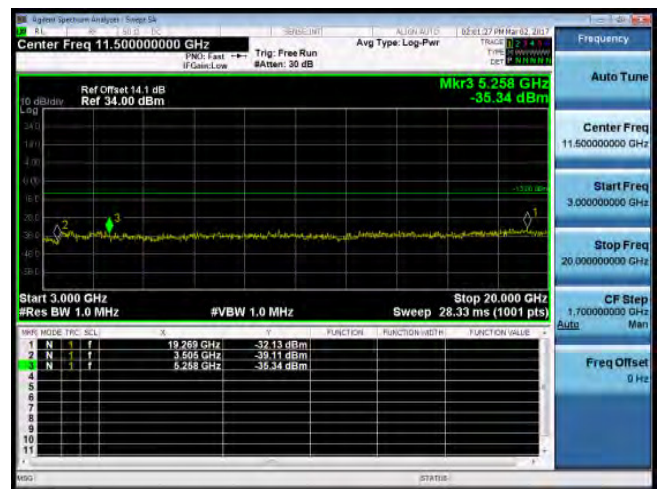
30MHz~3GHz_Band4_5MHz_QPSK_1_0_HighCH20375-1752.5



30MHz~3GHz_Band4_5MHz_QPSK_1_0_MidCH20175-1732.5



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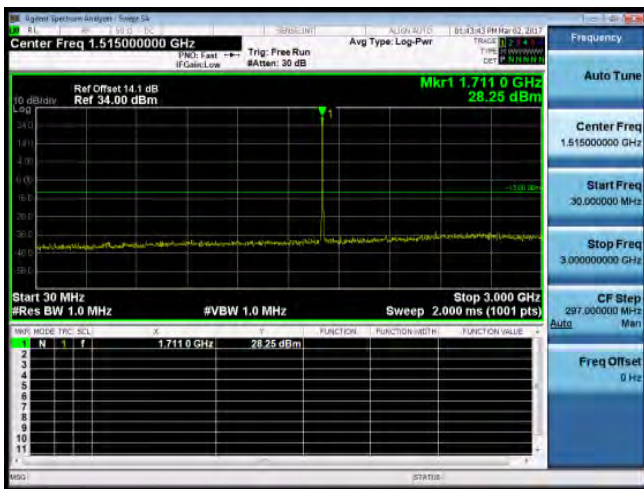


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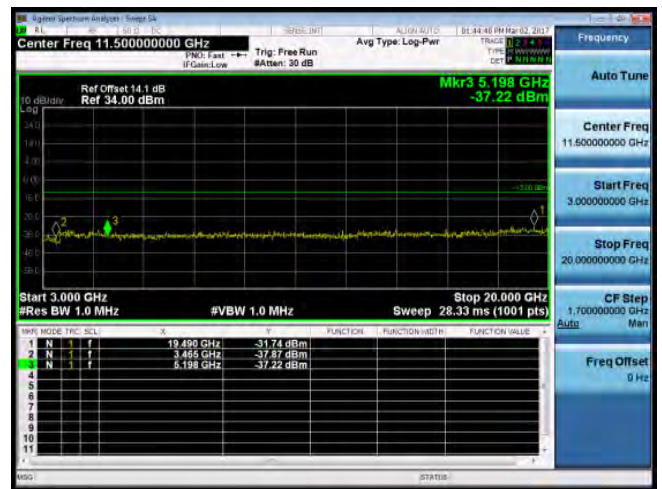
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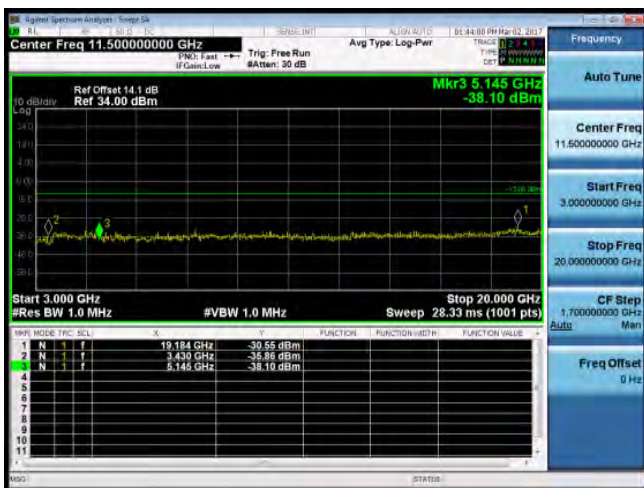
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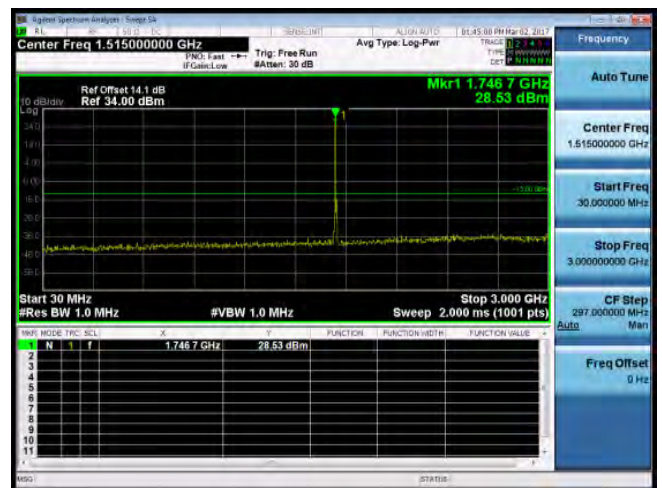
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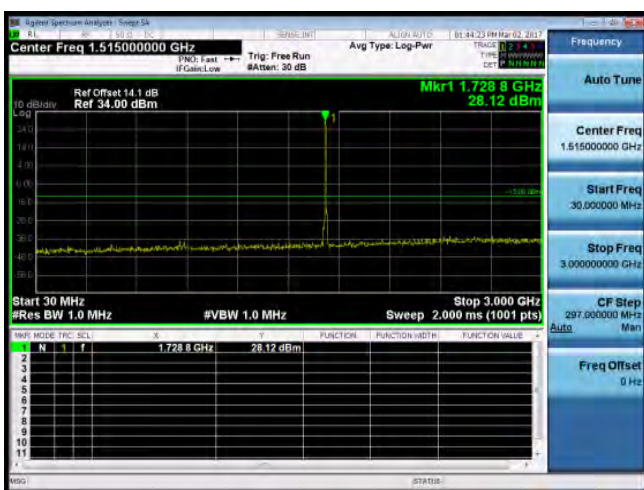
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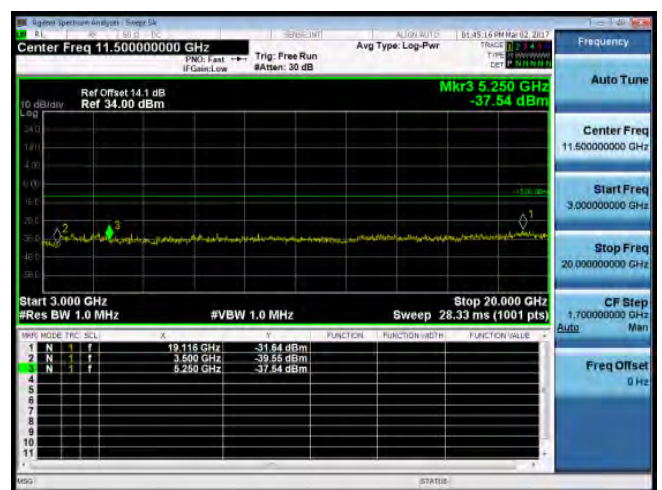
30MHz-3GHz_Band4_10MHz_QPSK_1_0_HighCH20350-1750



30MHz-3GHz_Band4_10MHz_QPSK_1_0_MidCH20175-1732.5



3GHz-10GHz_Band4_10MHz_QPSK_1_0_HighCH20350-1750

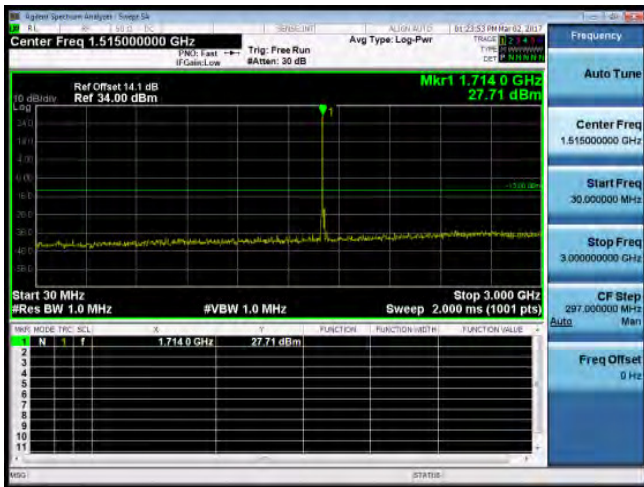


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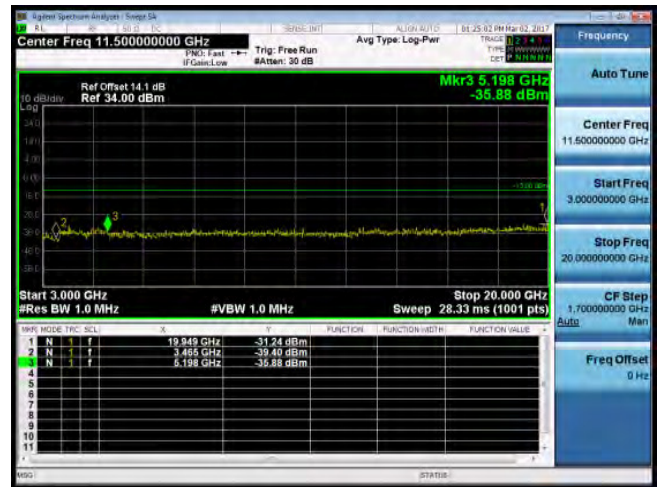
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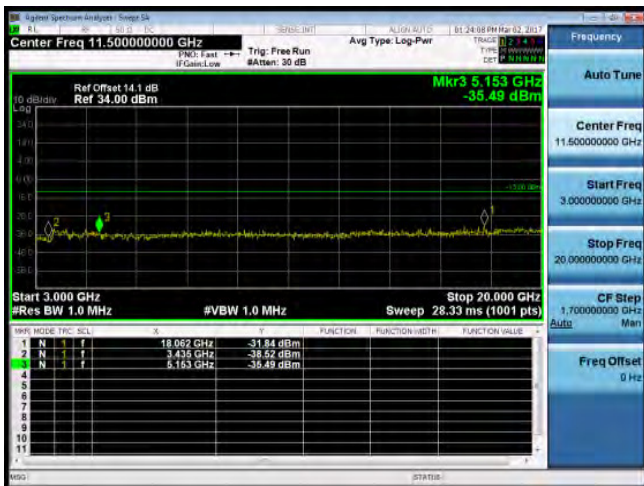
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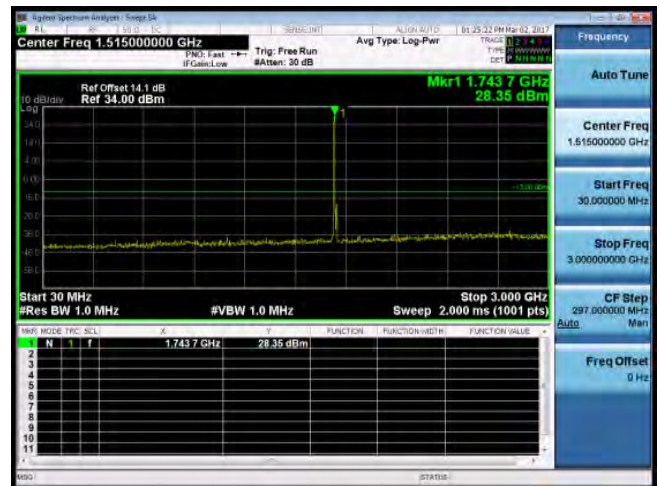
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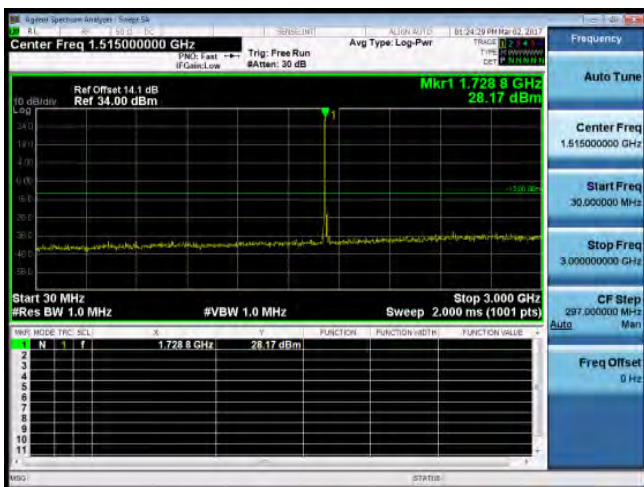
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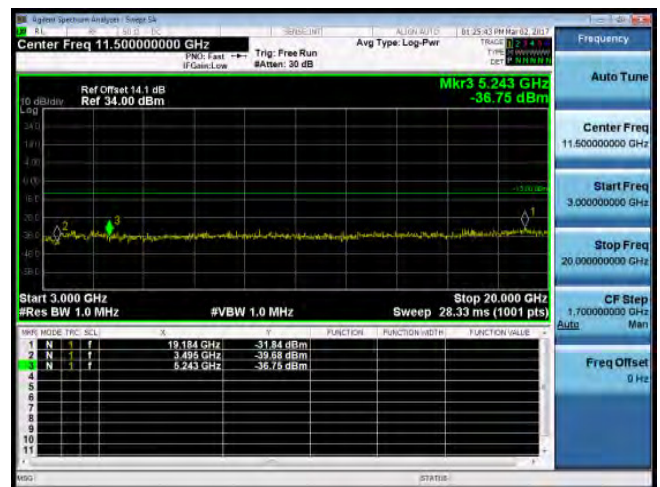
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30MHz~3GHz_Band4_15MHz_QPSK_1_0_MidCH20175-1732.5



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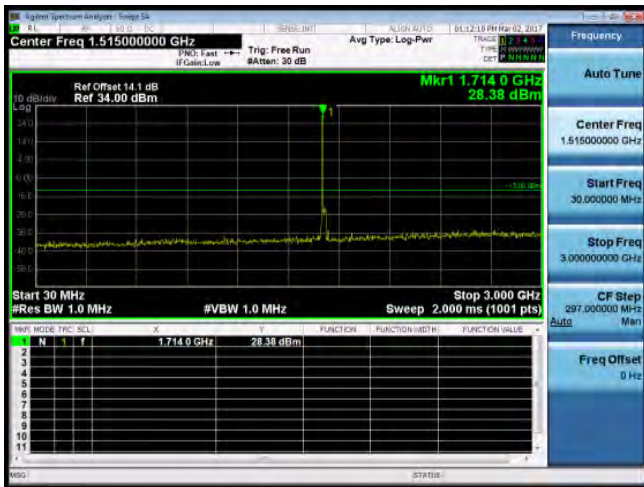


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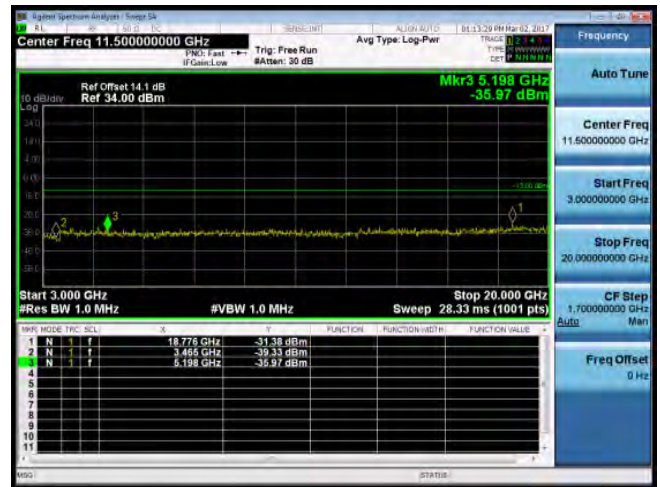
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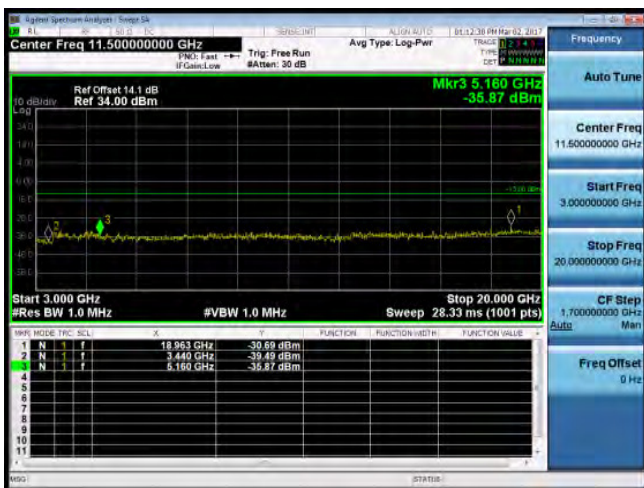
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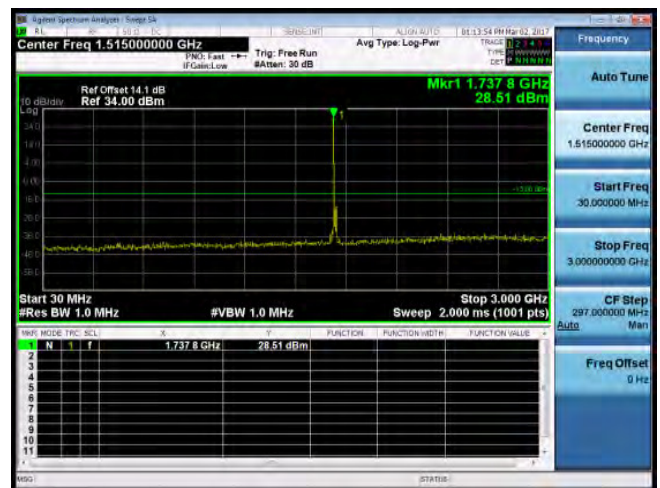
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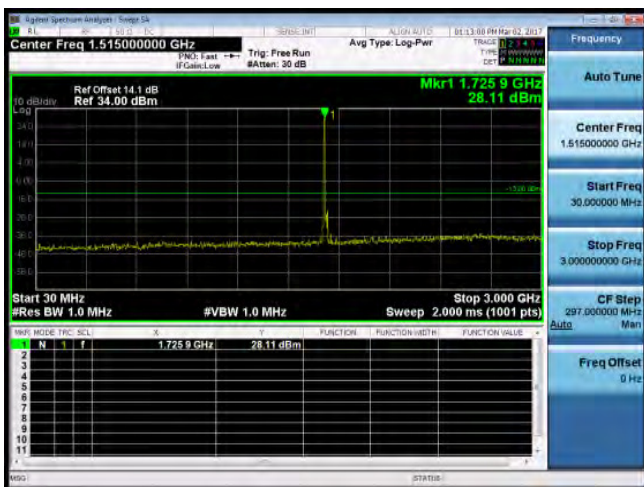
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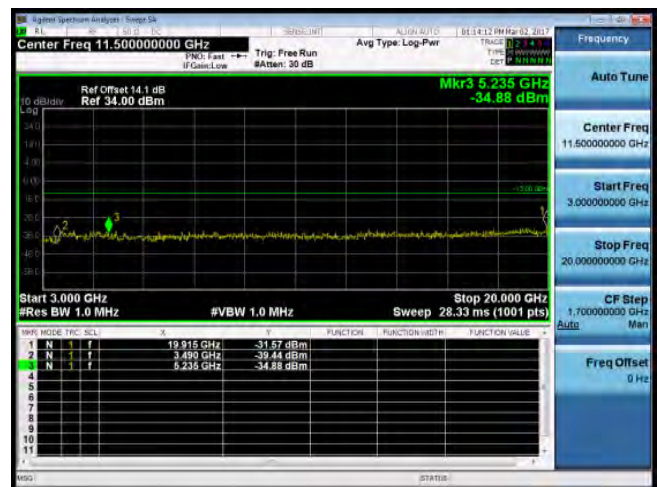
30MHz~3GHz_Band4_20MHz_QPSK_1_0_HighCH20300-1745



30MHz~3GHz_Band4_20MHz_QPSK_1_0_MidCH20175-1732.5



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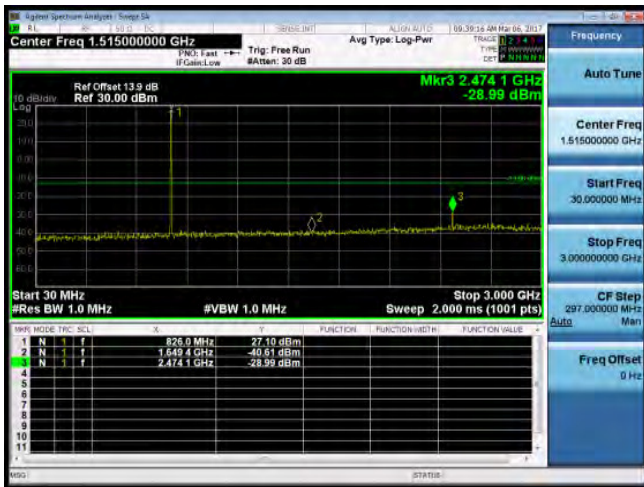


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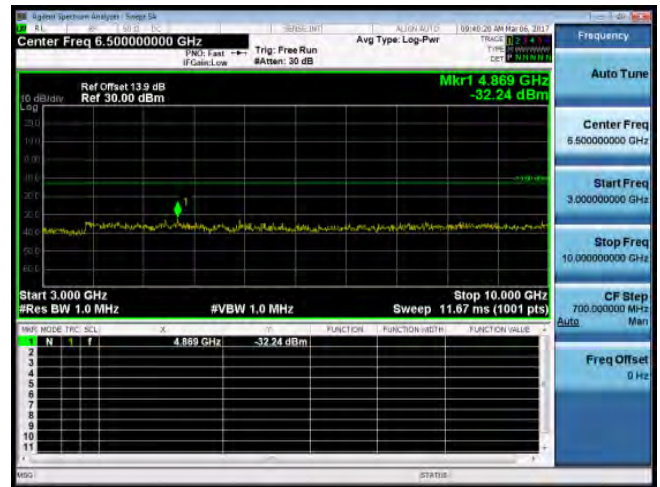
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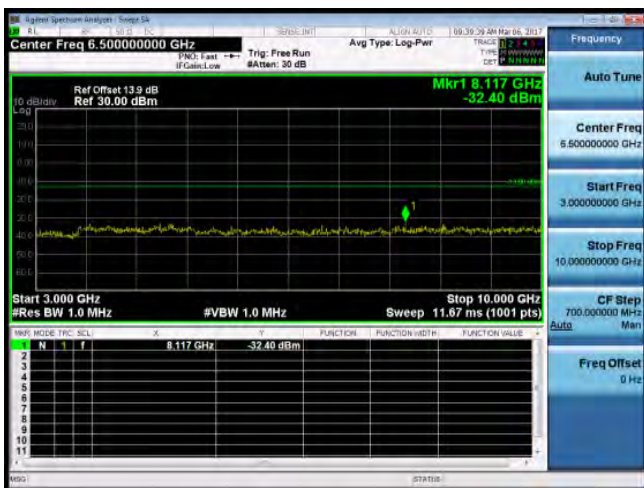
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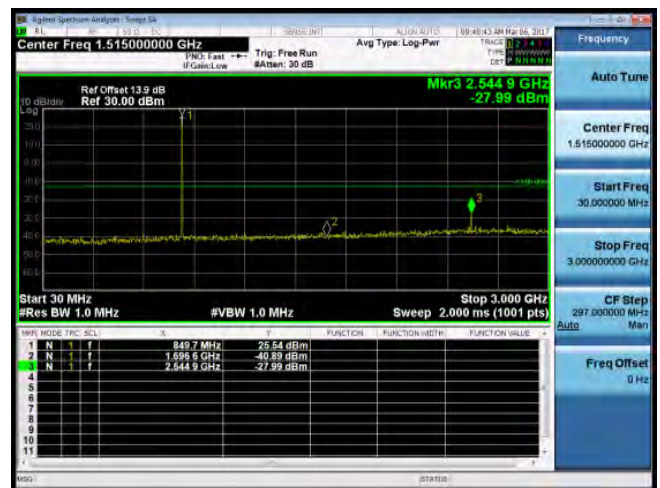
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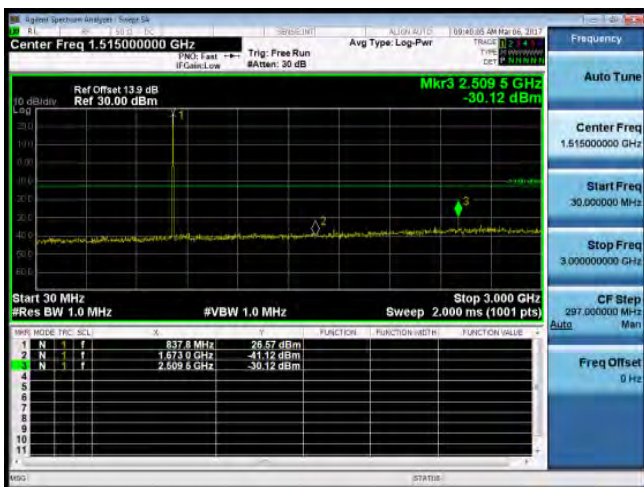
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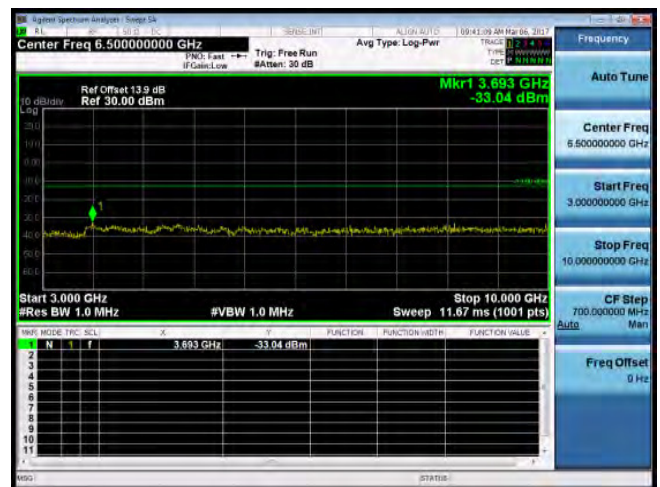
30MHz-3GHz_Band5_1.4MHz_QPSK_1_0_HighCH20643-848.3



30MHz-3GHz_Band5_1.4MHz_QPSK_1_0_MidCH20525-836.5



3GHz-10GHz_Band5_1.4MHz_QPSK_1_0_HighCH20643-848.3

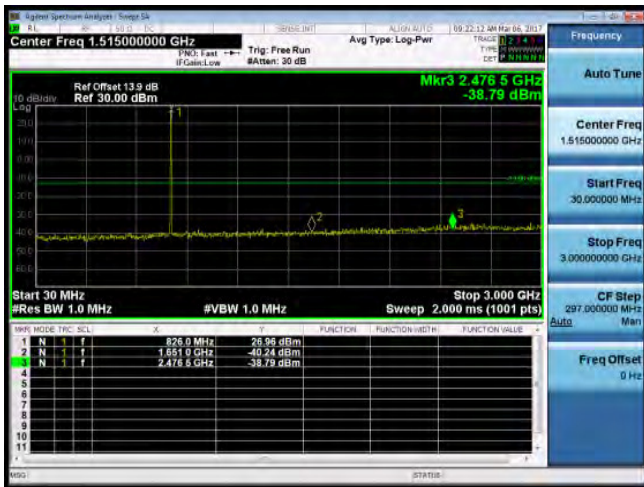


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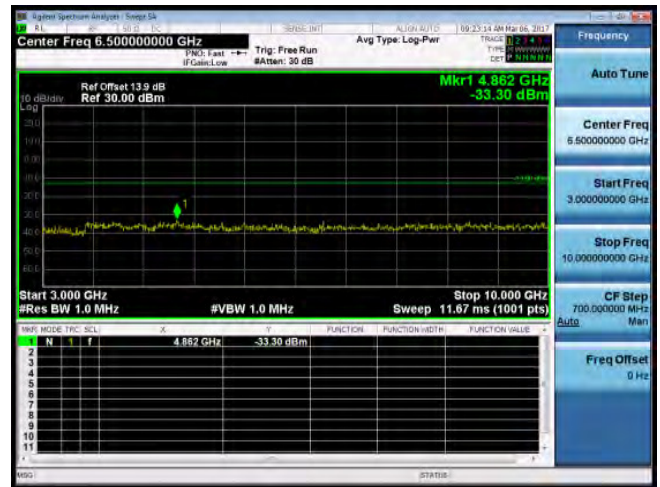
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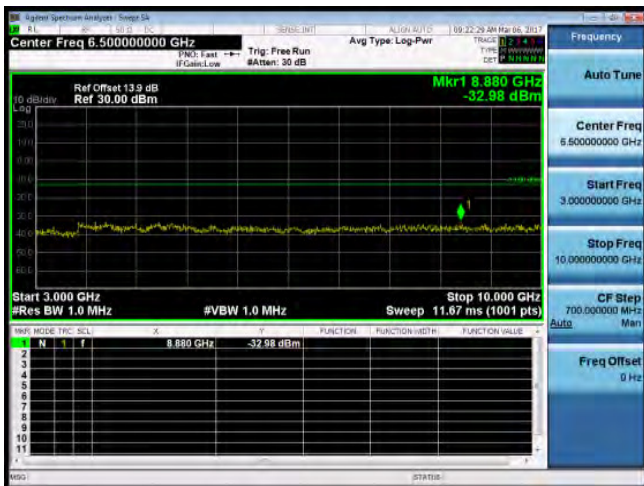
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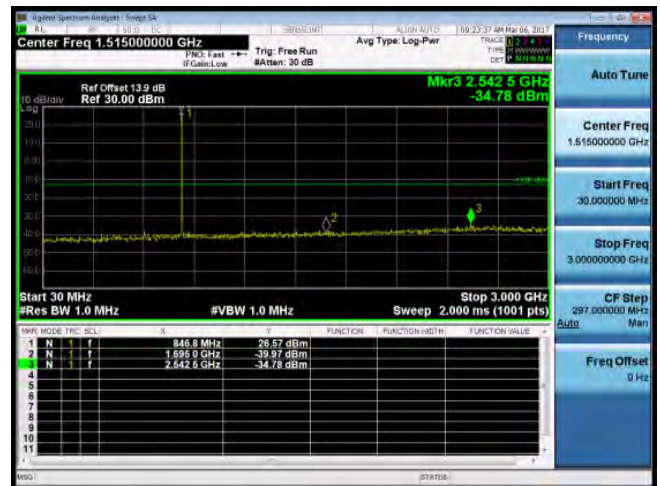
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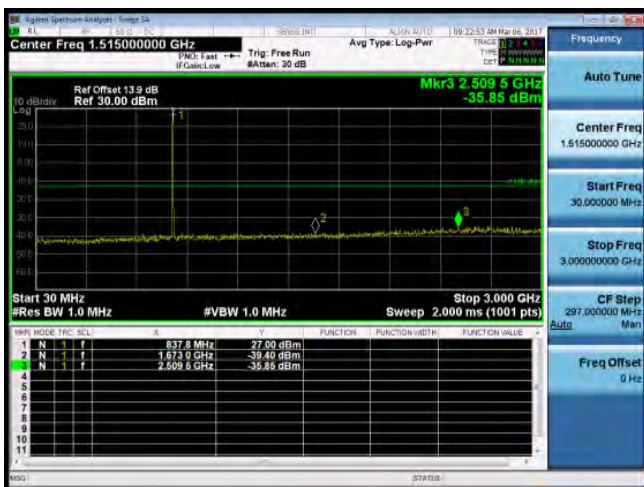
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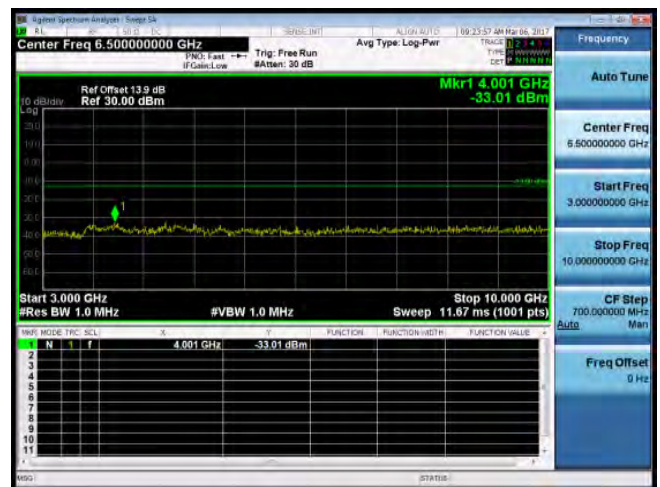
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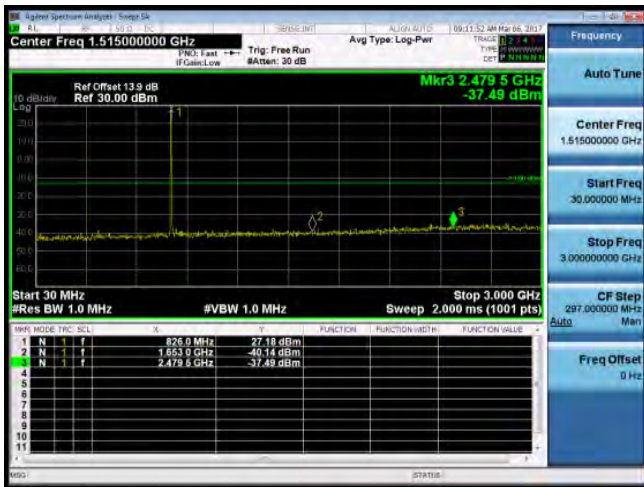


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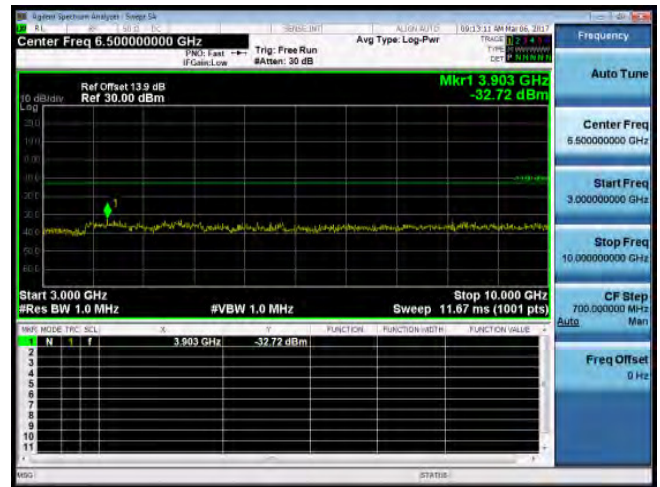
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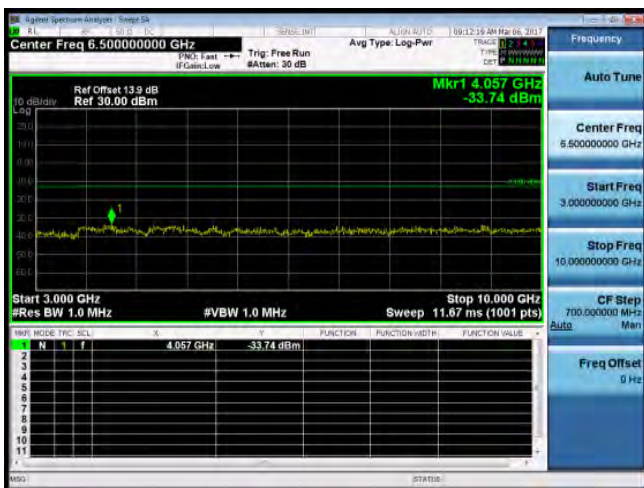
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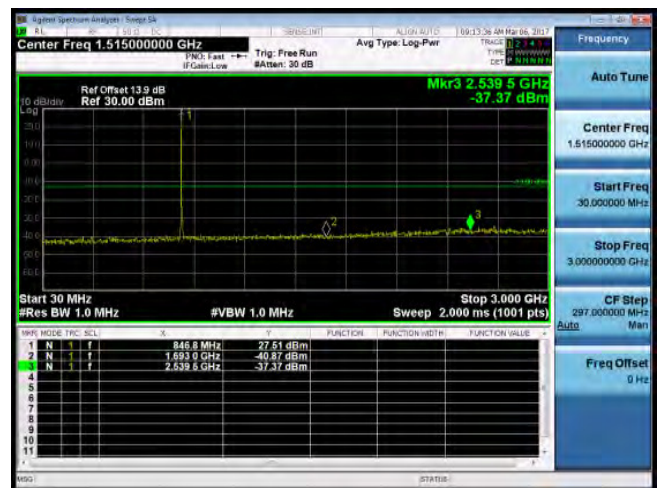
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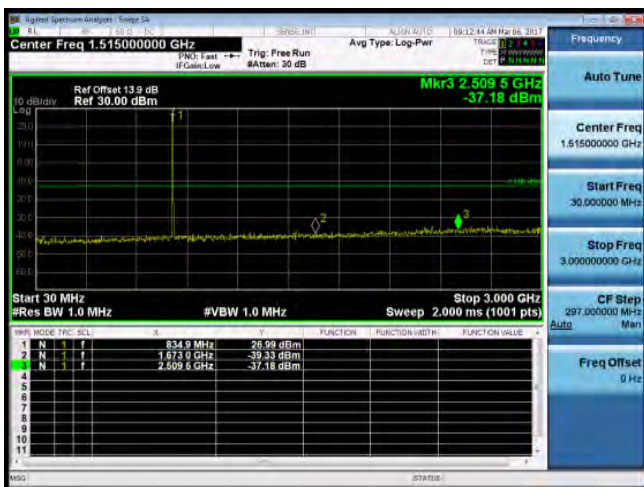
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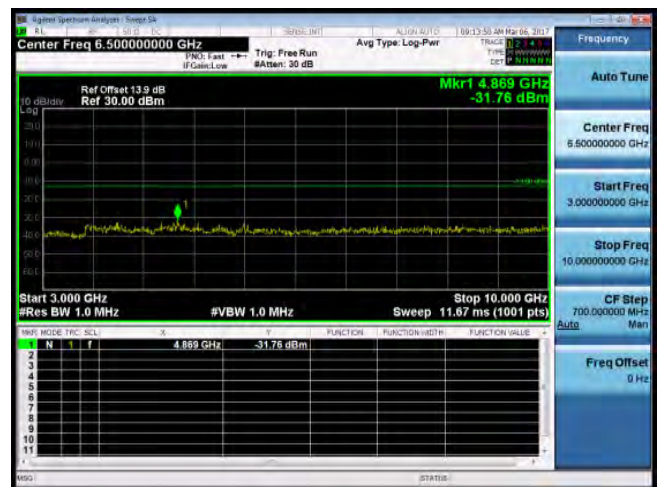
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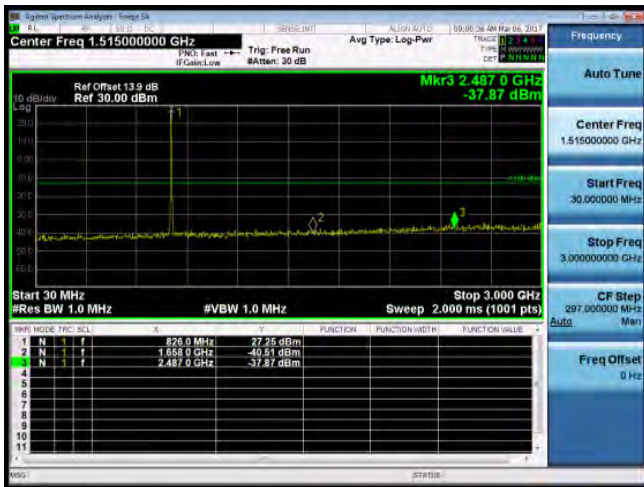


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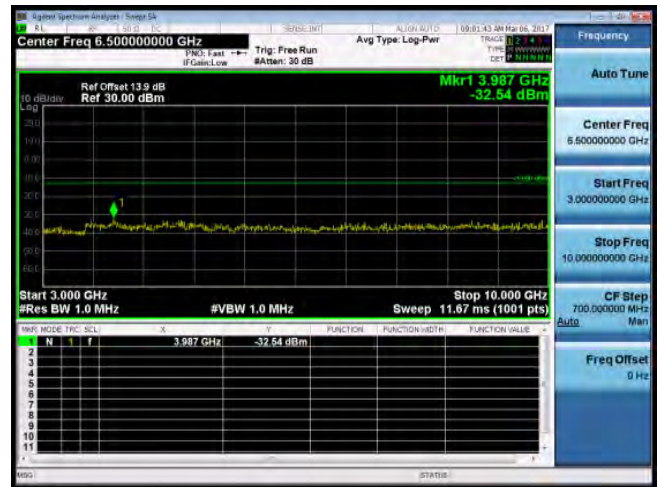
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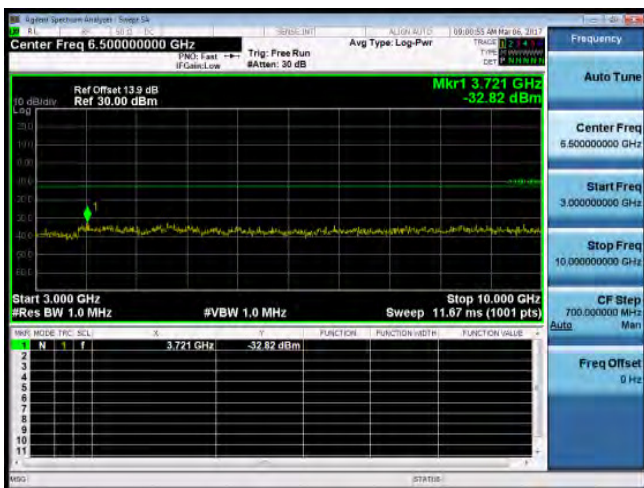
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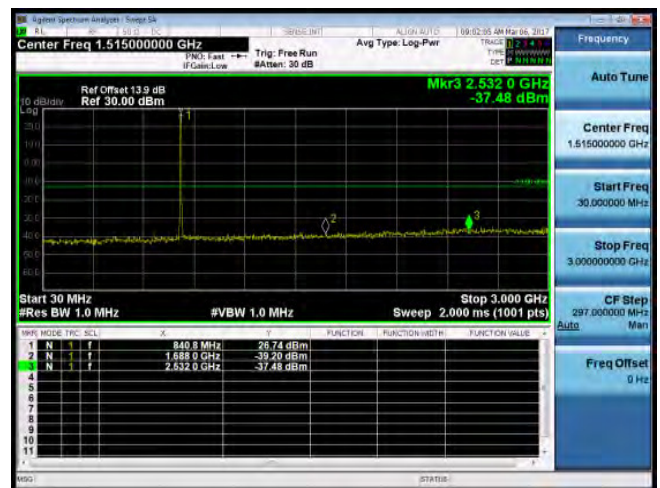
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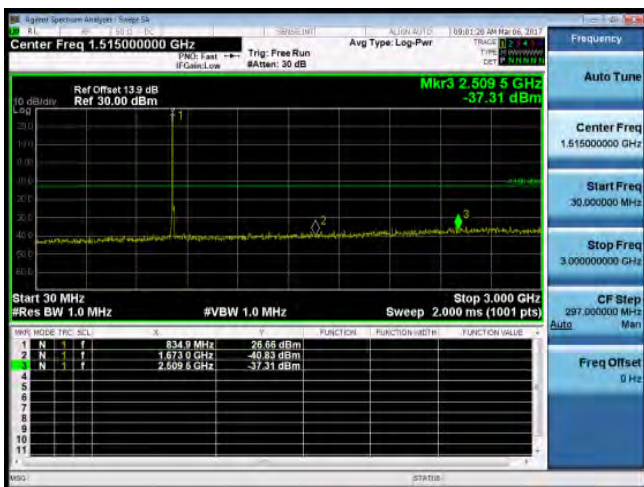
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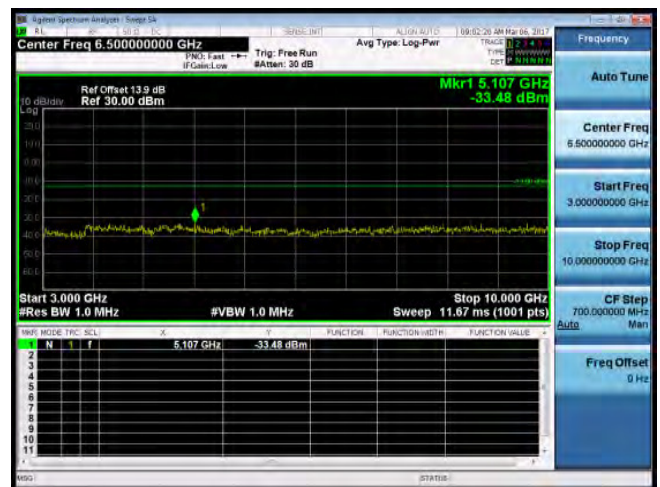
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30MHz-3GHz_Band5_10MHz_QPSK_1_0_MidCH20525-836.5



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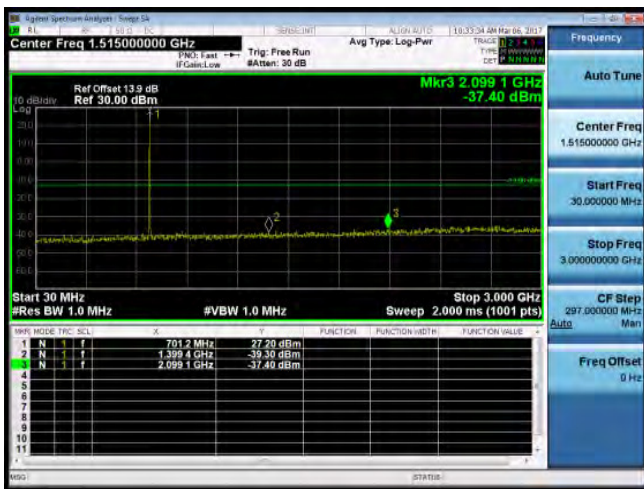


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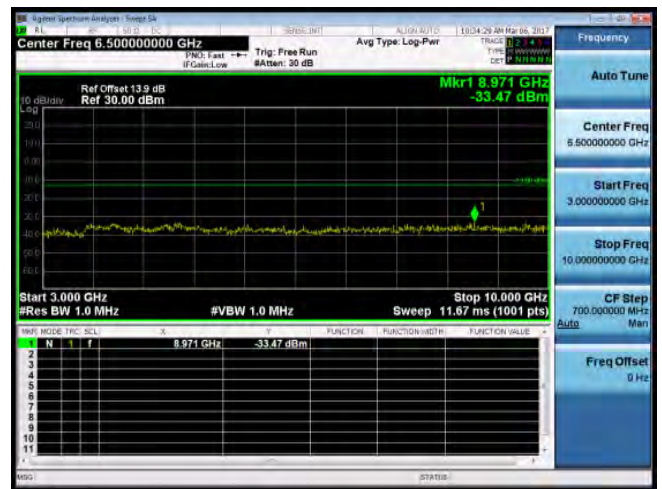
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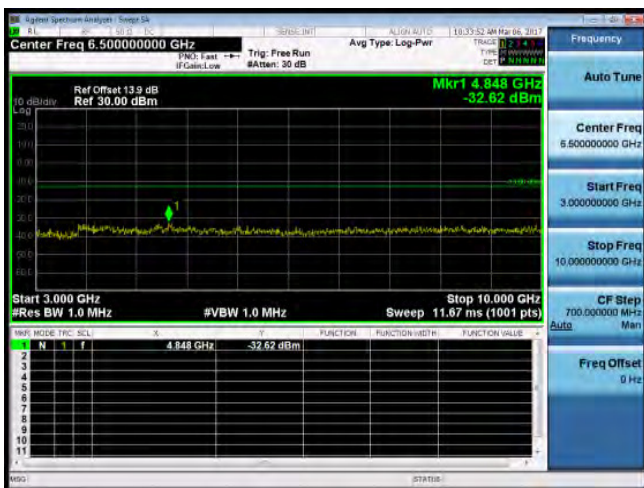
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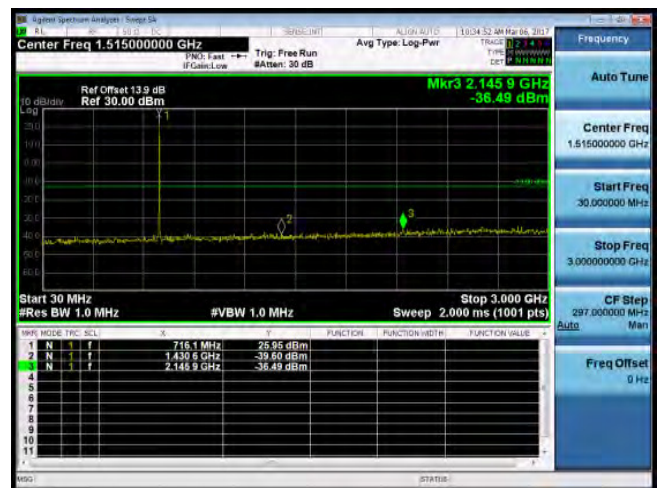
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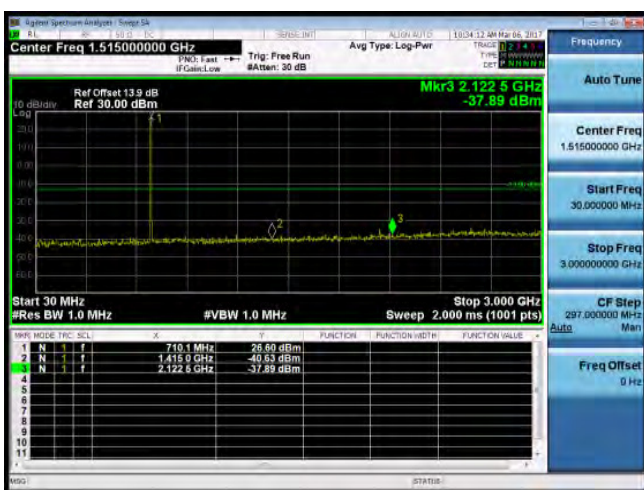
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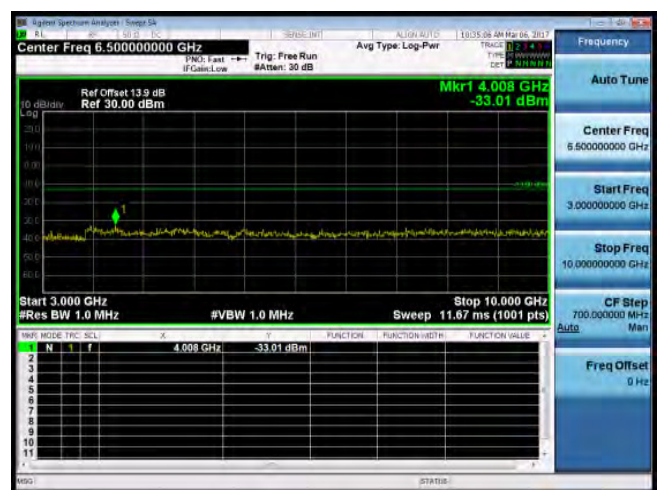
30MHz-3GHz_Band12_1.4MHz_QPSK_1_0_HighCH23173-715.3



30MHz-3GHz_Band12_1.4MHz_QPSK_1_0_MidCH23095-707.5



3GHz-10GHz_Band12_1.4MHz_QPSK_1_0_HighCH23173-715.3

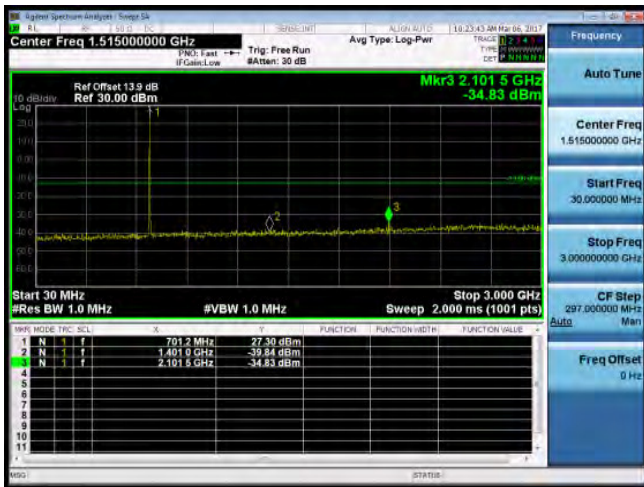


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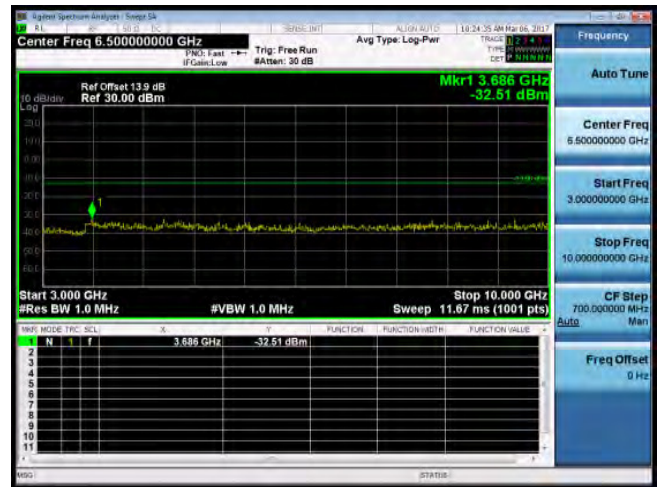
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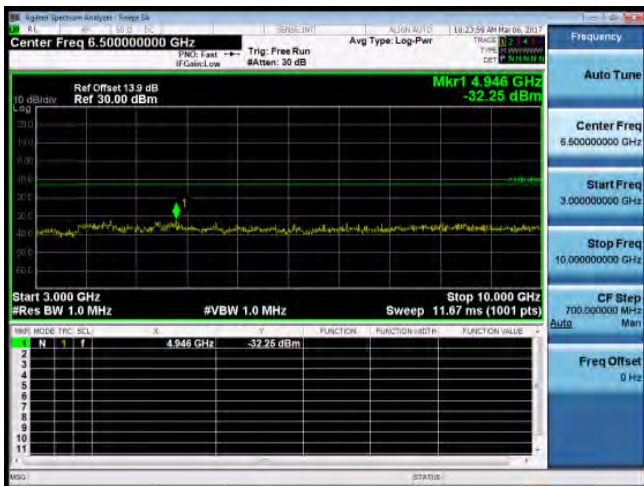
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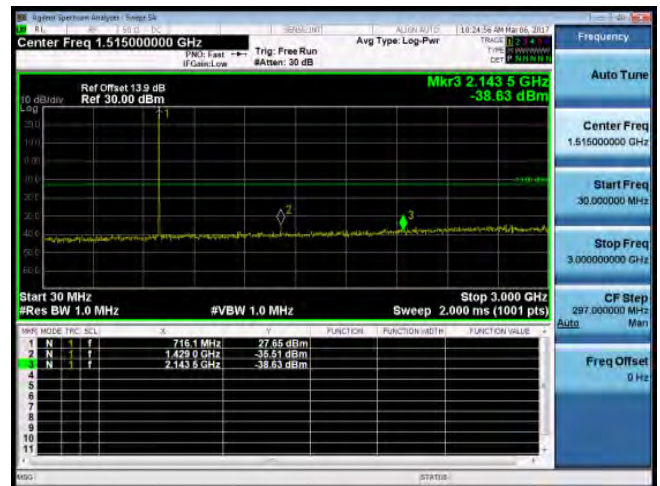
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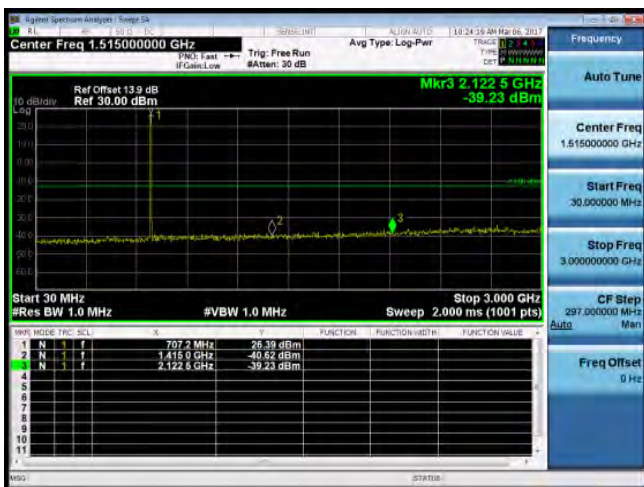
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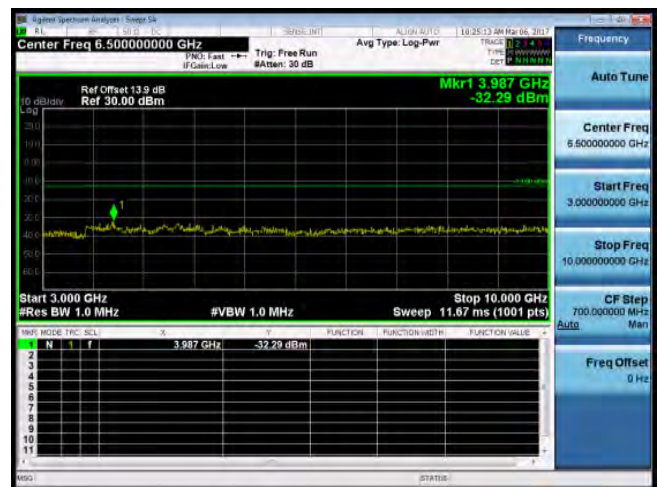
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30MHz-3GHz_Band12_3MHz_QPSK_1_0_MidCH23095-707.5



3GHz-10GHz_Band12_3MHz_QPSK_1_0_HighCH23165-714.5

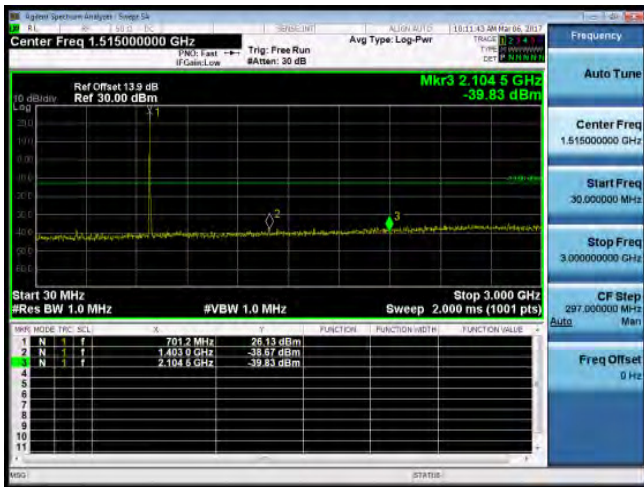


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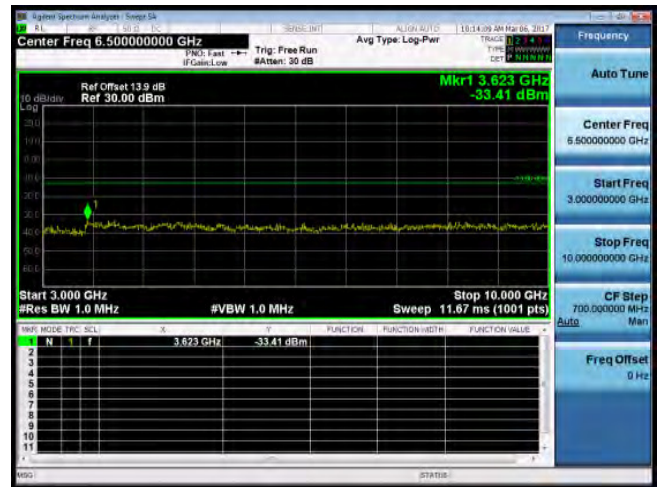
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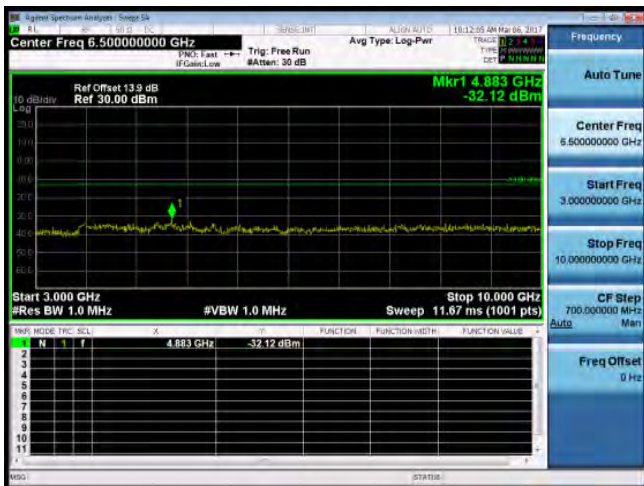
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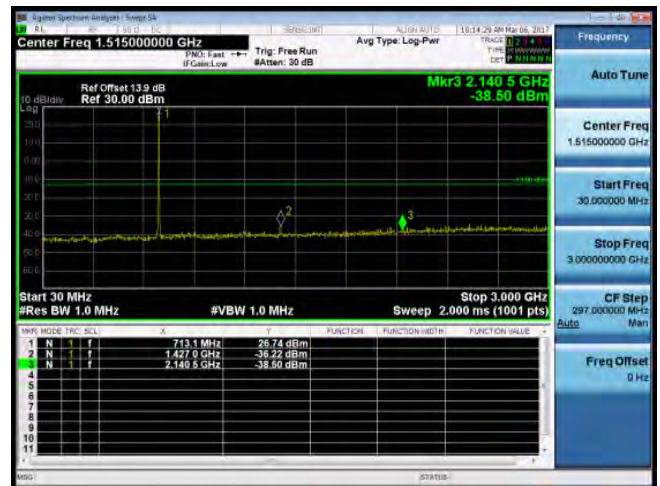
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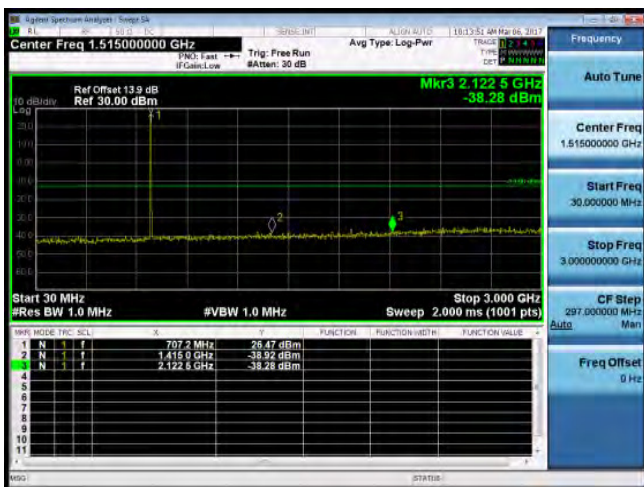
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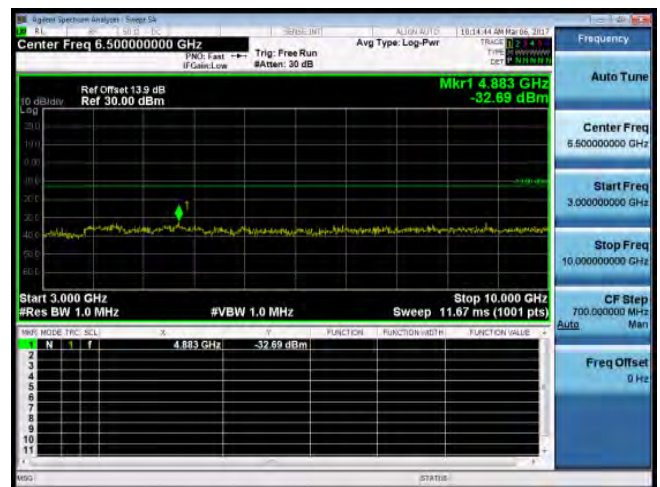
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3GHz-10GHz_Band12_5MHz_QPSK_1_0_HighCH23155-713.5

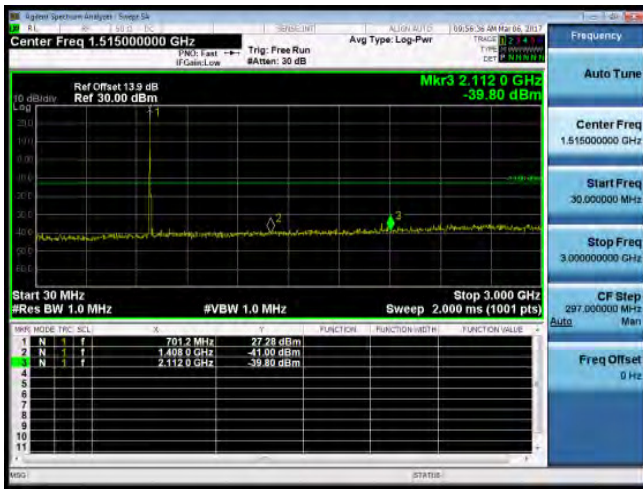


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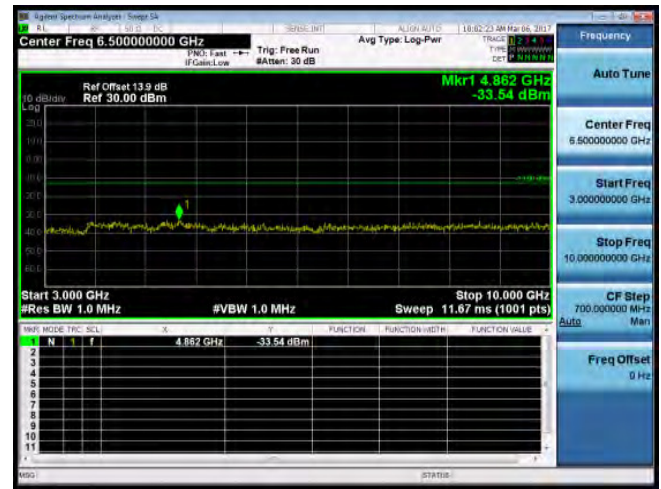
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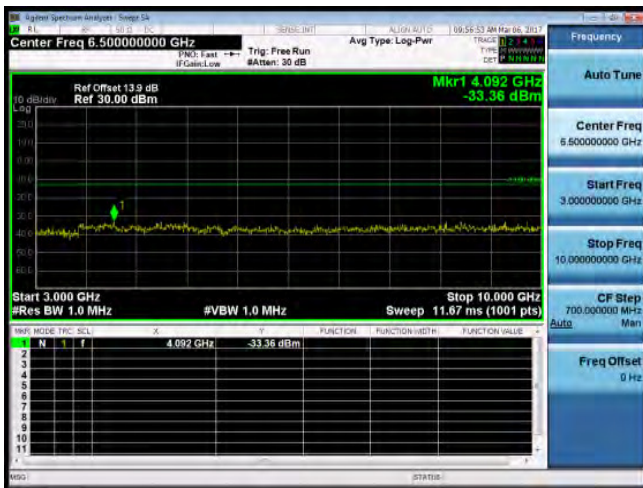
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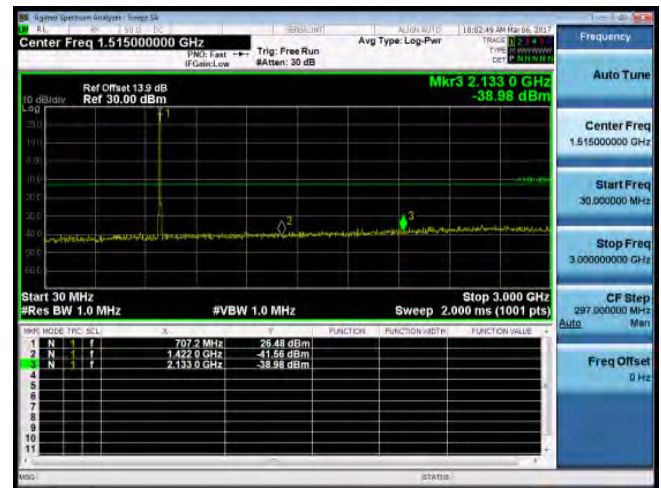
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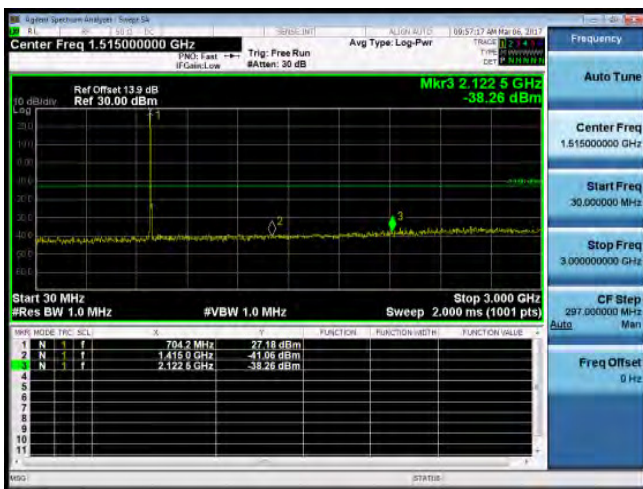
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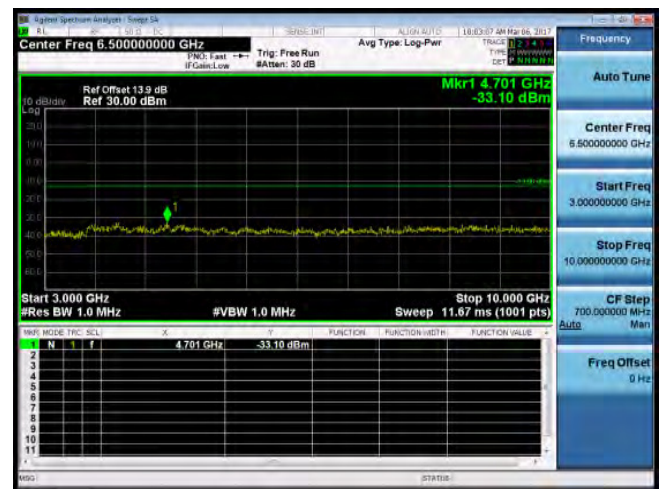
30MHz~3GHz_Band12_10MHz_QPSK_1_0_HighCH23130-711



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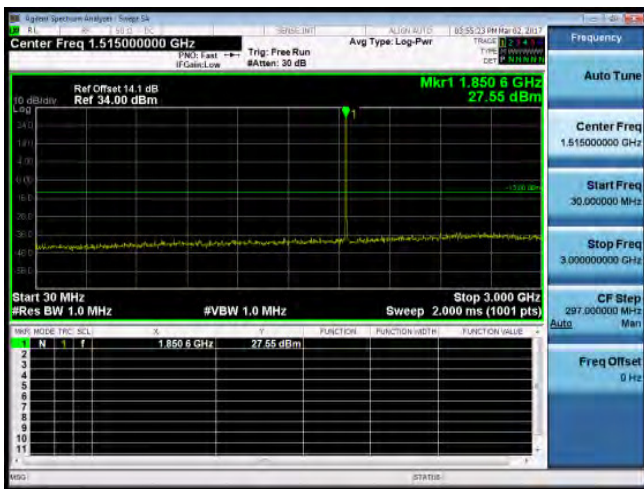


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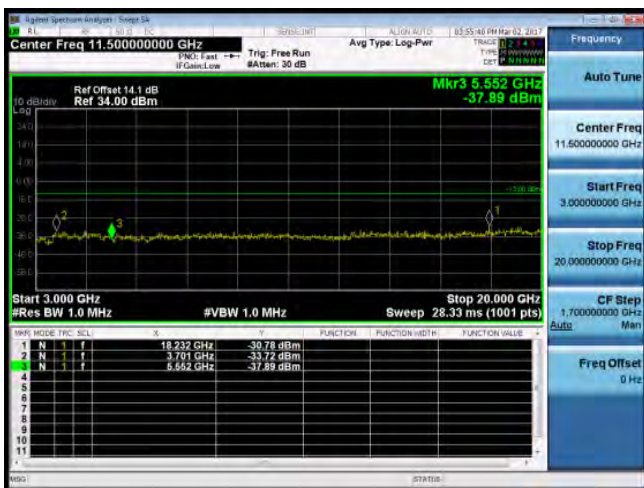
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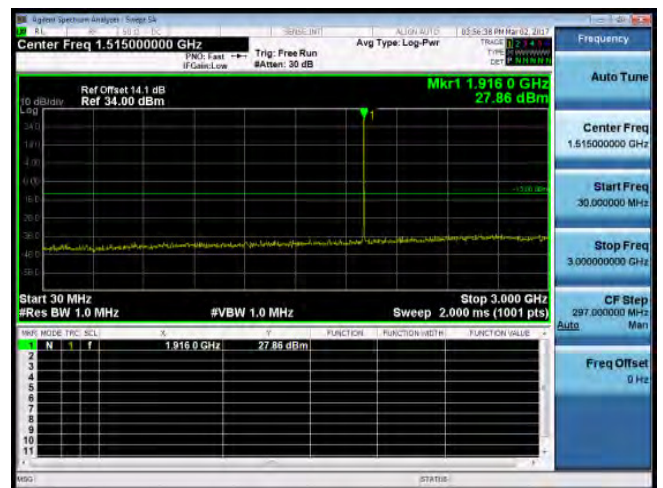
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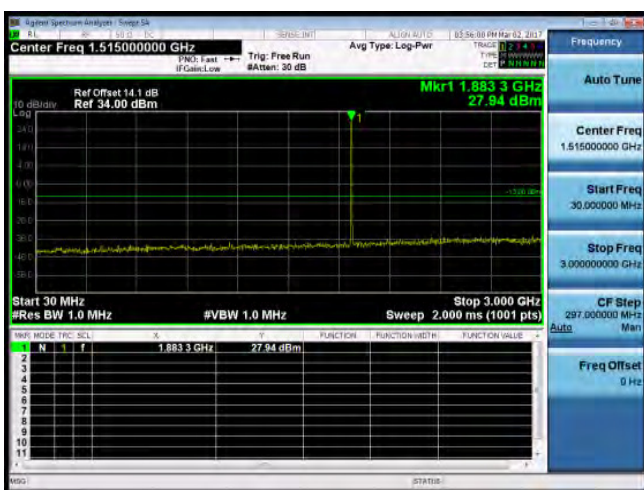
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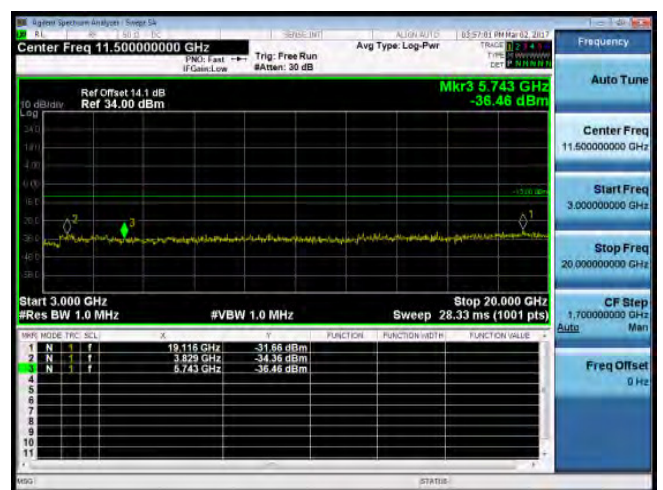
30MHz~3GHz_Band25_1.4MHz_QPSK_1_0_HighCH26683-1914.3



30MHz~3GHz_Band25_1.4MHz_QPSK_1_0_MidCH26365-1882.5



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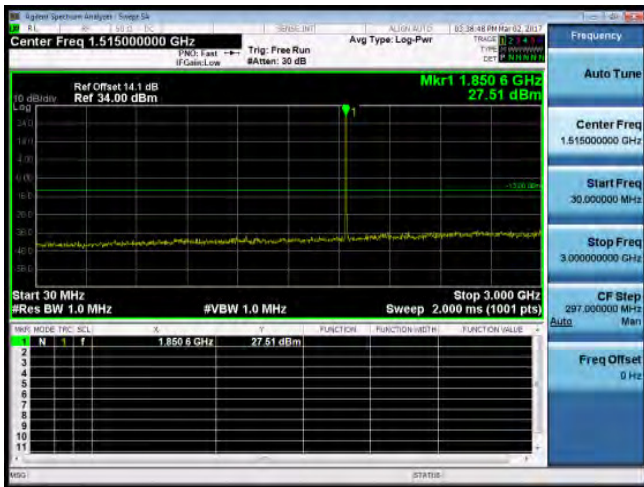


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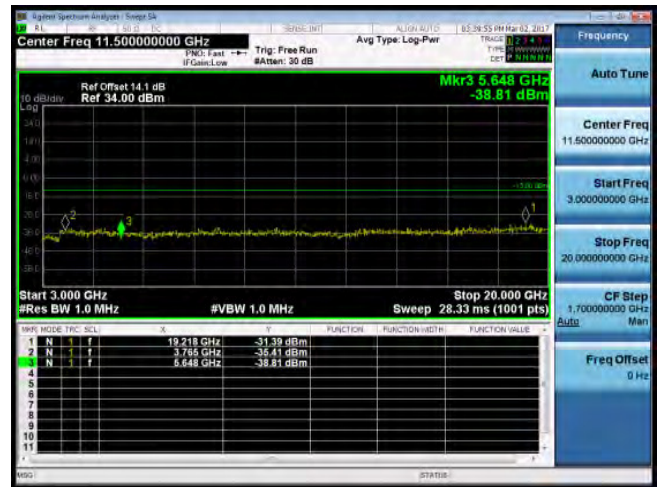
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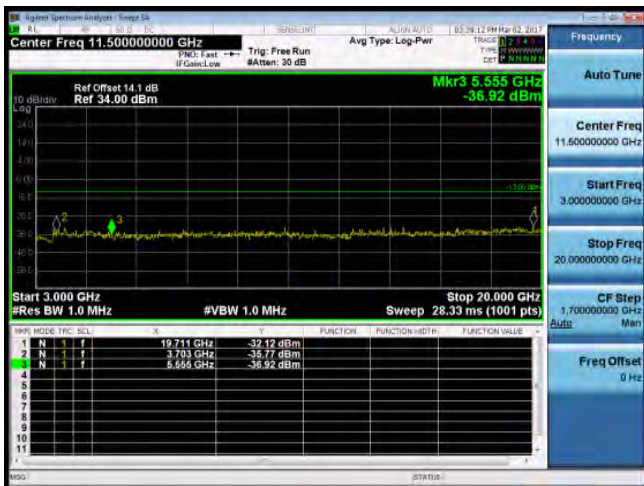
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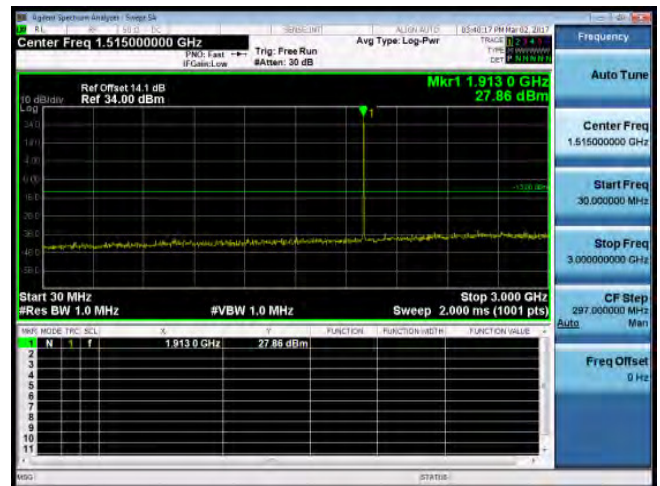
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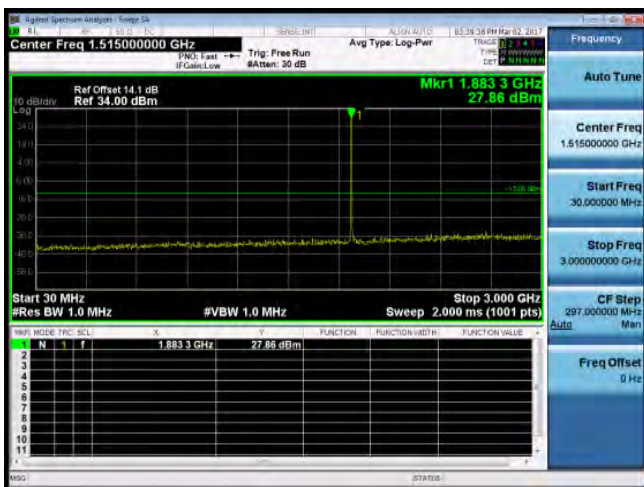
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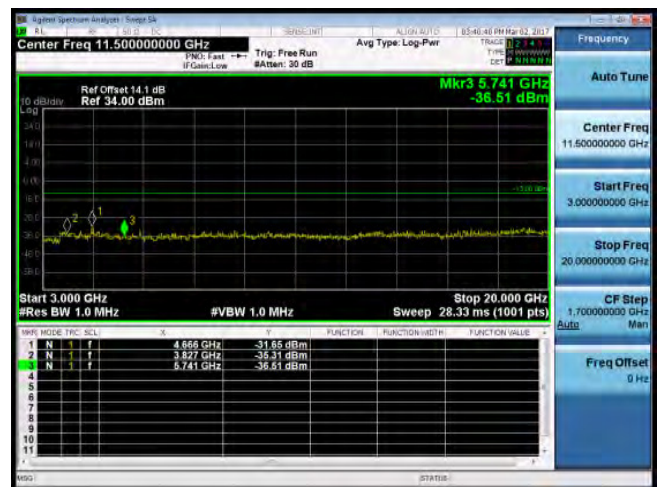
30MHz-3GHz_Band25_3MHz_QPSK_1_0_HighCH26675-1913.5



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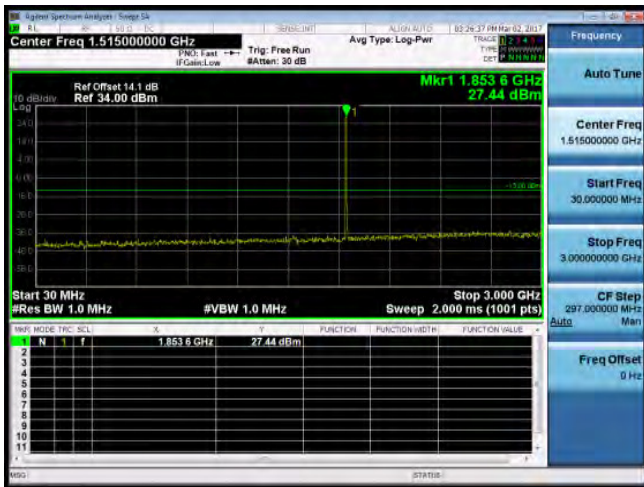


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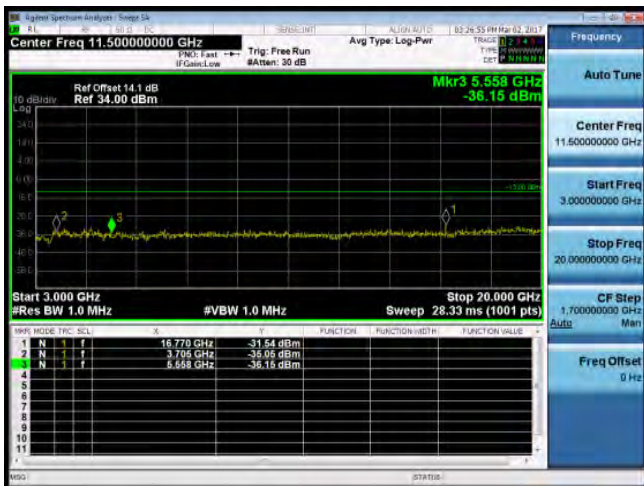
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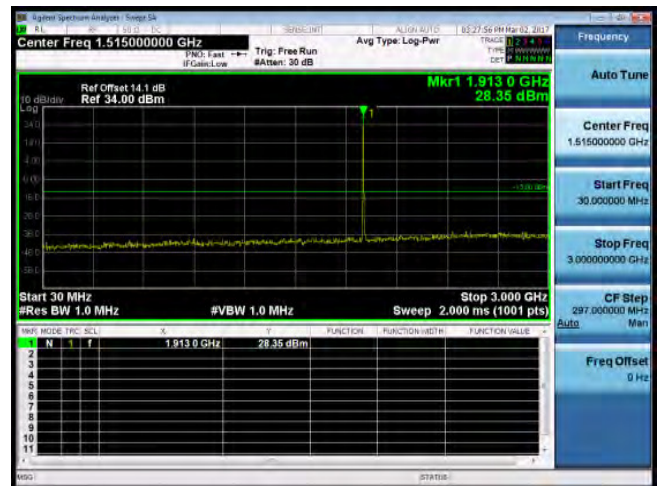
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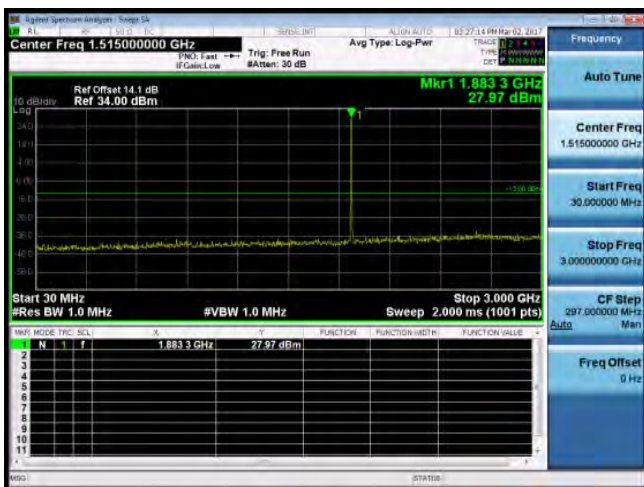
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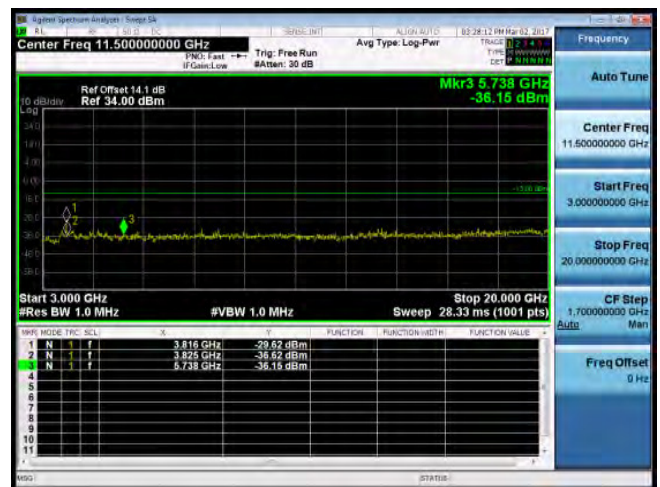
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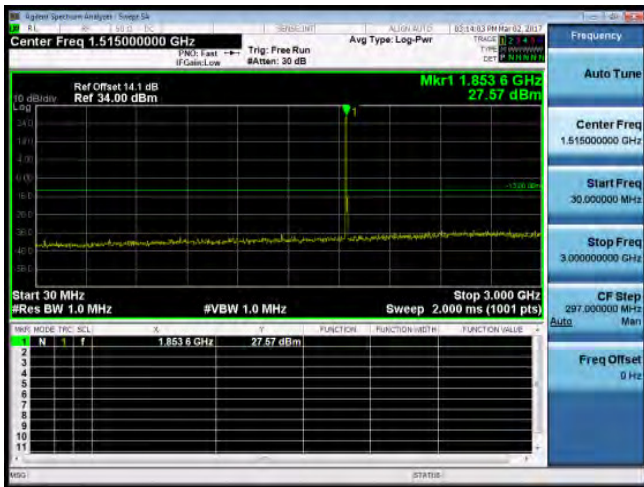


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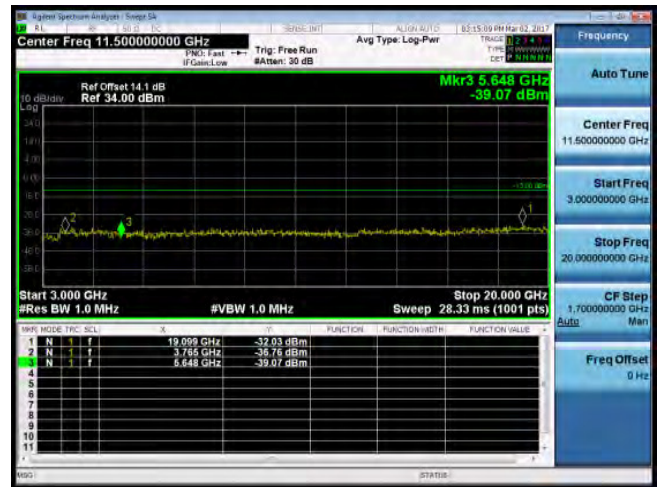
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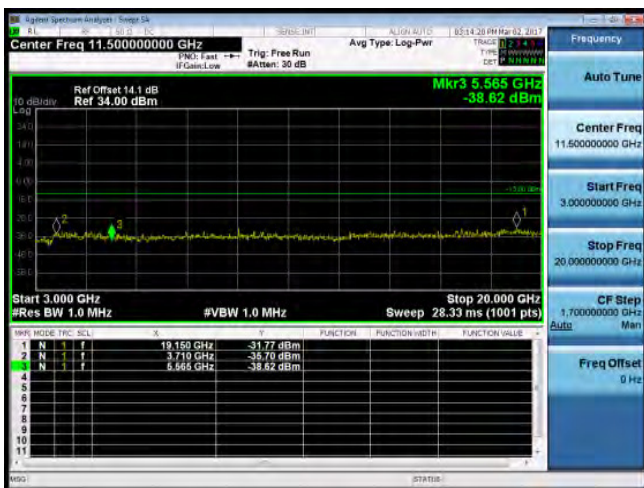
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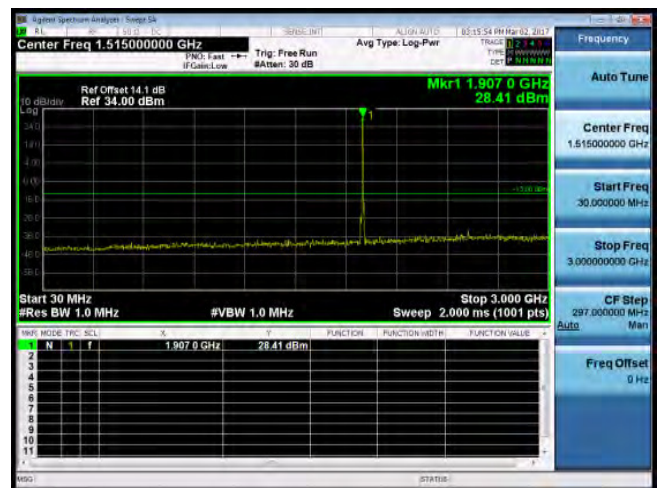
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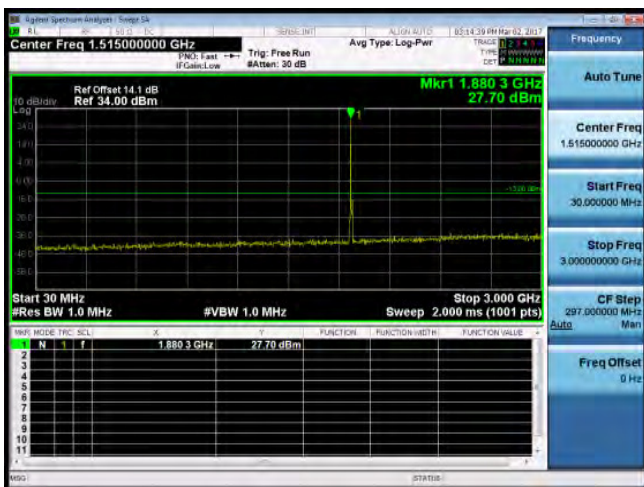
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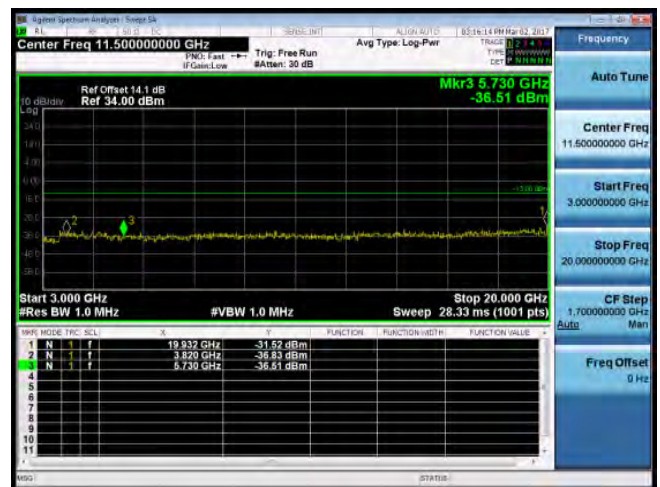
30MHz-3GHz_Band25_10MHz_QPSK_1_0_HighCH26640-1910



30MHz-3GHz_Band25_10MHz_QPSK_1_0_MidCH26365-1882.5



3GHz-10GHz_Band25_10MHz_QPSK_1_0_HighCH26640-1910

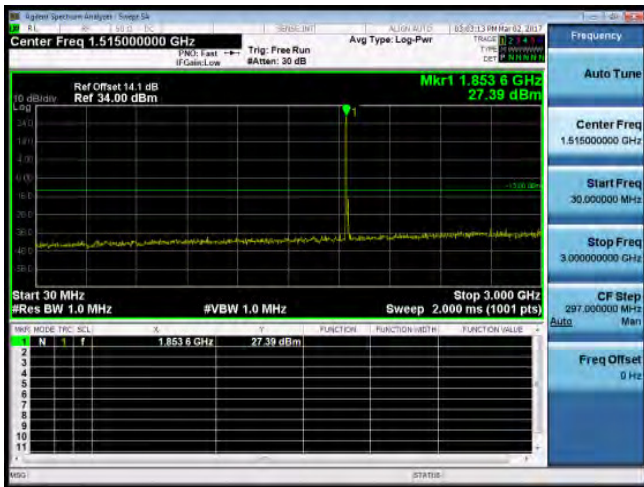


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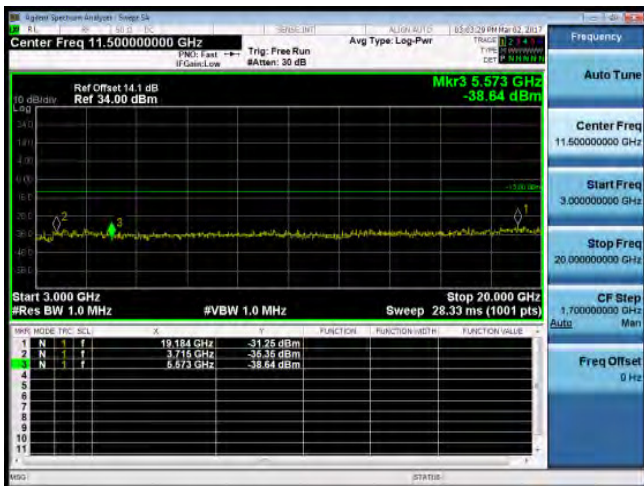
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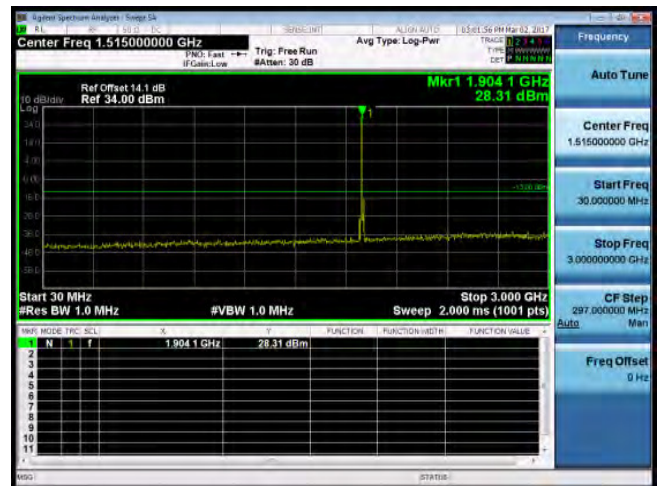
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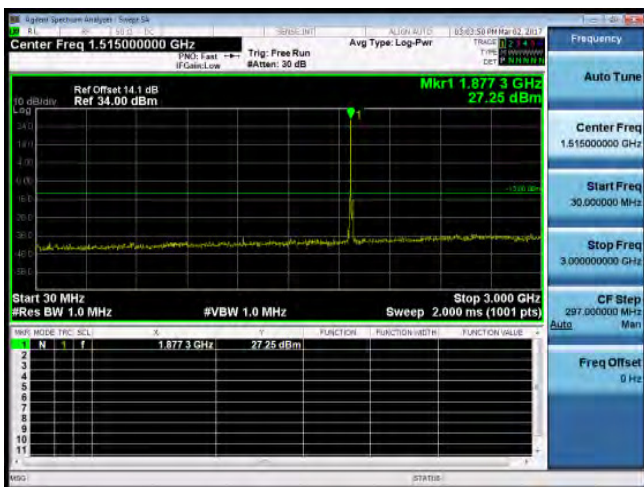
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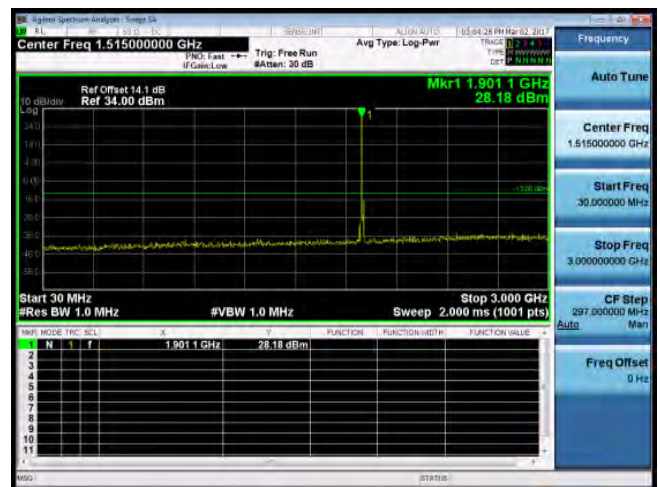
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30MHz-3GHz_Band25_15MHz_QPSK_1_0_MidCH26365-1882.5



30MHz-3GHz_Band25_15MHz_QPSK_1_0_HighCH26615-1907.5

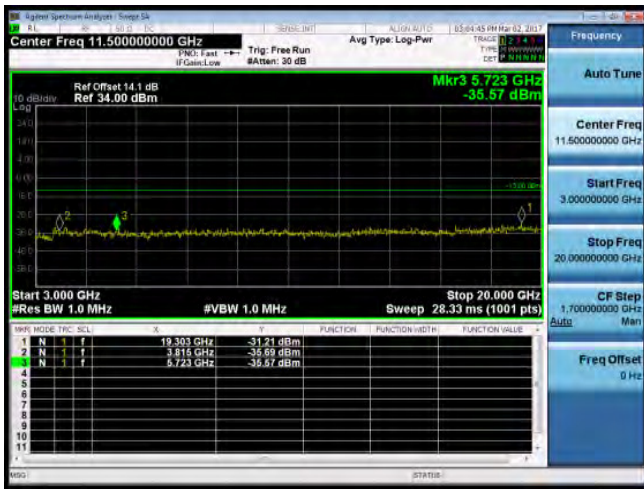


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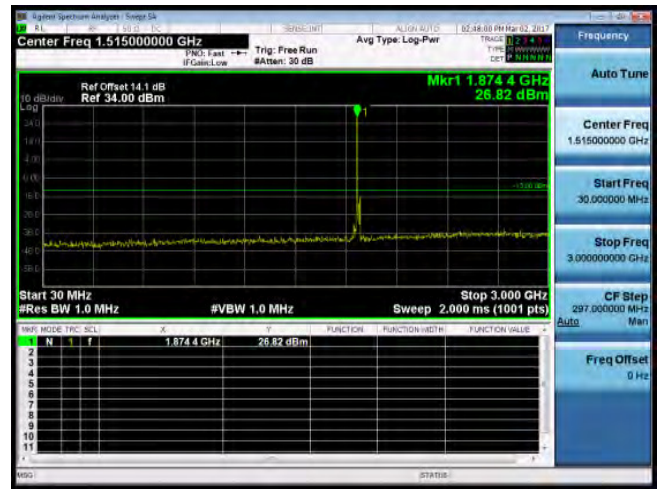
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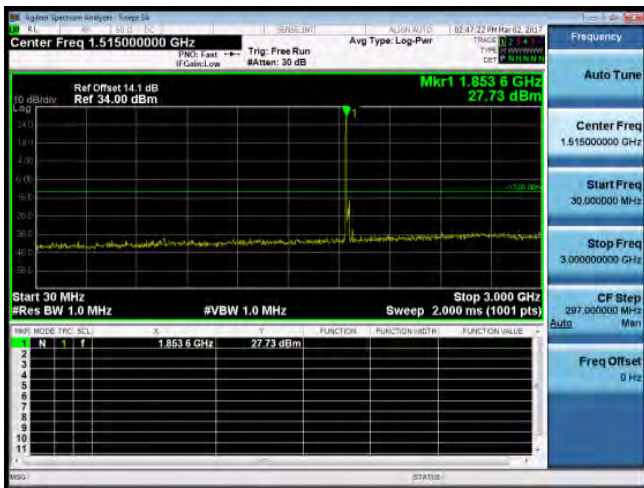
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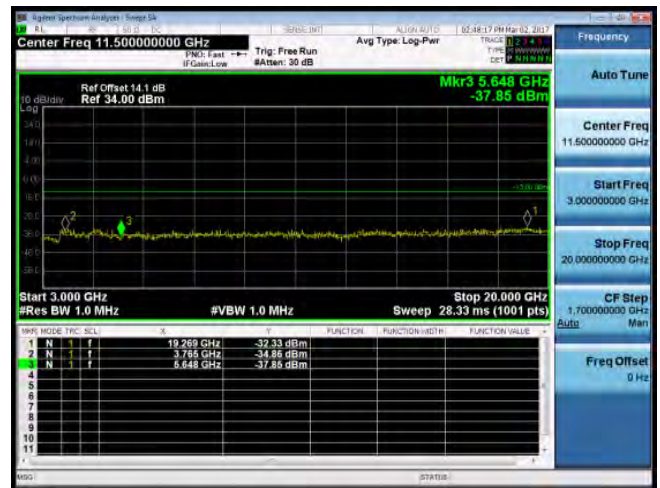
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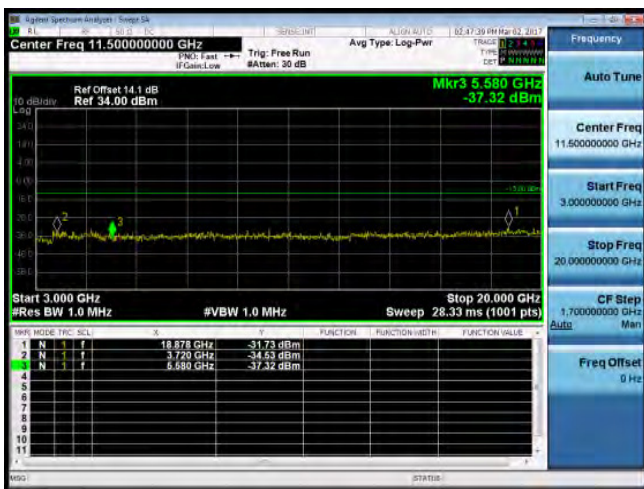
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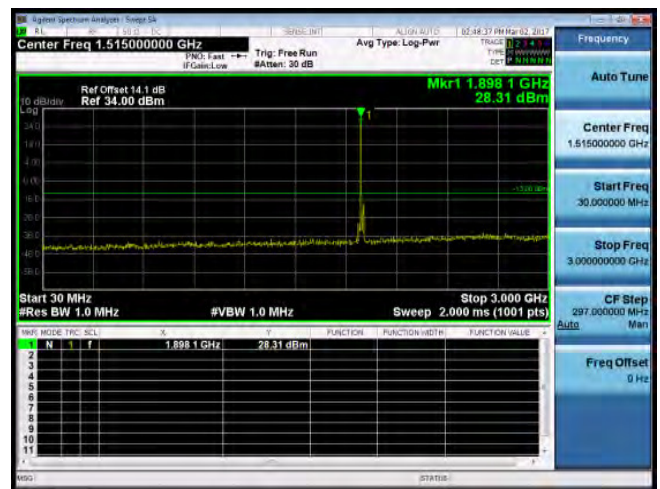
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3GHz~10GHz_Band25_20MHz_QPSK_1_0_LowCH26140-1860



30MHz~3GHz_Band25_20MHz_QPSK_1_0_HighCH26590-1905

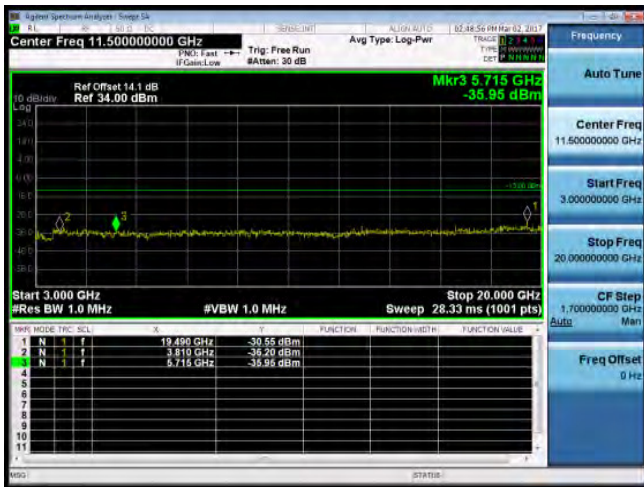


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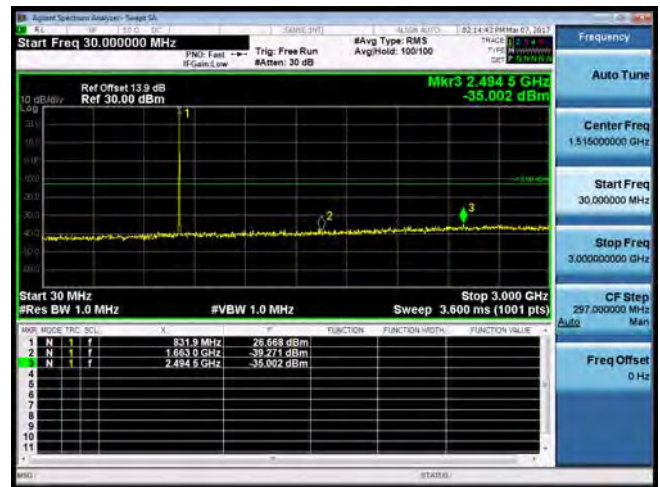
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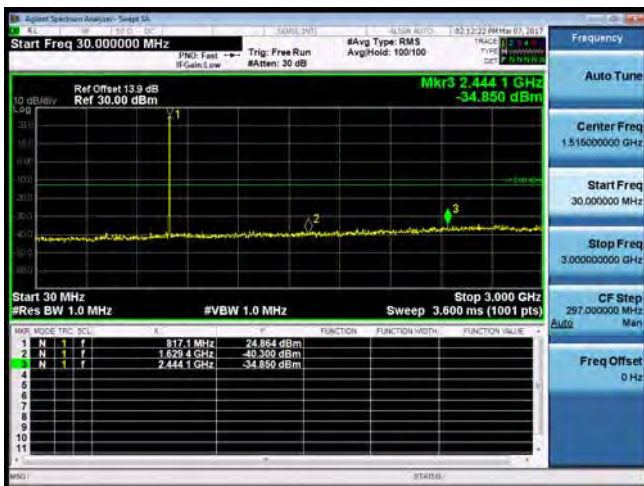
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30MHz-3GHz_Band26_1.4MHz_QPSK_1_0_MidCH26865-831.5



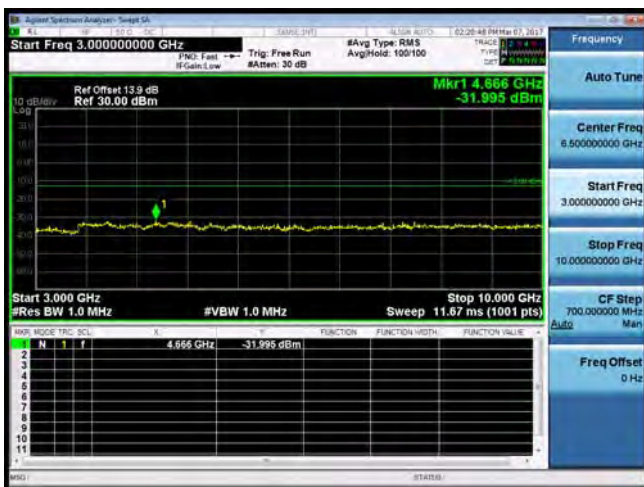
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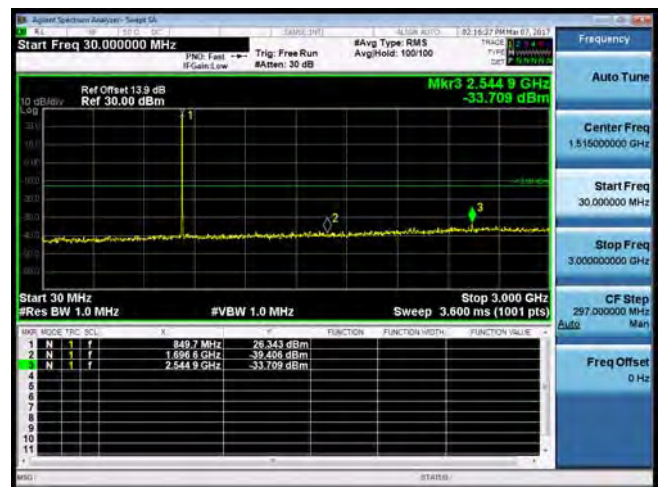
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3GHz-10GHz_Band26_1.4MHz_QPSK_1_0_LowCH26697-814.7



30MHz-3GHz_Band26_1.4MHz_QPSK_1_0_HighCH27033-848.3

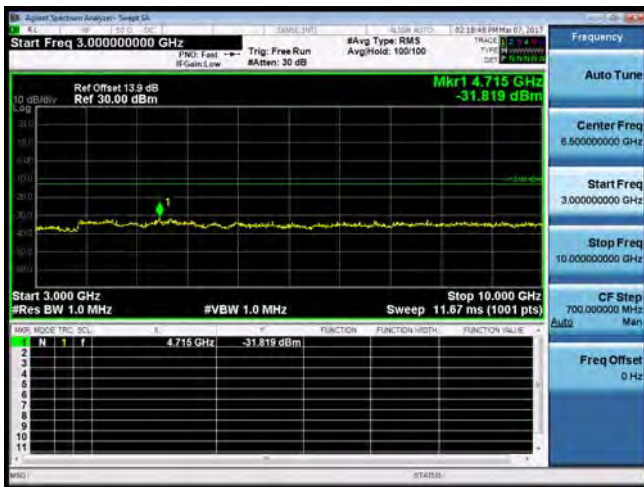


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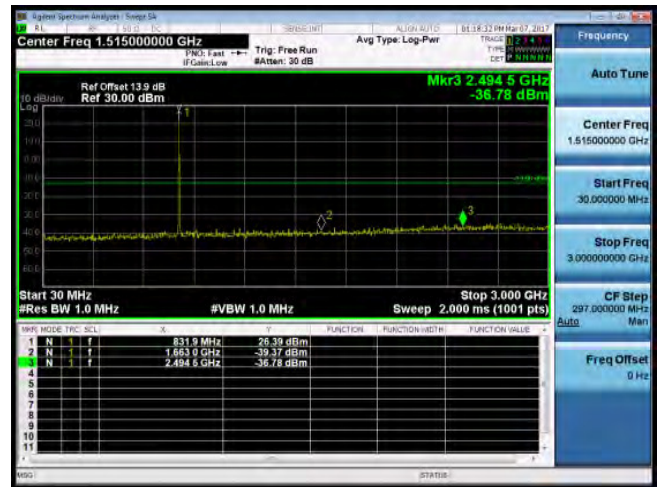
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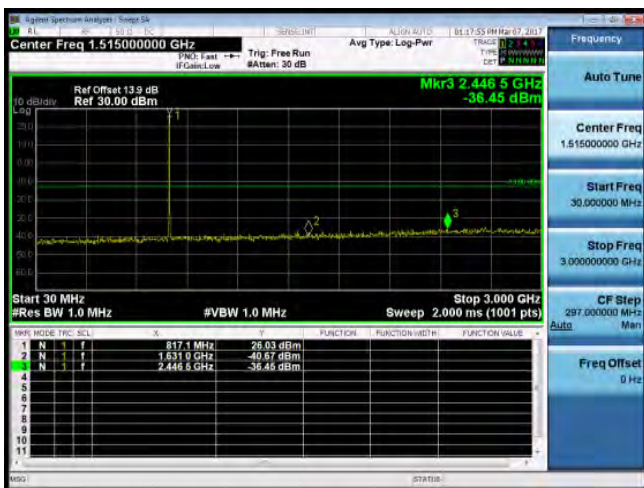
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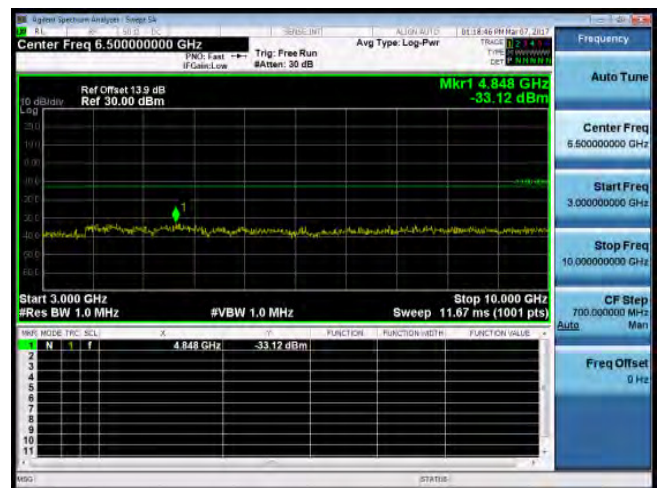
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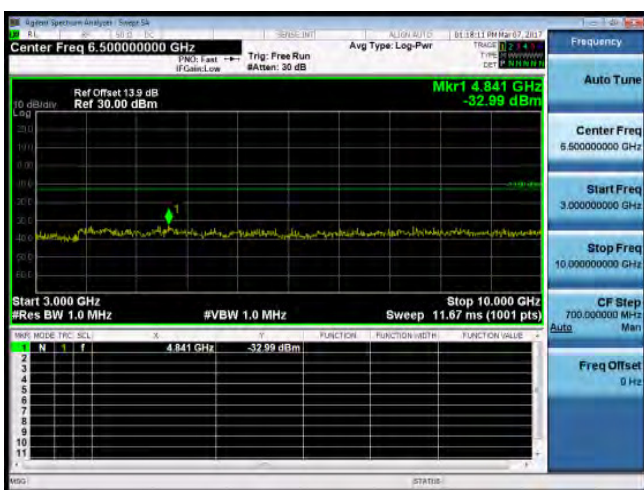
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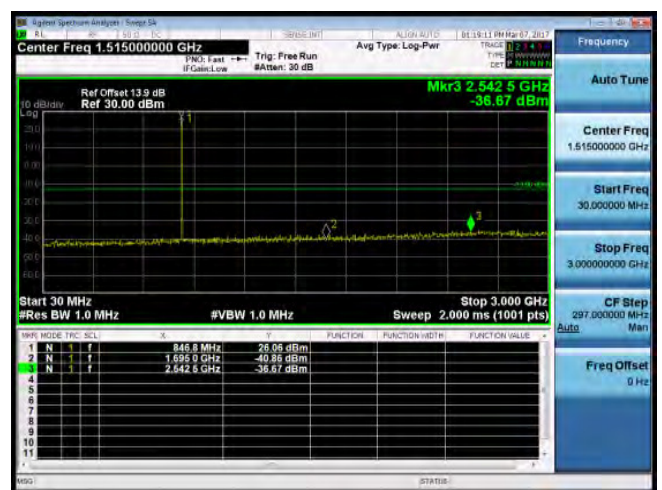
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30MHz-3GHz_Band26_3MHz_QPSK_1_0_HighCH27025-847.5

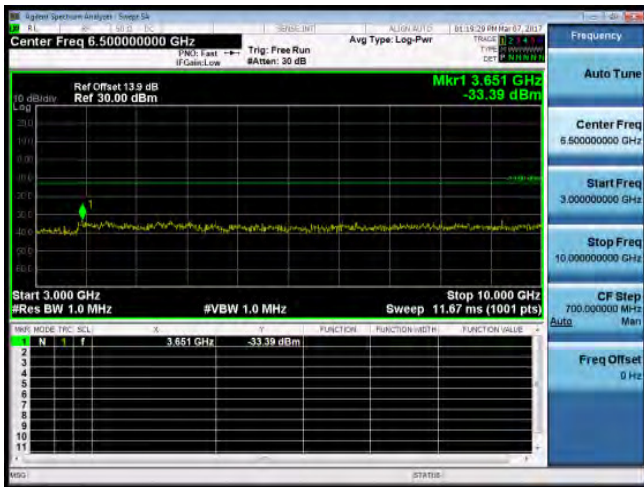


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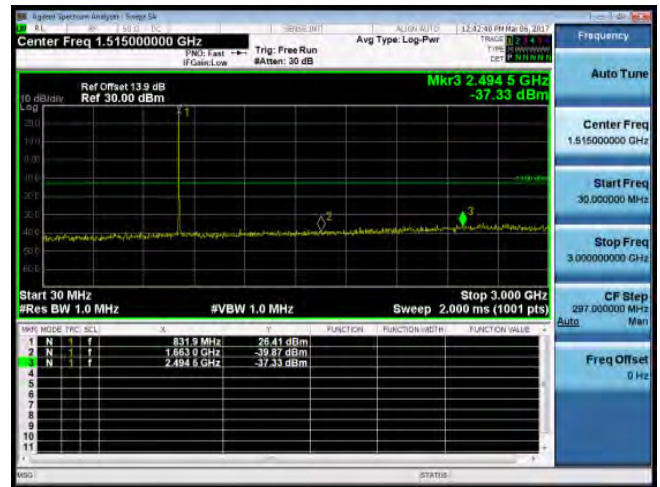
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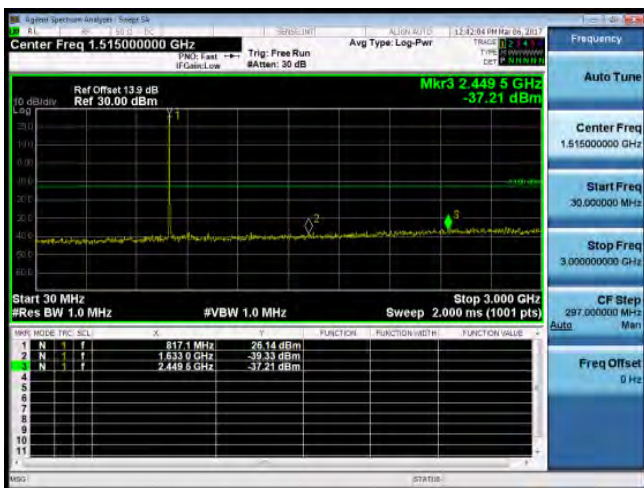
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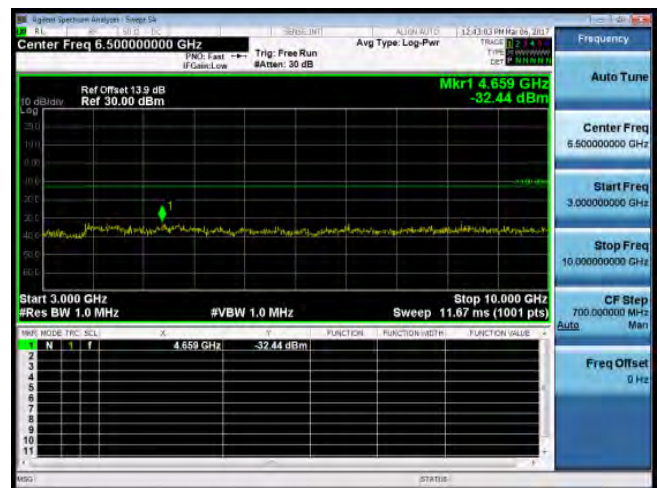
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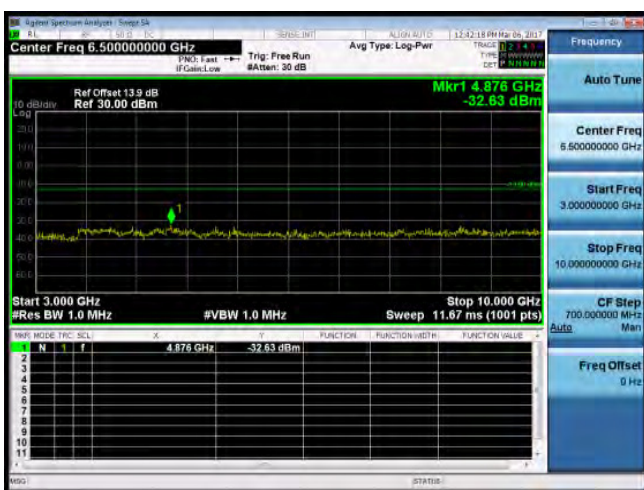
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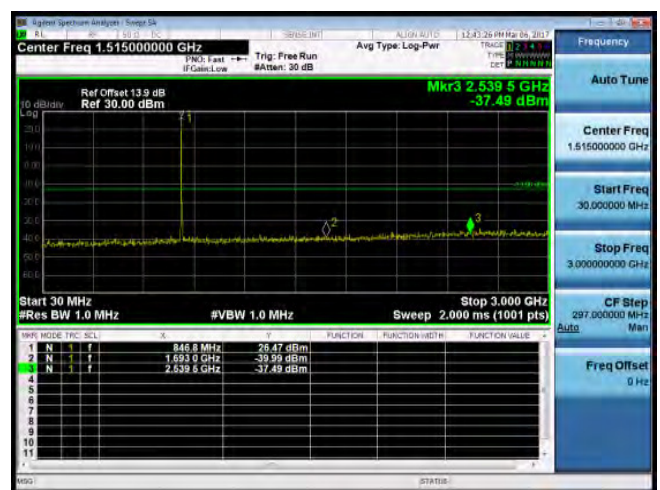
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30MHz~3GHz_Band26_5MHz_QPSK_1_0_HighCH27015-846.5

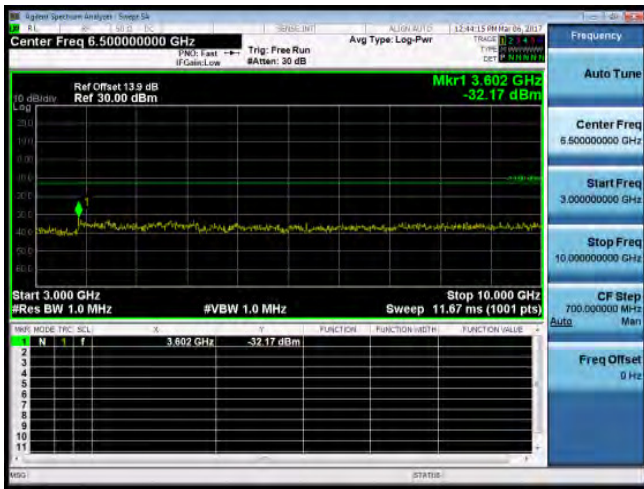


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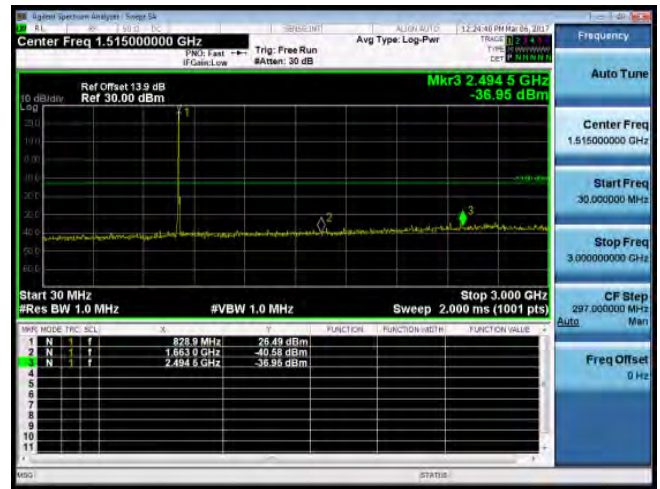
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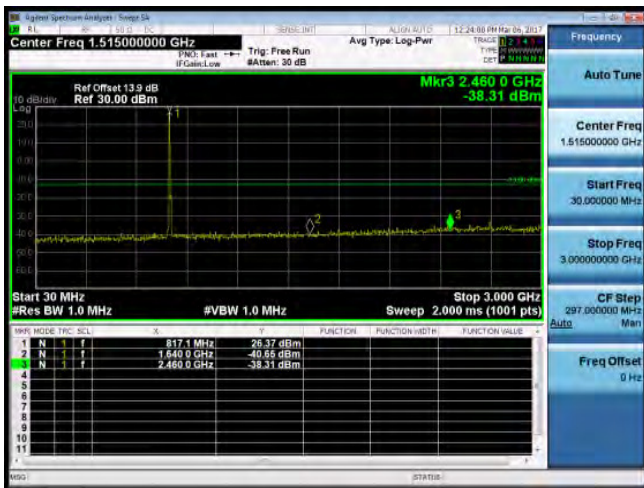
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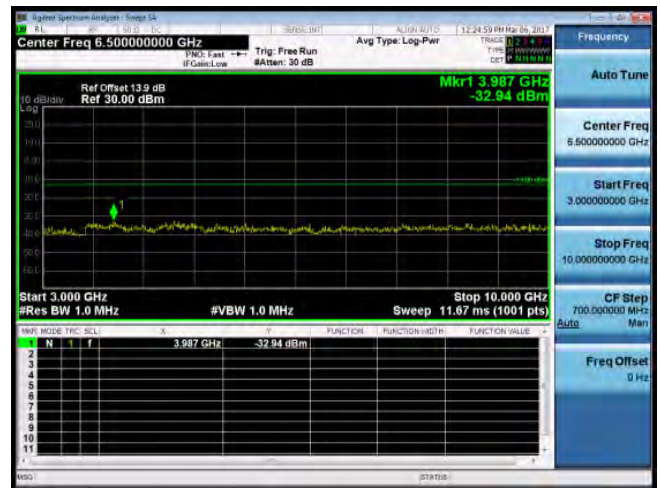
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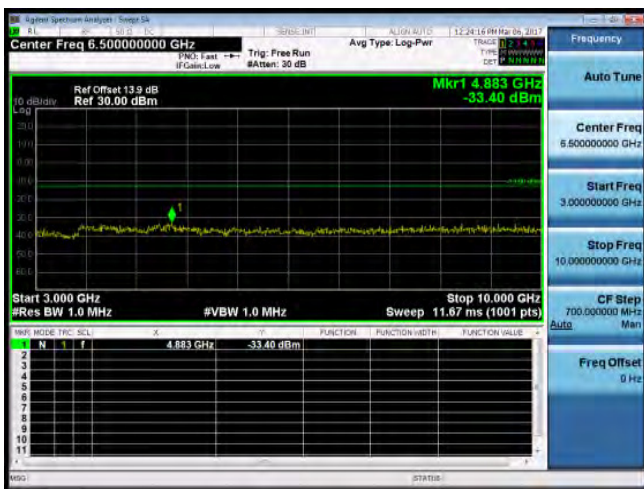
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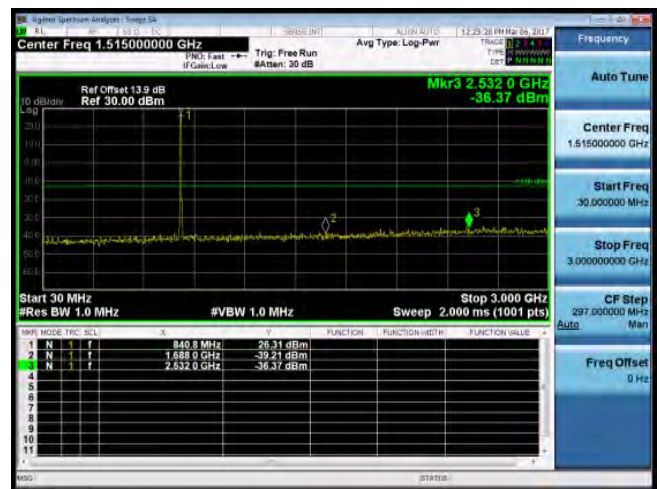
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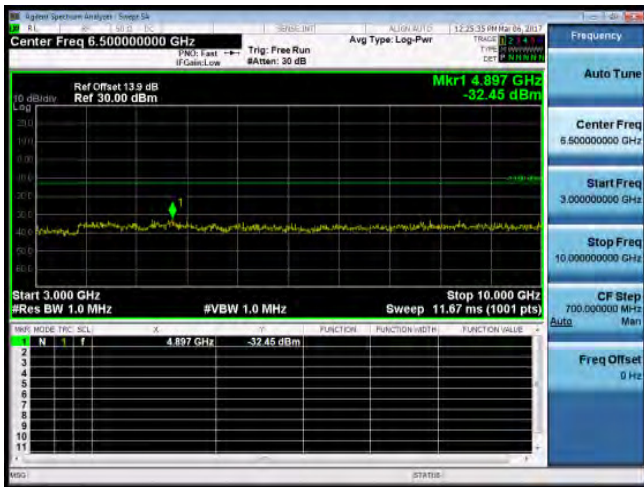


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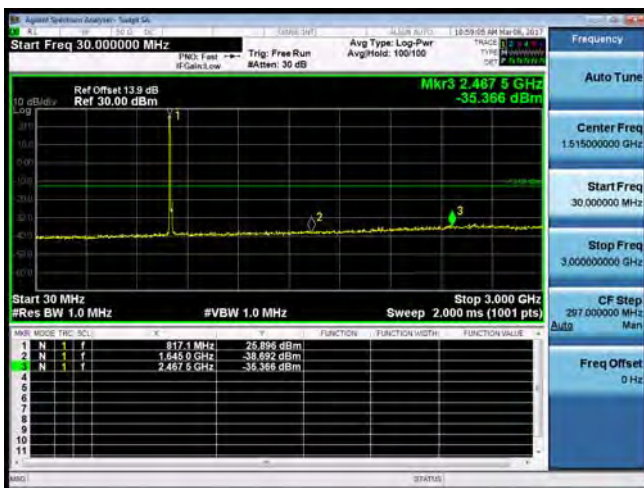
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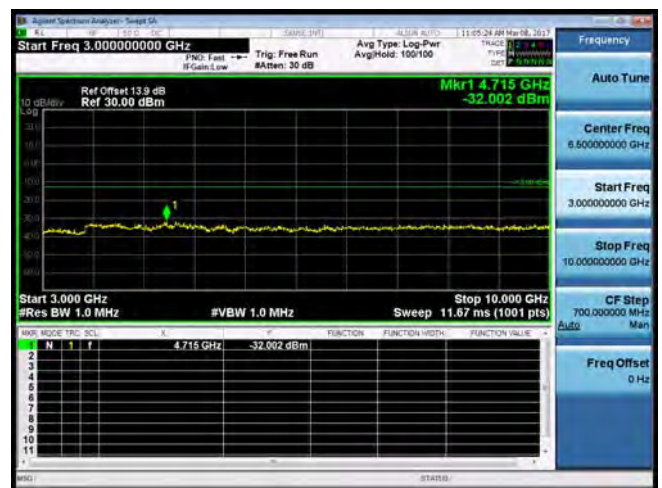
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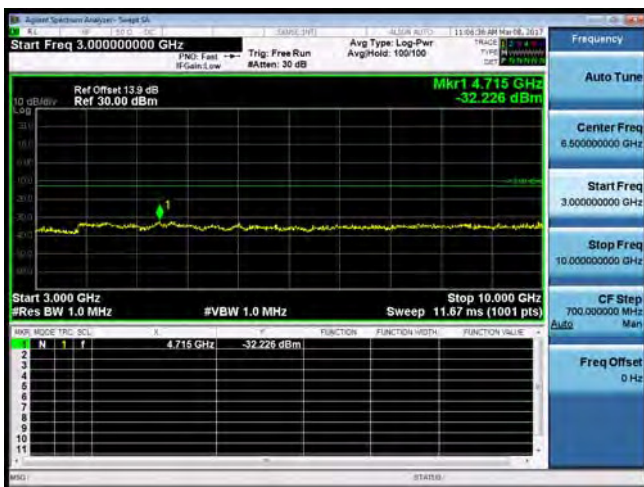
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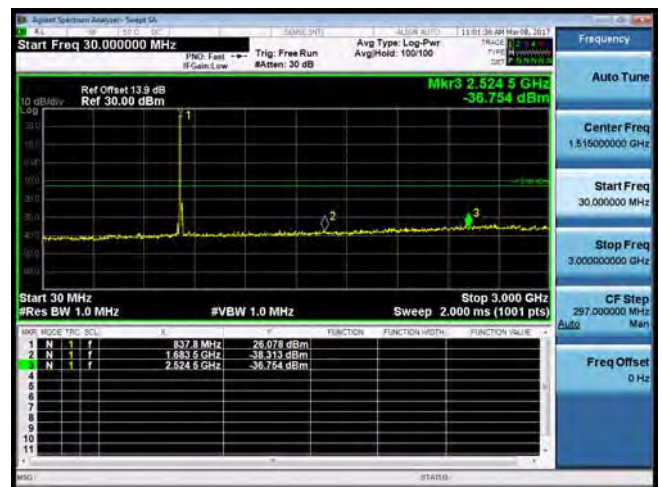
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3GHz~10GHz_Band26_15MHz_QPSK_1_0_LowCH26775-822.5



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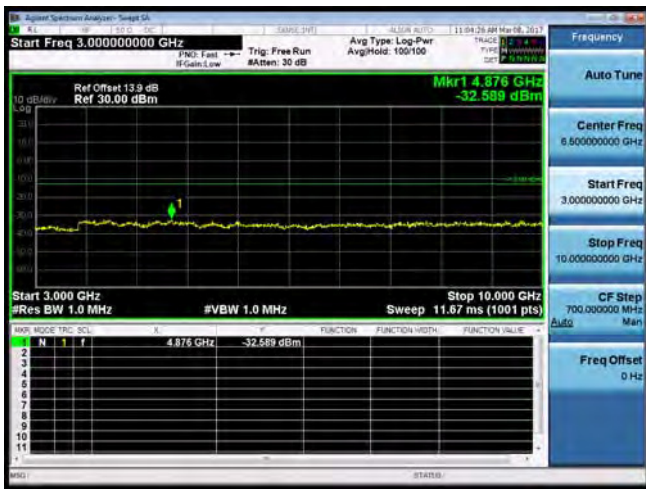


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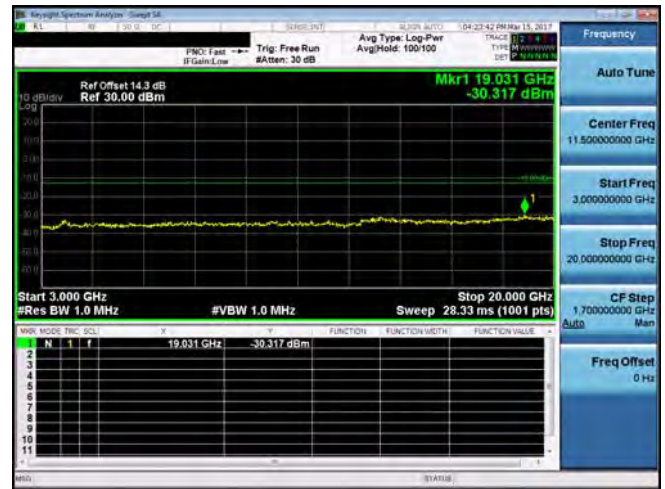
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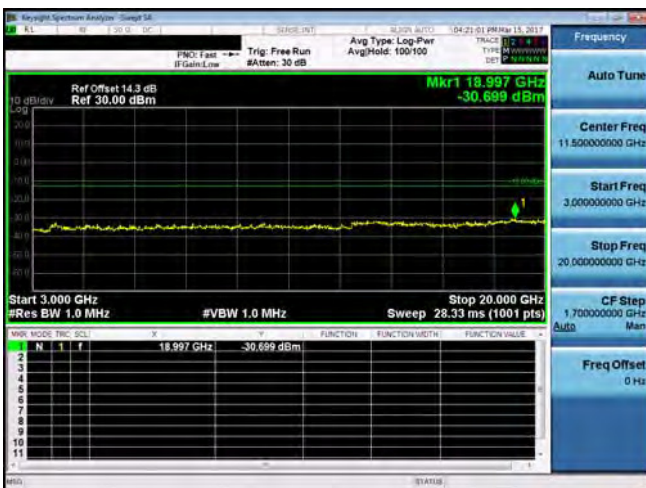
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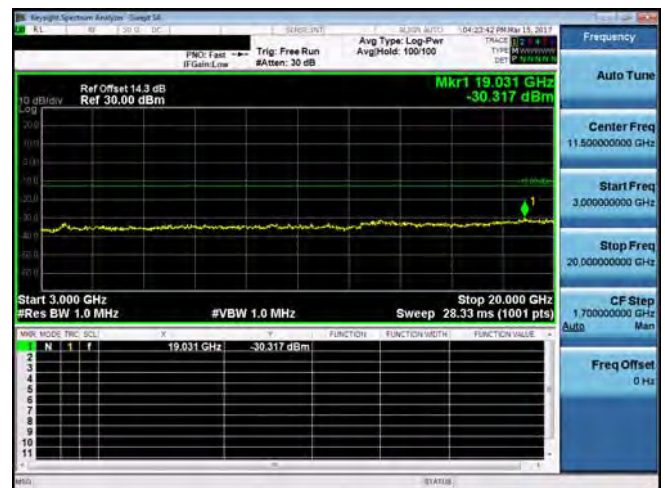
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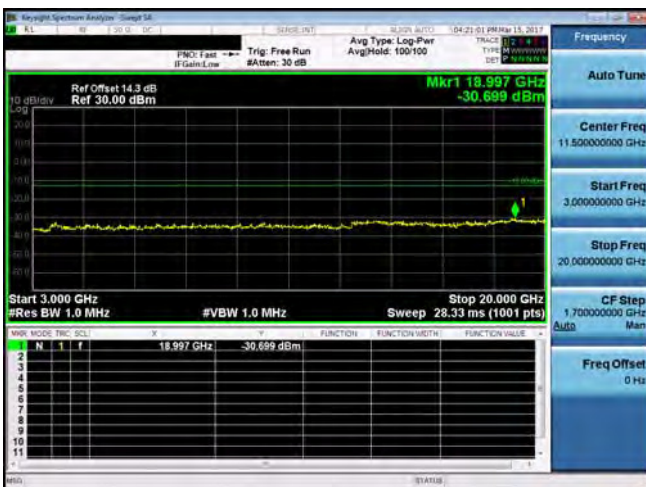
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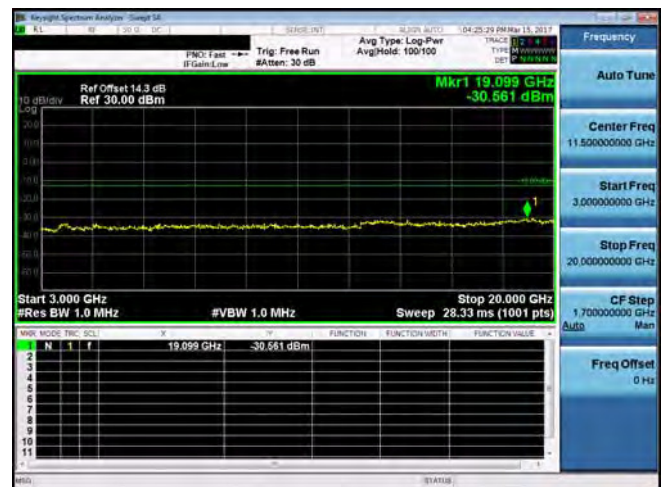
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3GHz~10GHz_Band41_5MHz_QPSK_1_0_LowCH39675



30MHz~3GHz_Band41_5MHz_QPSK_1_0_HighCH41565

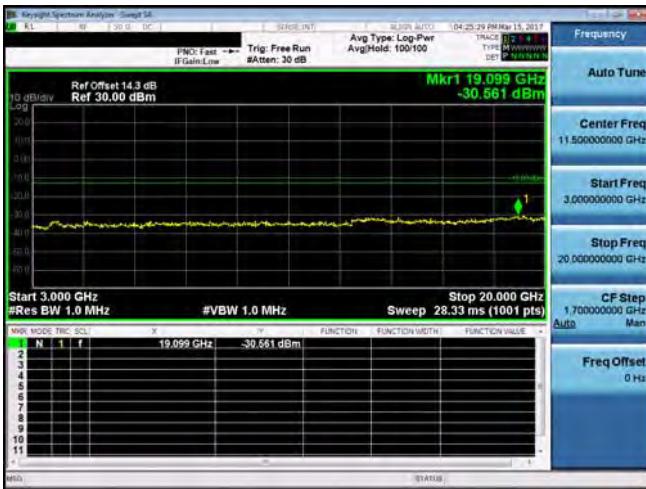


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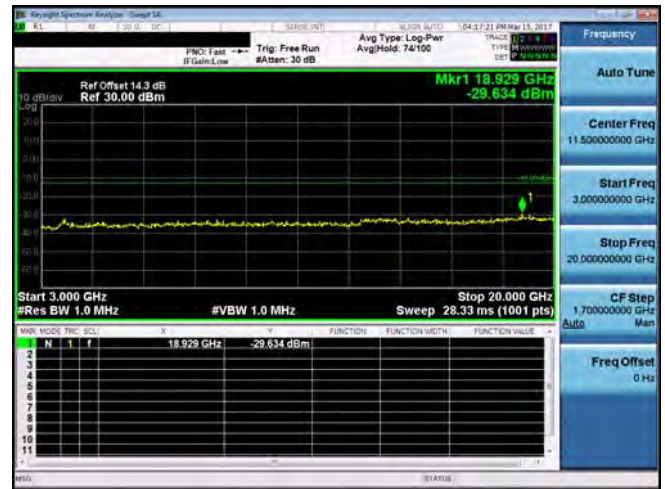
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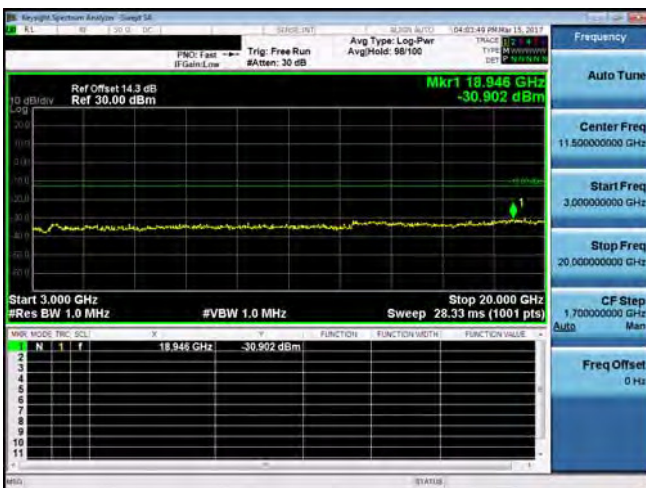
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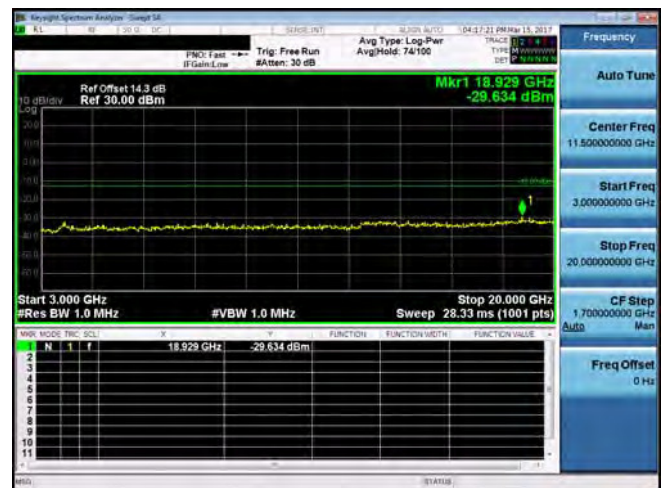
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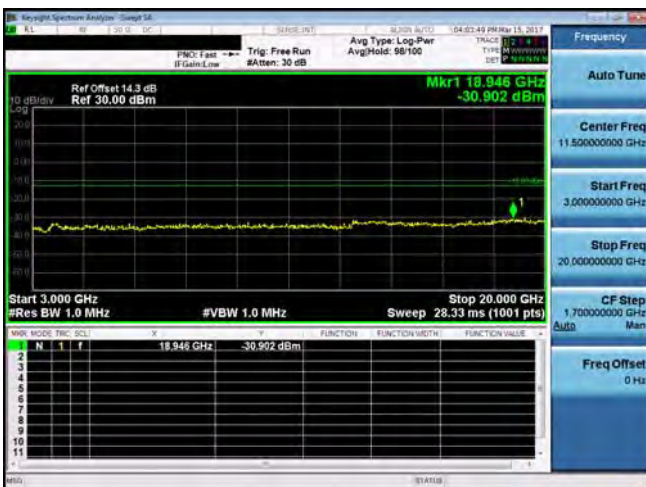
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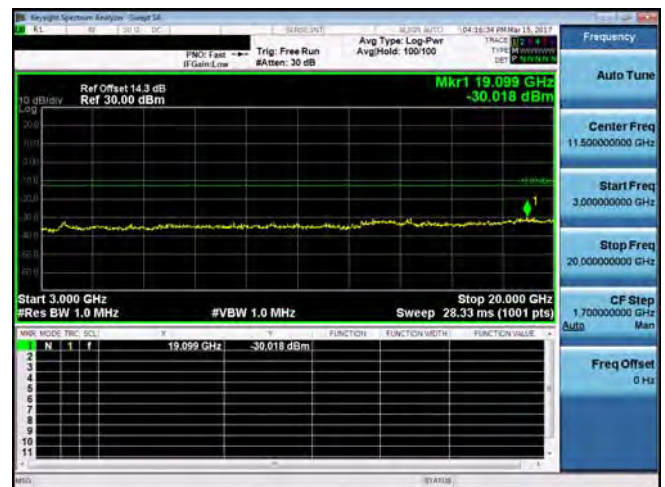
3GHz~10GHz_Band41_10MHz_QPSK_1_0_MidCH40620



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30MHz~3GHz_Band41_10MHz_QPSK_1_0_HighCH41540

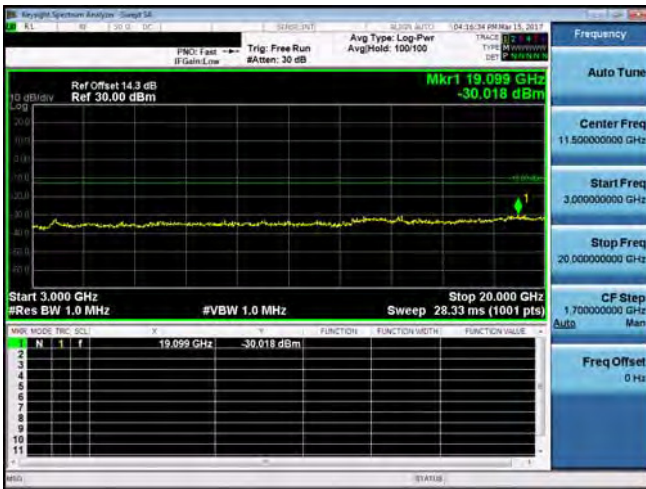


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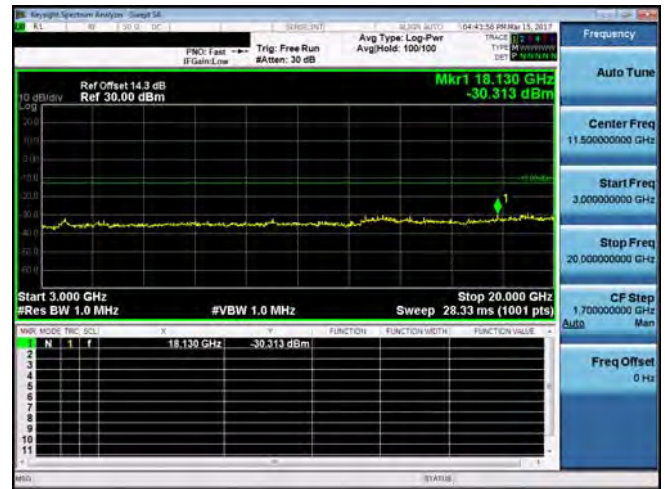
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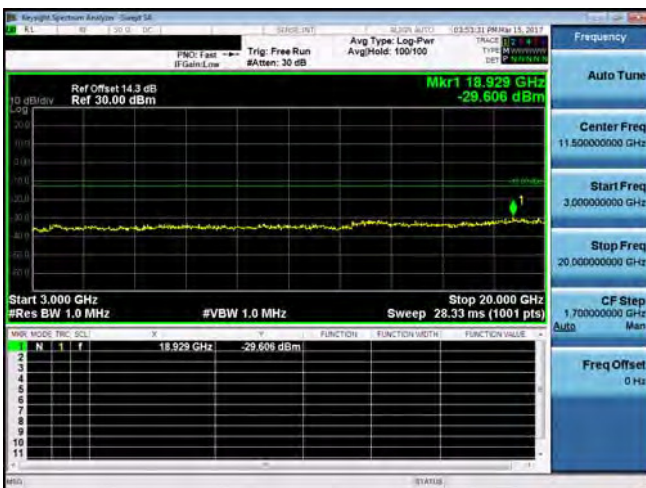
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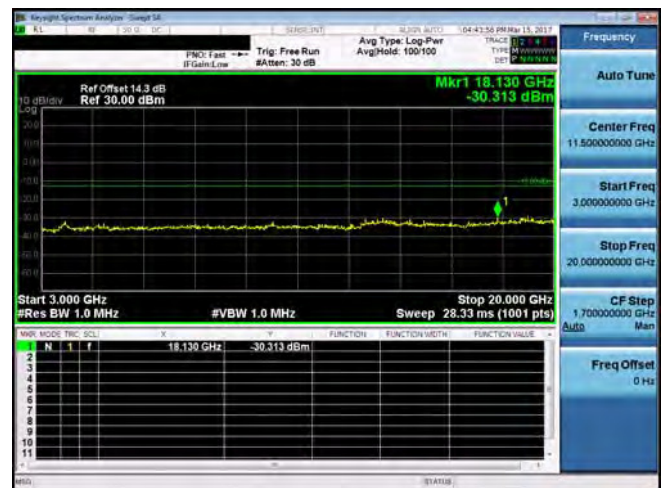
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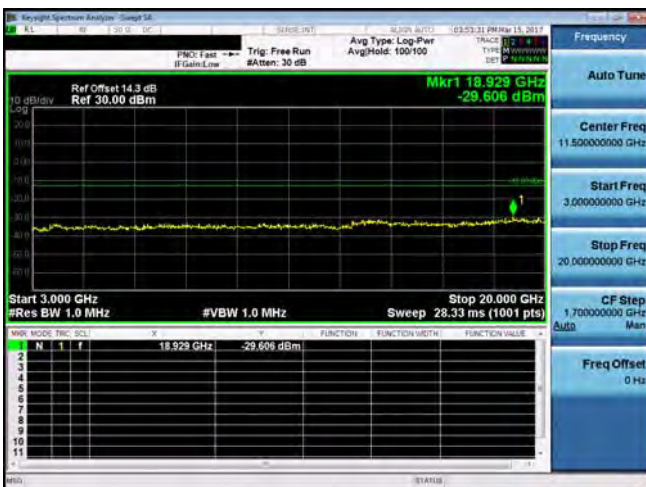
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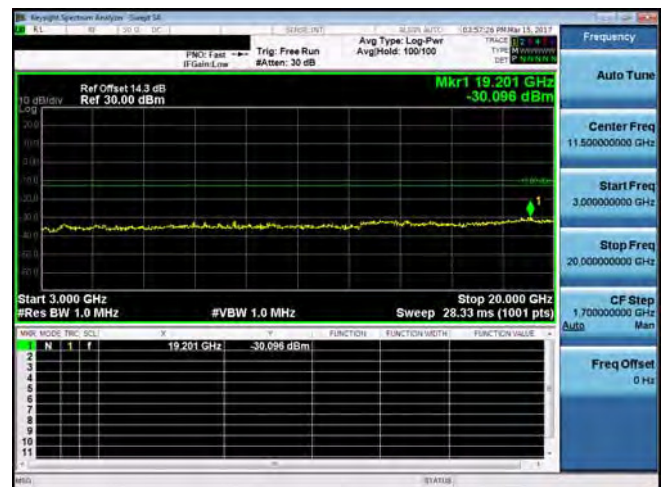
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30MHz~3GHz_Band41_15MHz_QPSK_1_0_HighCH41515

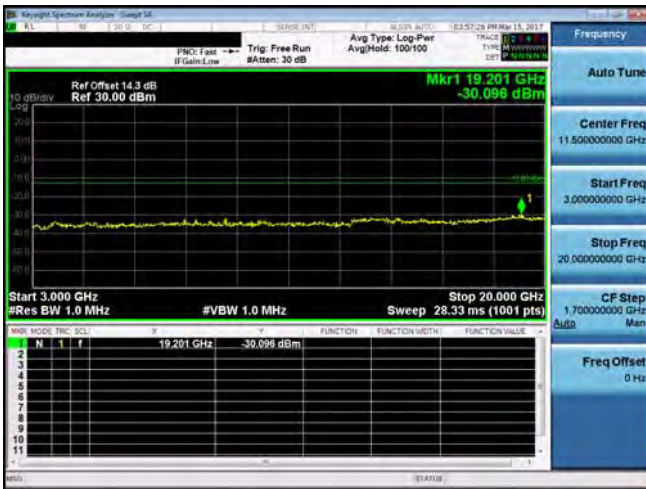


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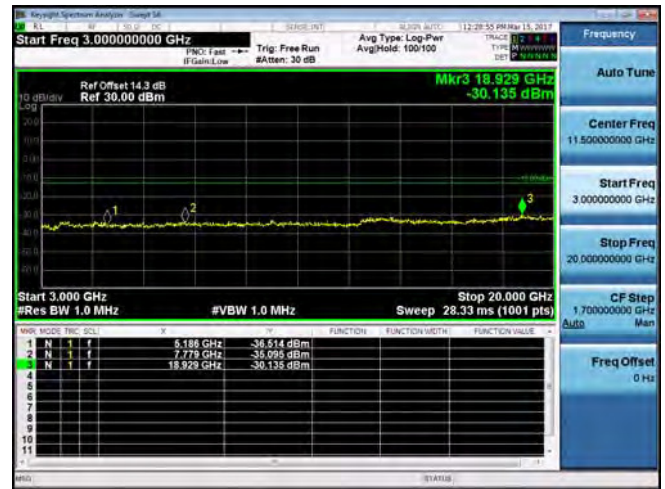
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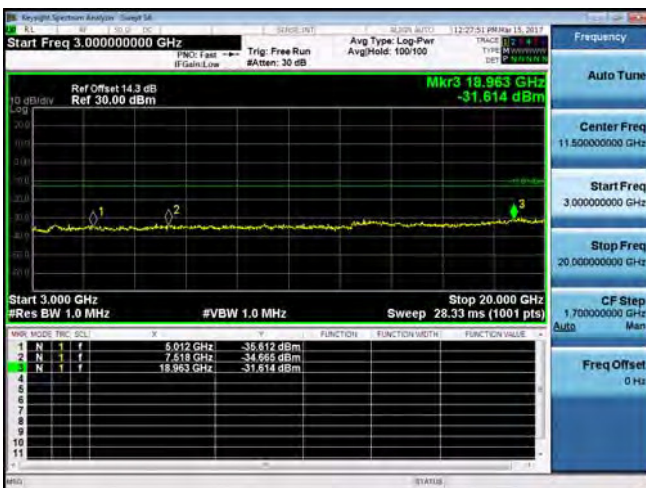
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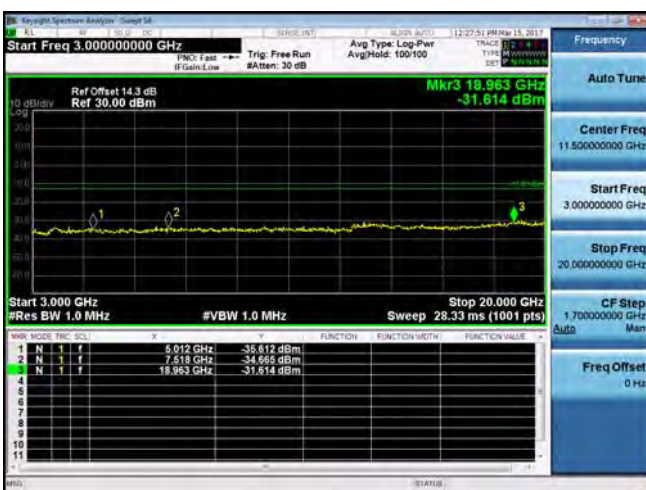
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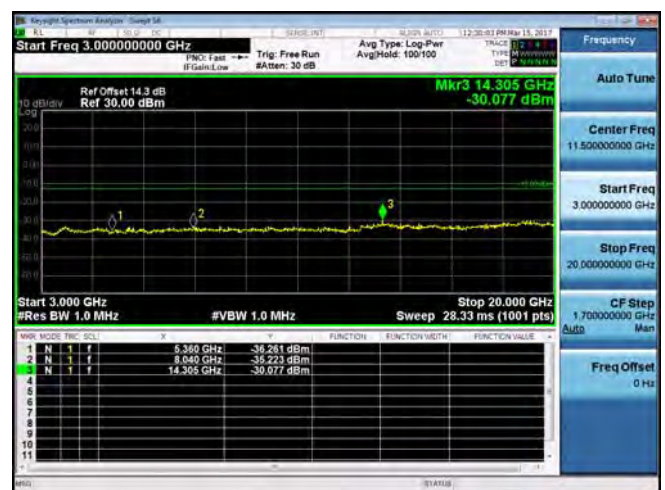
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30MHz~3GHz_Band41_20MHz_QPSK_1_0_HighCH41490

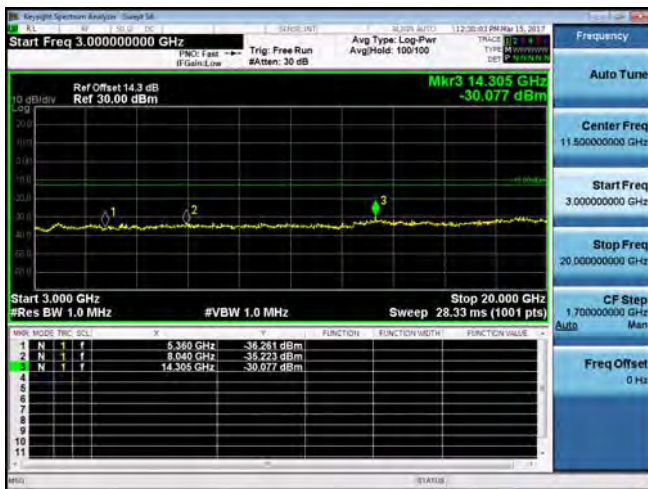


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3GHz~10GHz_Band41_20MHz_QPSK_1_0_HighCH41490



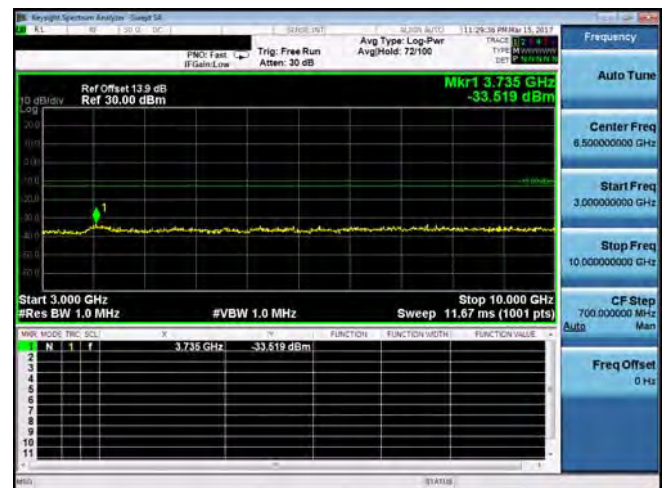
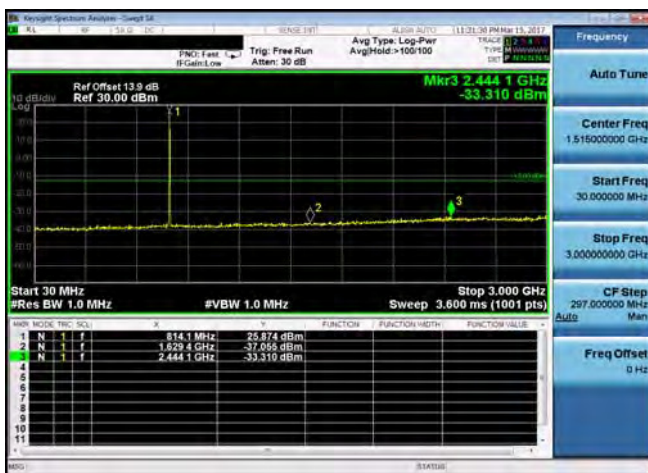
30MHz~3GHz_Band26_1.4MHz_QPSK_1_0_MidCH26740



Band 26 for Part 90S

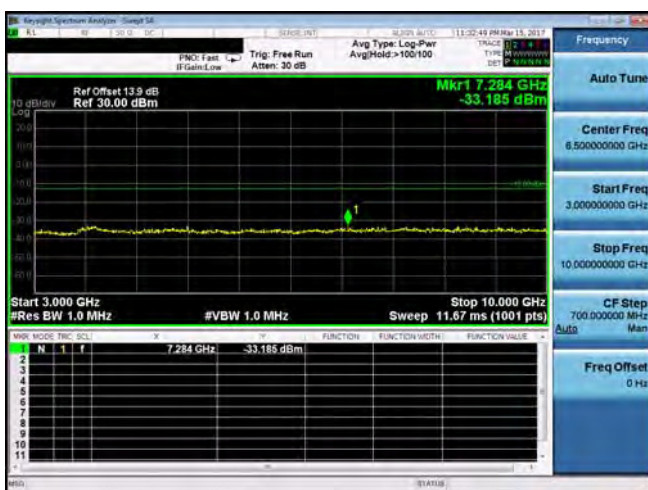
3GHz~10GHz_Band26_1.4MHz_QPSK_1_0_MidCH26740

30MHz~3GHz_Band26_1.4MHz_QPSK_1_0_LowCH26697



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30MHz~3GHz_Band26_1.4MHz_QPSK_1_0_HighCH26783

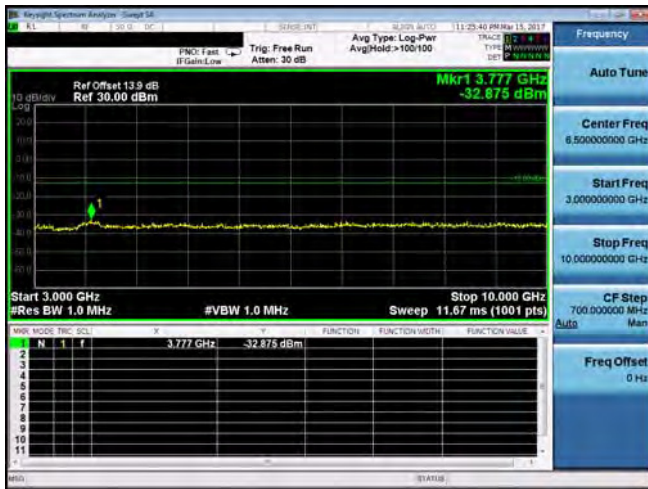


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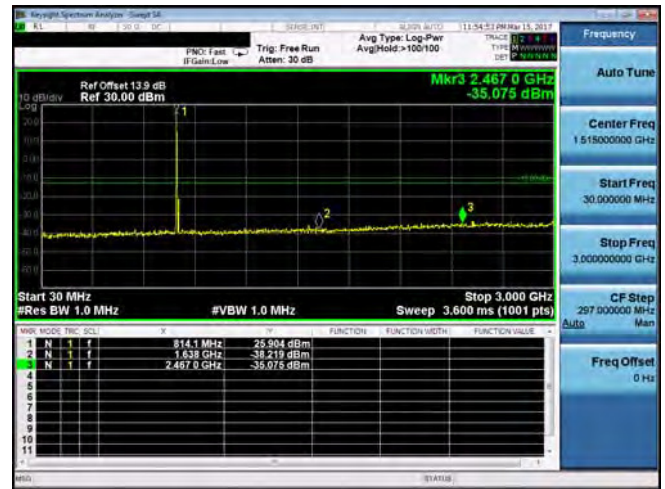
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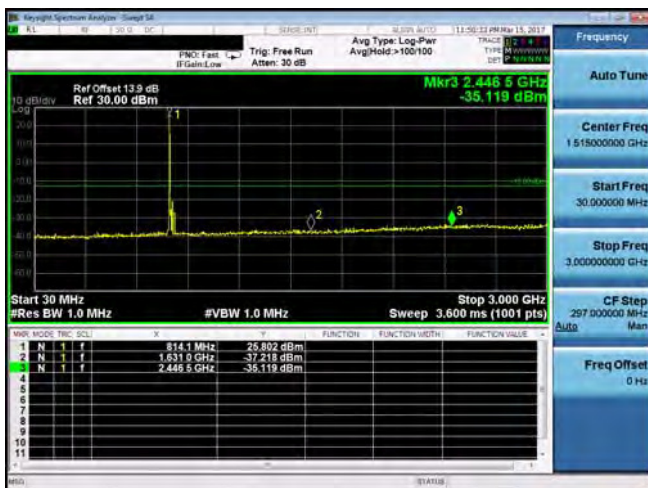
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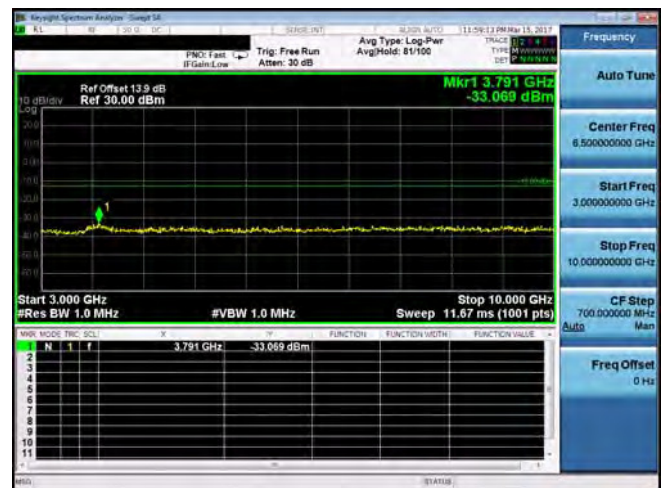
30MHz~3GHz_Band26_3MHz_QPSK_1_0_MidCH24740



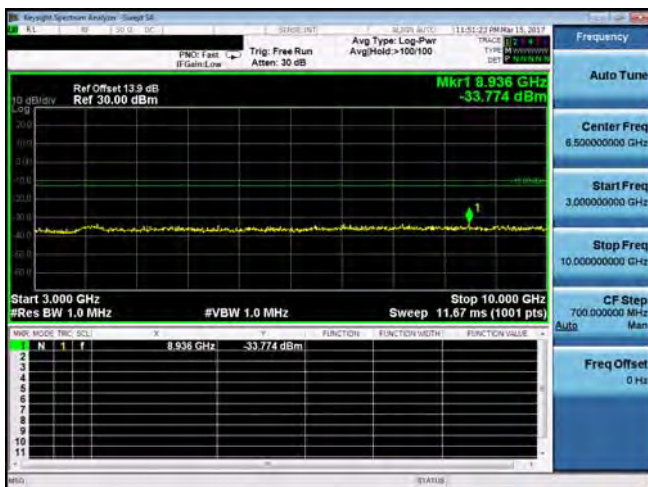
30MHz~3GHz_Band26_3MHz_QPSK_1_0_LowCH26705



3GHz~10GHz_Band26_3MHz_QPSK_1_0_MidCH24740



3GHz~10GHz_Band26_3MHz_QPSK_1_0_LowCH26705



30MHz~3GHz_Band26_3MHz_QPSK_1_0_HighCH26775

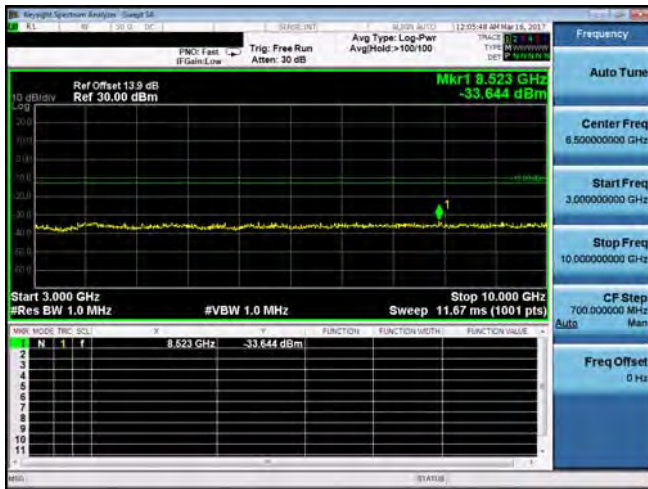


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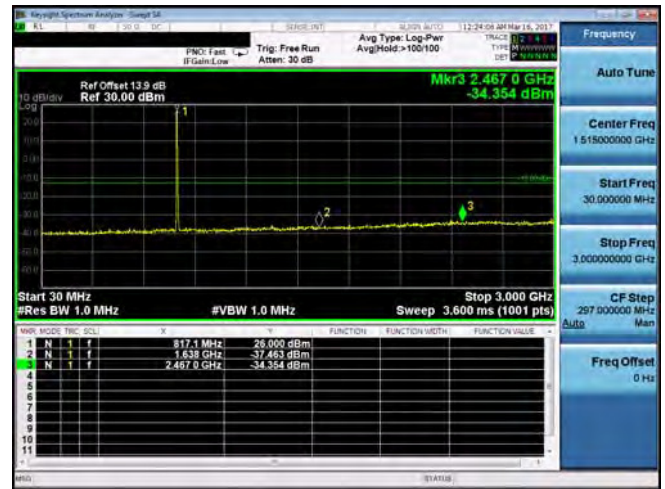
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3GHz-10GHz_Band26_3MHz_QPSK_1_0_HighCH26775



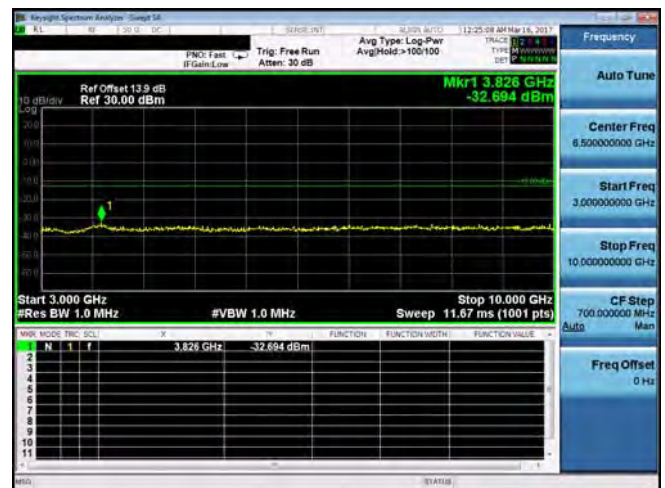
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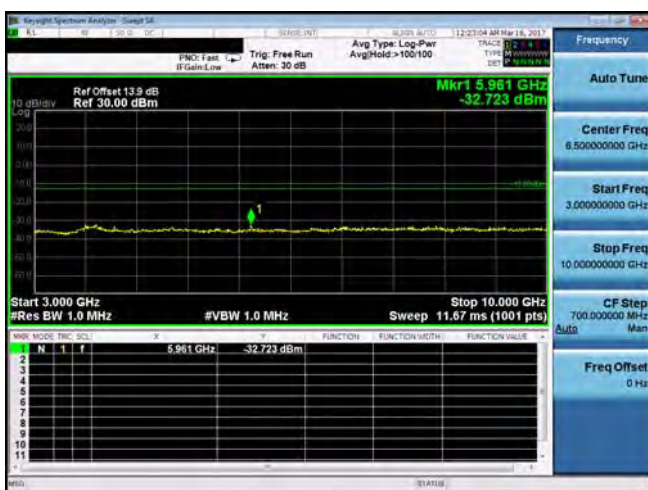
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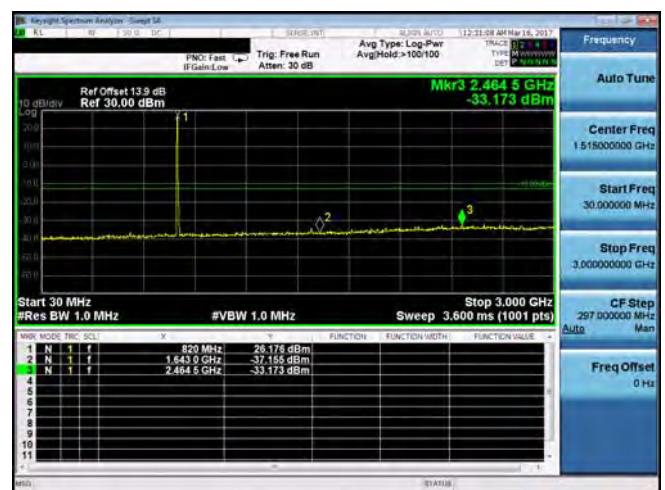
3GHz-10GHz_Band26_5MHz_QPSK_1_0_MidCH26740



3GHz-10GHz_Band26_5MHz_QPSK_1_0_LowCH26715



30MHz-3GHz_Band26_5MHz_QPSK_1_0_HighCH26765

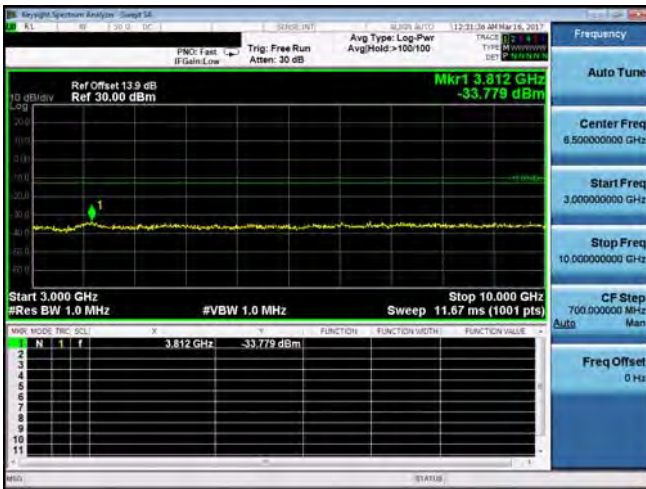


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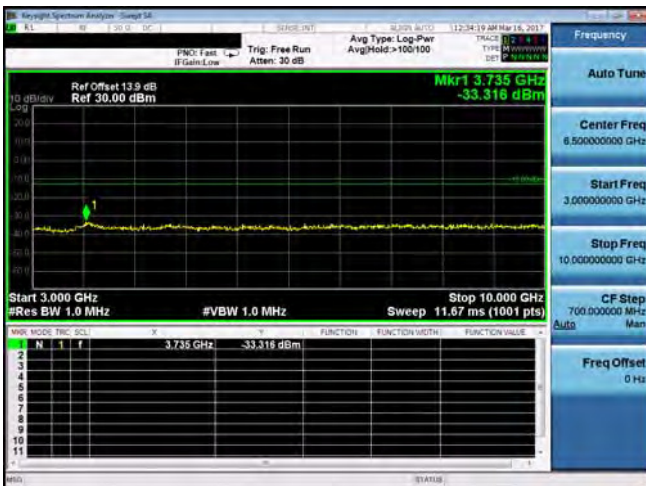
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3GHz~10GHz_Band26_5MHz_QPSK_1_0_HighCH26765



3GHz~10GHz_Band26_10MHz_QPSK_1_0_MidCH26740



30MHz~3GHz_Band26_10MHz_QPSK_1_0_MidCH26740



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10. FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT

10.1. Standard Applicable

According to FCC §2.1053, FCC §22.917(a) , §24.238(a) , §27.53(g)(h) , the magnitude of each spurious and harmonic emission that can be detected when the equipment is operated under the conditions specified in the instruction manual and/ or alignment procedure, shall not be less than $43 + 10 \log$ (mean output power in watts) dBc below the mean power output outside a license's frequency block (-13dBm).

FCC §27.53 (m) (4) shall not be less than $55 + 10 \log$ (mean output power in watt) dBc below the mean power output outside a license's frequency block (-25dBm).

§27.53 (c)

(2) On any frequency outside the 776– 788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log$ (P) dB (-13dBm)

(4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $65 + 10 \log$ (P) dB in a 6.25 kHz band segment, for mobile and portable stations;

§27.53 (f) For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

Table 2 — Unwanted Emissions for Mobile, Portable and Low-Power Fixed Subscriber Equipment

Frequency (MHz)	Attenuation (dB)
<2200	$43 + 10 \log_{10}(p)$
2200 - 2288	$70 + 10 \log_{10}(p)$
2288 - 2292	$67 + 10 \log_{10}(p)$
2292 - 2296	$61 + 10 \log_{10}(p)$
2296 - 2300	$55 + 10 \log_{10}(p)$
2300 - 2305	$43 + 10 \log_{10}(p)$
2305 - 2320	$43 + 10 \log_{10}(p)$ ^{Note}
2320 - 2324	$55 + 10 \log_{10}(p)$
2324 - 2328	$61 + 10 \log_{10}(p)$
2328 - 2337	$67 + 10 \log_{10}(p)$
2337 - 2341	$61 + 10 \log_{10}(p)$
2341 - 2345	$55 + 10 \log_{10}(p)$
2345 - 2360	$43 + 10 \log_{10}(p)$ ^{Note}
2360 - 2365	$43 + 10 \log_{10}(p)$
2365 - 2395	$70 + 10 \log_{10}(p)$
>2395	$43 + 10 \log_{10}(p)$

Note: Measured at the edges of the highest and lowest frequency range(s) in which the equipment is designed to operate. See Section 5.2 for the permitted frequency ranges for various equipment types.

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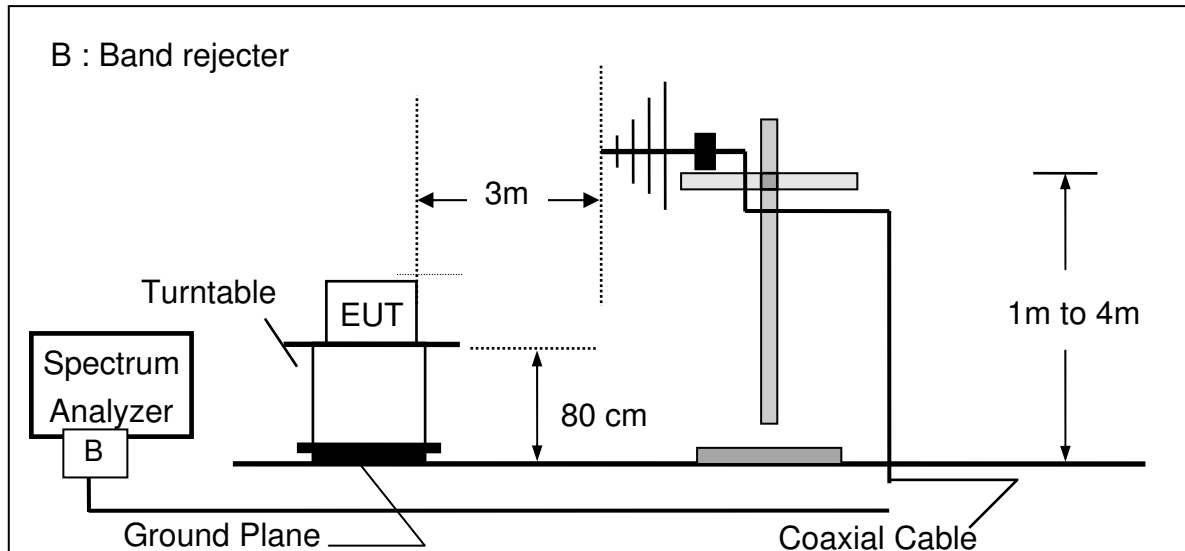
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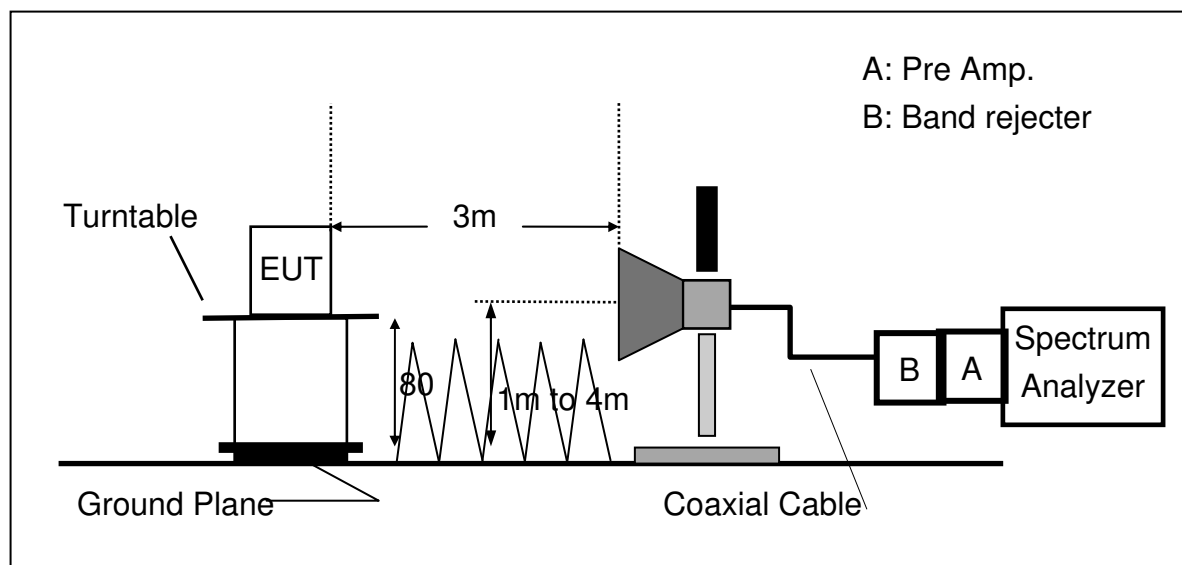
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10.2. EUT Setup

Radiated Emission Test Set-Up, Frequency Below 1000MHz



Radiated Emission Test Set-UP Frequency Over 1 GHz



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10.3. Measurement Procedure:

The EUT was placed on a non-conductive; the measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

The frequency range up to tenth harmonic was investigated for each of three fundamental frequencies (low, middle and high channels). Once spurious emission was identified, the power of the emission was determined using the substitution method.

The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency.

$$\text{ERP (dBm)} = \text{SG Level(dBm)} + \text{Antenna Gain(dBd)} + \text{Cable Loss(dB)}$$

$$\text{EIRP (dBm)} = \text{SG Level(dBm)} + \text{Antenna Gain(dBi)} + \text{Cable Loss(dB)}$$

Note : “F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

“---” : denotes Noise Floor.

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10.4. Measurement Equipment Used:

ERP, EIRP MEASUREMENT EQUIPMENT List 966 Chamber					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EMI Test Receiver	R&S	ESU 40	100363	04/12/2016	04/11/2017
Broadband Antenna	TESEQ	CBL 6112D	35240	11/03/2016	11/02/2017
Broadband Antenna	TESEQ	CBL 6112D	35243	11/09/2016	11/08/2017
Horn Antenna	ETS-Lindgren	3117	00143272	12/15/2016	12/16/2017
Horn Antenna	ETS-Lindgren	3117	143279	11/14/2016	11/13/2017
Horn Antenna	Schwarzbeck	BBHA9170	184	12/11/2016	12/10/2017
Horn Antenna	Schwarzbeck	BBHA9170	185	07/24/2016	07/23/2017
Pre Amplifier	EMC Instruments	EMC330	980096	12/12/2016	12/11/2017
Pre Amplifier	EMC Instruments	EMC0011830	980199	12/12/2016	12/11/2017
Pre Amplifier	R&S	SCU-18	10204	12/12/2016	12/11/2017
Pre Amplifier	R&S	SCU-26	100780	12/12/2016	12/11/2017
Pre Amplifier	EMC Instruments	EMC184045B	980135	12/12/2016	12/11/2017
Coaxial Cable	Huber+Suhner	RG 214/U	966Rx 9K-30M	12/12/2016	12/11/2017
Coaxial Cable	Huber+Suhner	RG 214/U SUCOFLEX 104	966Rx 30M-3G	12/12/2016	12/11/2017
Coaxial Cable	Huber+Suhner	SUCOFLEX 104	966Rx 1G-18G	12/12/2016	12/11/2017
Coaxial Cable	Huber+Suhner	mini 141-12 SUCOFLEX 104	966Rx 18G-40G	12/12/2016	12/11/2017
Coaxial Cable	Huber+Suhner	SUCOFLEX 104	966Tx 30M-18G	12/12/2016	12/11/2017
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	966Tx 18G-40G	12/12/2016	12/11/2017
Attenuator	WOKEN	218FS-10	RF27	12/12/2016	12/11/2017
Communication Tester	Anritsu	MT8820C	6201107337	05/25/2016	05/24/2017
Site NSA	SGS	966 Chamber C	SAC-C	03/02/2017	03/01/2018
Site VSWR	SGS	966 Chamber C	SAC-C	03/02/2017	03/01/2018
DC Power Supply	HOLA	DP-3003	D7070035	05/04/2016	05/03/2017
Controller	MF	MF-7802	N/A	N.C.R.	N.C.R.
Antenna Master	MF	N/A	N/A	N.C.R.	N.C.R.
Turn Table	MF	N/A	N/A	N.C.R.	N.C.R.
Test Software	World-Pallas	Dr. E	V 3.0 Lite	N.C.R.	N.C.R.

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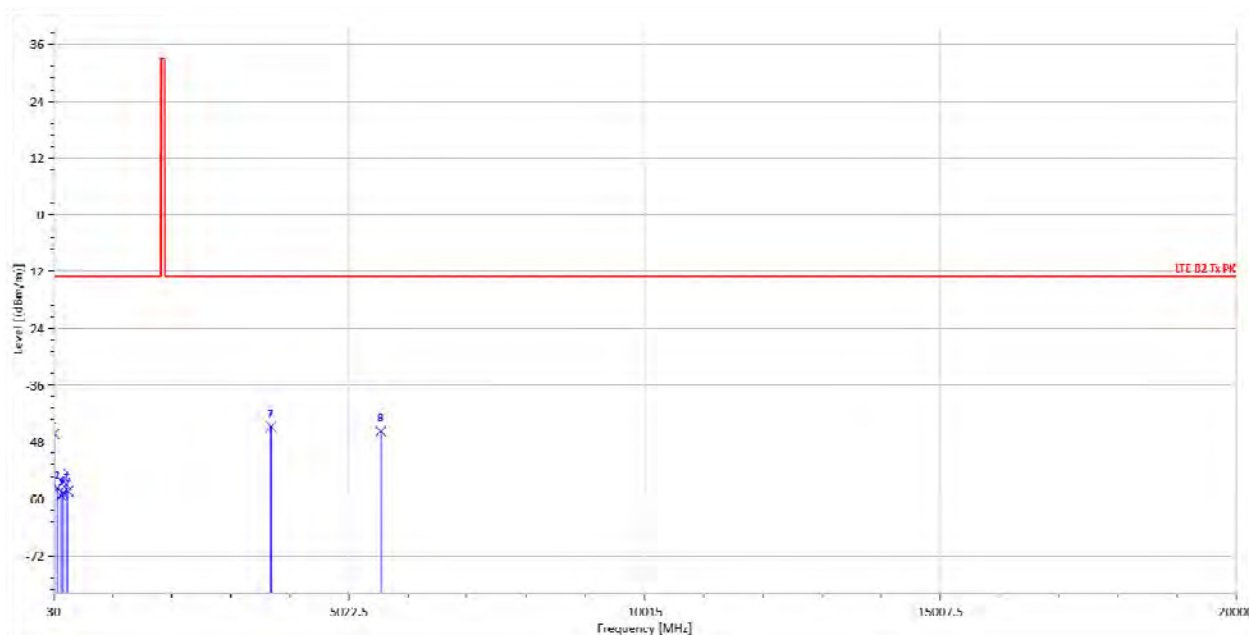
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10.5. Measurement Result:

Radiated Spurious Emission Measurement Result: LTE-Band 2 (The Worst Case)

Operation Mode :	LTE B2 20M QPSK RB 1.0	Test Date :	2017/3/15
Fundamental Frequency :	1860 MHz	Temp. / Humi. :	22.7deg_C/57RH
Operation Band :	Tx CH Low	Test Engineer :	Ashton
EUT Pol. :	E2	Measurement Antenna Pol. :	Vertical



Freq. MHz	Note F/H/E/S	EIRP dBm	SG Output Level dBm	Antenna Gain dBi	Cable Loss dB	Limit @3m dBm/m	Margin dB
42.61	S	-46.21	-35.59	-9.85	-0.76	-13	-33.21
93.05	S	-57.73	-56.32	-0.28	-1.14	-13	-44.73
160.95	S	-59.33	-61.67	3.70	-1.36	-13	-46.33
188.11	S	-58.75	-63.28	6.10	-1.56	-13	-45.75
247.28	S	-56.96	-60.50	5.39	-1.85	-13	-43.96
273.47	S	-58.35	-61.98	5.55	-1.92	-13	-45.35
3702.00	H	-44.77	-49.92	12.30	-7.15	-13	-31.77
5557.00	H	-45.72	-49.69	12.62	-8.66	-13	-32.72

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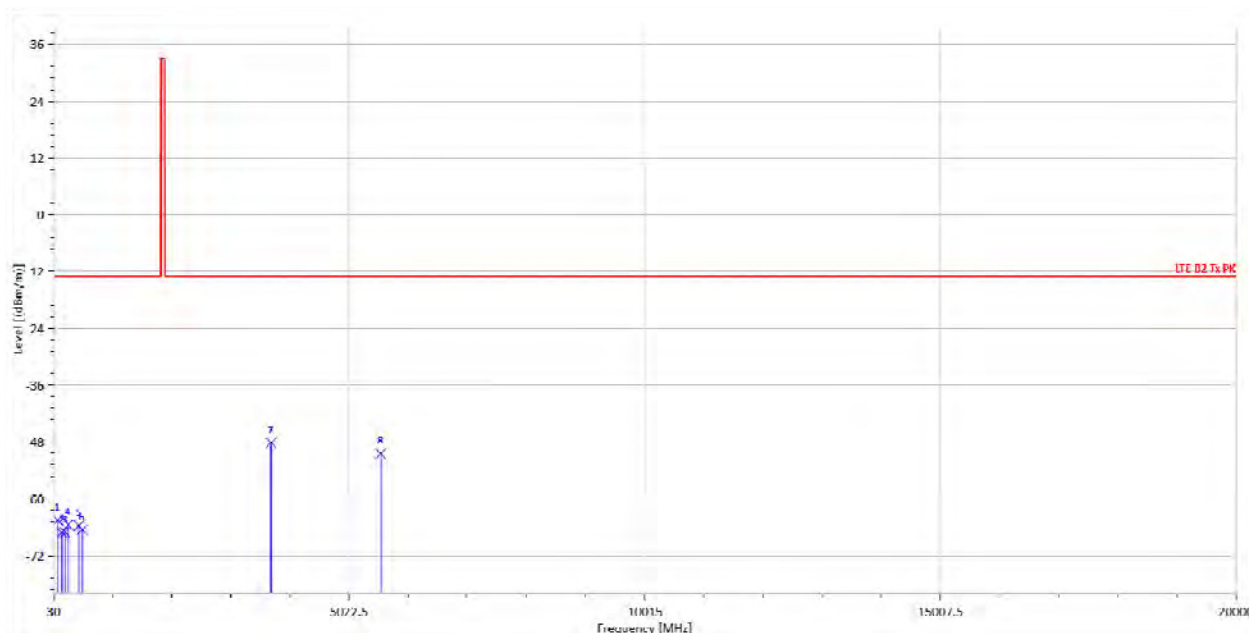
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Operation Mode : LTE B2 20M QPSK RB 1.0
Fundamental Frequency : 1860 MHz
Operation Band : Tx CH Low
EUT Pol. : E2

Test Date : 2017/3/15
Temp. / Humi. : 22.7deg_C/57RH
Test Engineer : Ashton
Measurement Antenna Pol. : Horizontal



Freq.	Note	EIRP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBi	Loss dB	@3m dBm/m	dB
101.78	S	-64.51	-62.37	-0.96	-1.18	-13	-51.51
172.59	S	-67.12	-70.51	4.98	-1.58	-13	-54.12
224.97	S	-67.07	-71.74	6.40	-1.73	-13	-54.07
277.35	S	-65.47	-69.16	5.67	-1.98	-13	-52.47
457.77	S	-65.68	-69.39	6.29	-2.58	-13	-52.68
515.00	S	-66.50	-70.37	6.40	-2.53	-13	-53.50
3702.00	H	-48.14	-53.29	12.30	-7.15	-13	-35.14
5557.00	H	-50.47	-54.43	12.62	-8.66	-13	-37.47

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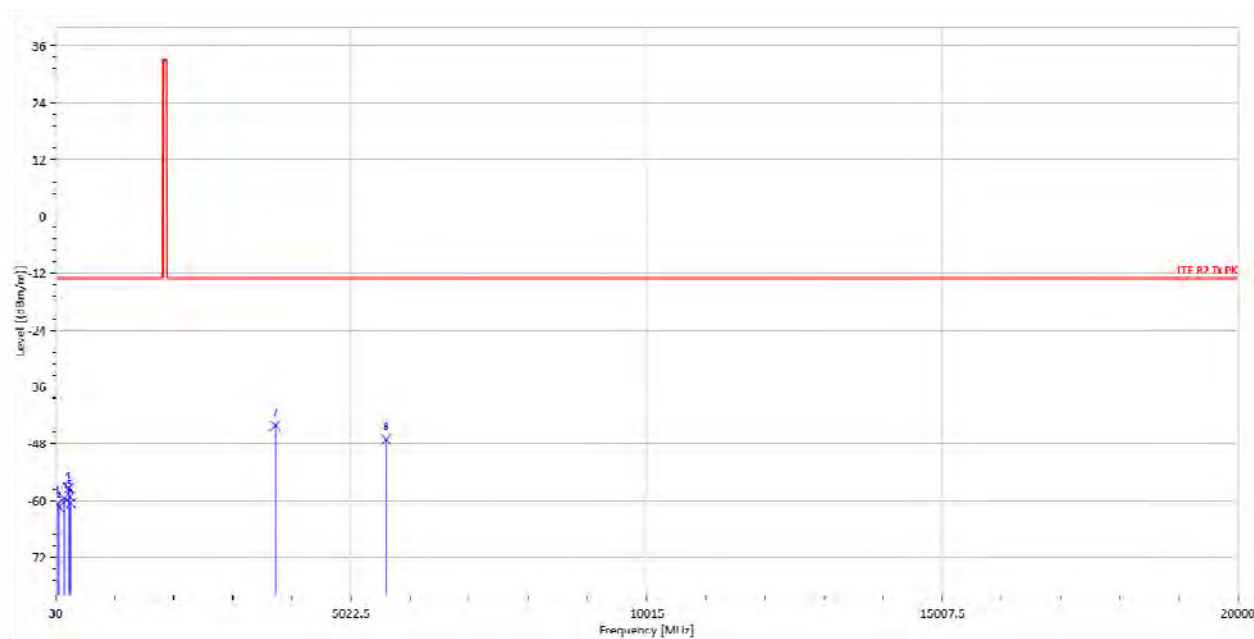
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Operation Mode : LTE B2 20M QPSK RB 1.0
Fundamental Frequency : 1880 MHz
Operation Band : Tx CH Mid
EUT Pol. : E2

Test Date : 2017/3/15
Temp. / Humi. : 22.7deg_C/57RH
Test Engineer : Ashton
Measurement Antenna Pol. : Vertical



Freq.	Note	EIRP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBi	Loss dB	@3m dBm/m	dB
61.04	S	-60.64	-58.90	-0.79	-0.95	-13	-47.64
91.11	S	-61.42	-60.20	-0.10	-1.12	-13	-48.42
177.44	S	-59.55	-63.50	5.46	-1.51	-13	-46.55
248.25	S	-57.44	-60.94	5.35	-1.85	-13	-44.44
275.41	S	-59.22	-62.90	5.61	-1.92	-13	-46.22
288.02	S	-60.57	-64.40	5.84	-2.00	-13	-47.57
3744.00	H	-44.14	-49.23	12.30	-7.21	-13	-31.14
5613.00	H	-47.14	-50.99	12.65	-8.80	-13	-34.14

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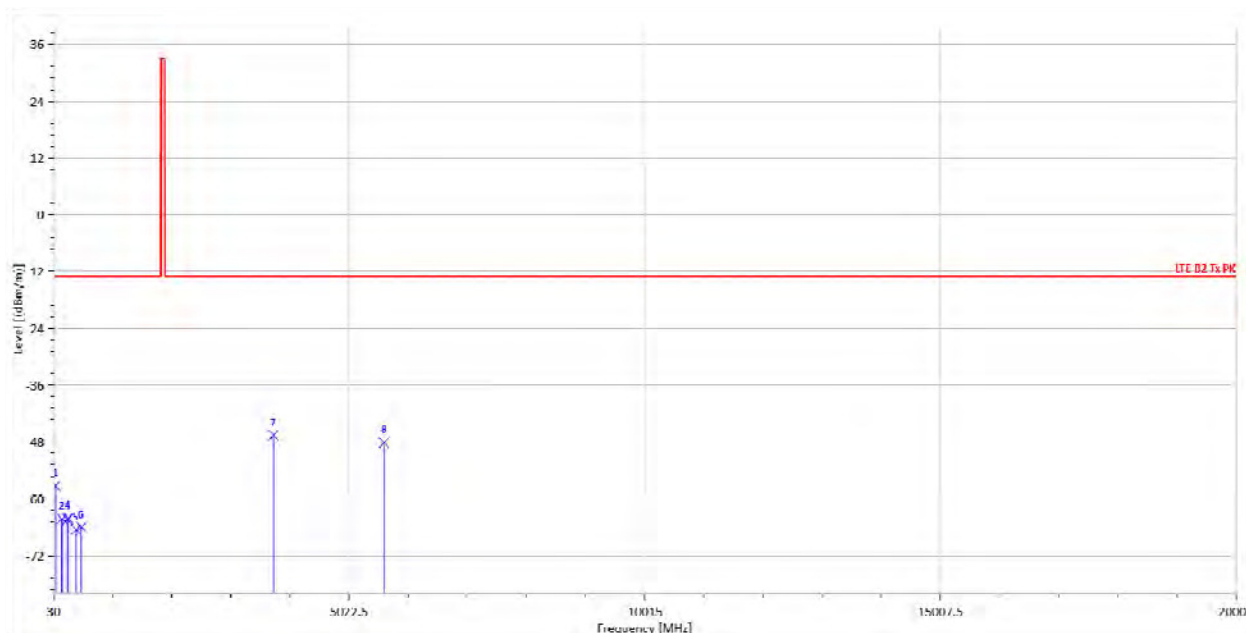
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Operation Mode : LTE B2 20M QPSK RB 1.0
Fundamental Frequency : 1880 MHz
Operation Band : Tx CH Mid
EUT Pol. : E2

Test Date : 2017/3/15
Temp. / Humi. : 22.7deg_C/57RH
Test Engineer : Ashton
Measurement Antenna Pol. : Horizontal



Freq.	Note	EIRP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBi	Loss dB	@3m dBm/m	dB
62.01	S	-57.29	-55.64	-0.66	-1.00	-13	-44.29
170.65	S	-64.19	-67.49	4.78	-1.49	-13	-51.19
265.71	S	-64.37	-67.57	5.08	-1.88	-13	-51.37
278.32	S	-64.10	-67.82	5.70	-1.98	-13	-51.10
409.27	S	-66.52	-69.90	5.85	-2.47	-13	-53.52
496.57	S	-65.94	-69.82	6.38	-2.50	-13	-52.94
3744.00	H	-46.55	-51.64	12.30	-7.21	-13	-33.55
5613.00	H	-48.11	-51.96	12.65	-8.80	-13	-35.11

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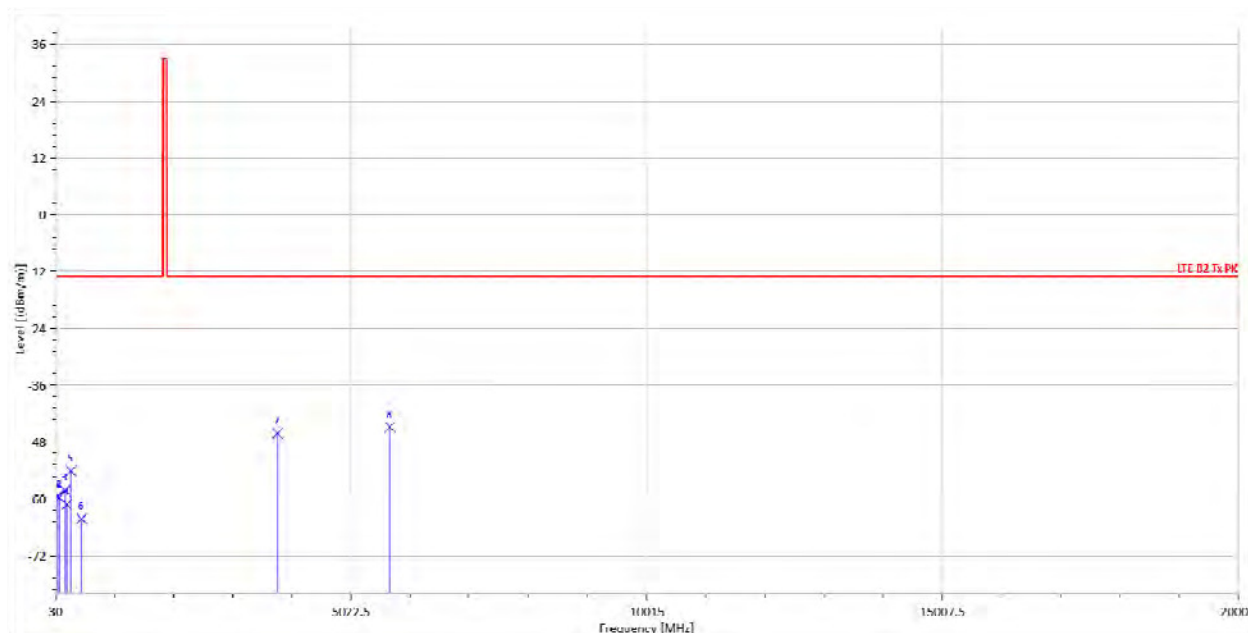
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Operation Mode : LTE B2 20M QPSK RB 1.0
Fundamental Frequency : 1900 MHz
Operation Band : Tx CH High
EUT Pol. : E2

Test Date : 2017/3/15
Temp. / Humi. : 22.7deg_C/57RH
Test Engineer : Ashton
Measurement Antenna Pol. : Vertical



Freq.	Note	EIRP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBi	Loss dB	@3m dBm/m	dB
60.07	S	-59.48	-57.68	-0.92	-0.89	-13	-46.48
96.93	S	-59.67	-57.90	-0.62	-1.15	-13	-46.67
188.11	S	-58.20	-62.73	6.10	-1.56	-13	-45.20
220.12	S	-61.22	-66.02	6.55	-1.75	-13	-48.22
288.99	S	-54.15	-58.01	5.85	-1.99	-13	-41.15
467.47	S	-64.24	-67.95	6.31	-2.60	-13	-51.24
3779.00	H	-46.13	-51.18	12.30	-7.25	-13	-33.13
5676.00	H	-44.83	-48.65	12.67	-8.86	-13	-31.83

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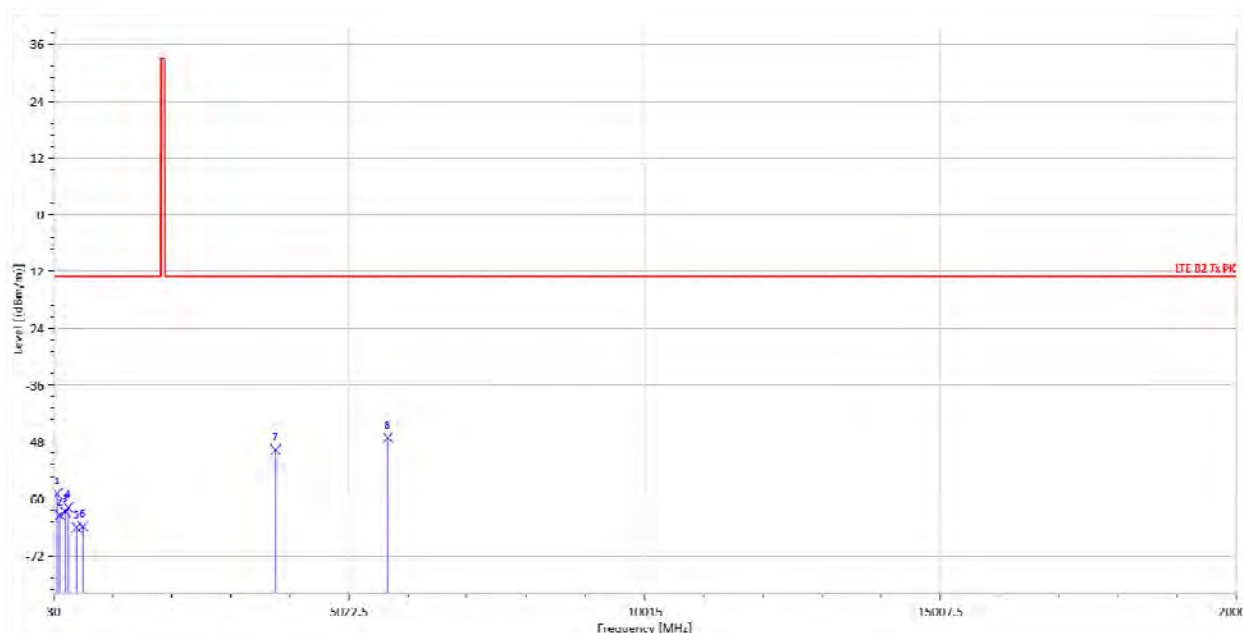
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Operation Mode : LTE B2 20M QPSK RB 1.0
Fundamental Frequency : 1900 MHz
Operation Band : Tx CH High
EUT Pol. : E2

Test Date : 2017/3/15
Temp. / Humi. : 22.7deg_C/57RH
Test Engineer : Ashton
Measurement Antenna Pol. : Horizontal



Freq.	Note	EIRP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBi	Loss dB	@3m dBm/m	dB
91.11	S	-58.90	-57.68	-0.10	-1.12	-13	-45.90
134.76	S	-63.43	-62.54	0.48	-1.38	-13	-50.43
226.91	S	-62.76	-67.36	6.34	-1.74	-13	-49.76
277.35	S	-61.85	-65.55	5.67	-1.98	-13	-48.85
418.97	S	-66.01	-69.50	5.95	-2.45	-13	-53.01
524.70	S	-65.84	-69.76	6.40	-2.48	-13	-52.84
3779.00	H	-49.63	-54.69	12.30	-7.25	-13	-36.63
5676.00	H	-47.03	-50.84	12.67	-8.86	-13	-34.03

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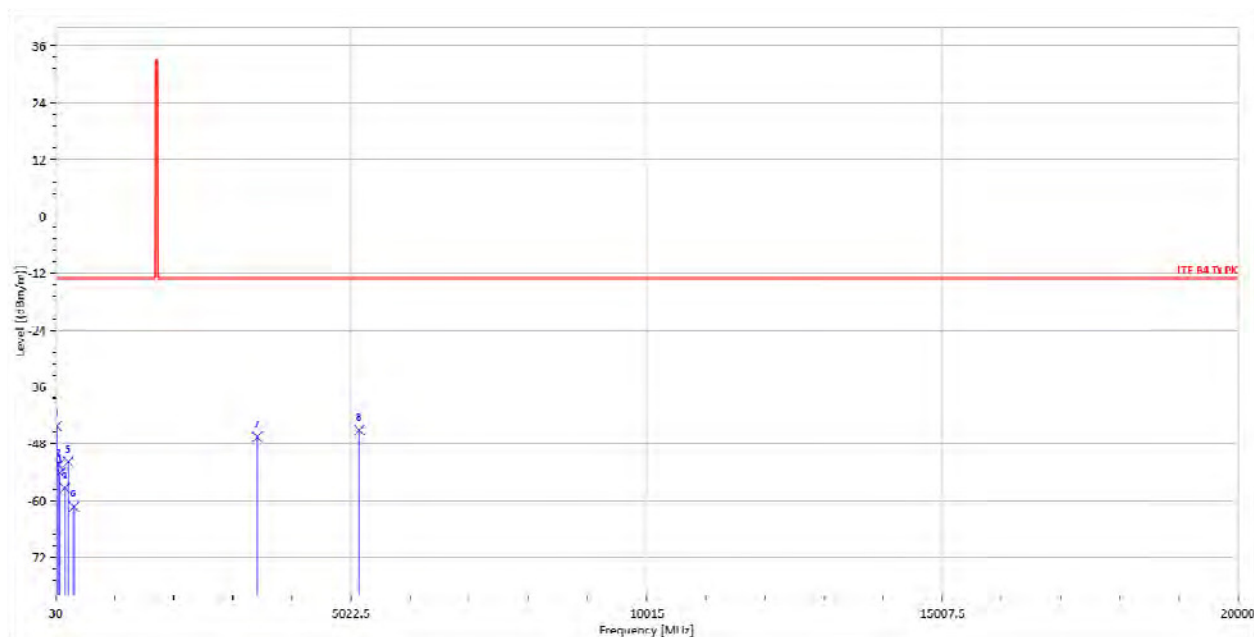
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Radiated Spurious Emission Measurement Result: LTE-Band 4 (The Worst Case)

Operation Mode :	LTE B4 10M 16QAM RB 1.49	Test Date :	2017/3/15
Fundamental Frequency :	1715 MHz	Temp. / Humi. :	22.7deg_C/57RH
Operation Band :	Tx CH Low	Test Engineer :	Ashton
EUT Pol. :	E2	Measurement Antenna Pol. :	Vertical



Freq.	Note	EIRP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBi	Loss dB	@3m dBm/m	dB
50.37	S	-44.30	-38.42	-4.76	-1.12	-13	-31.30
82.38	S	-52.53	-51.53	0.51	-1.51	-13	-39.53
101.78	S	-54.13	-51.50	-0.96	-1.67	-13	-41.13
186.17	S	-57.39	-61.03	6.01	-2.37	-13	-44.39
244.37	S	-51.80	-54.65	5.52	-2.67	-13	-38.80
338.46	S	-61.33	-64.09	5.91	-3.14	-13	-48.33
3436.00	H	-46.59	-51.83	12.17	-6.94	-13	-33.59
5158.00	H	-45.14	-49.07	12.39	-8.46	-13	-32.14

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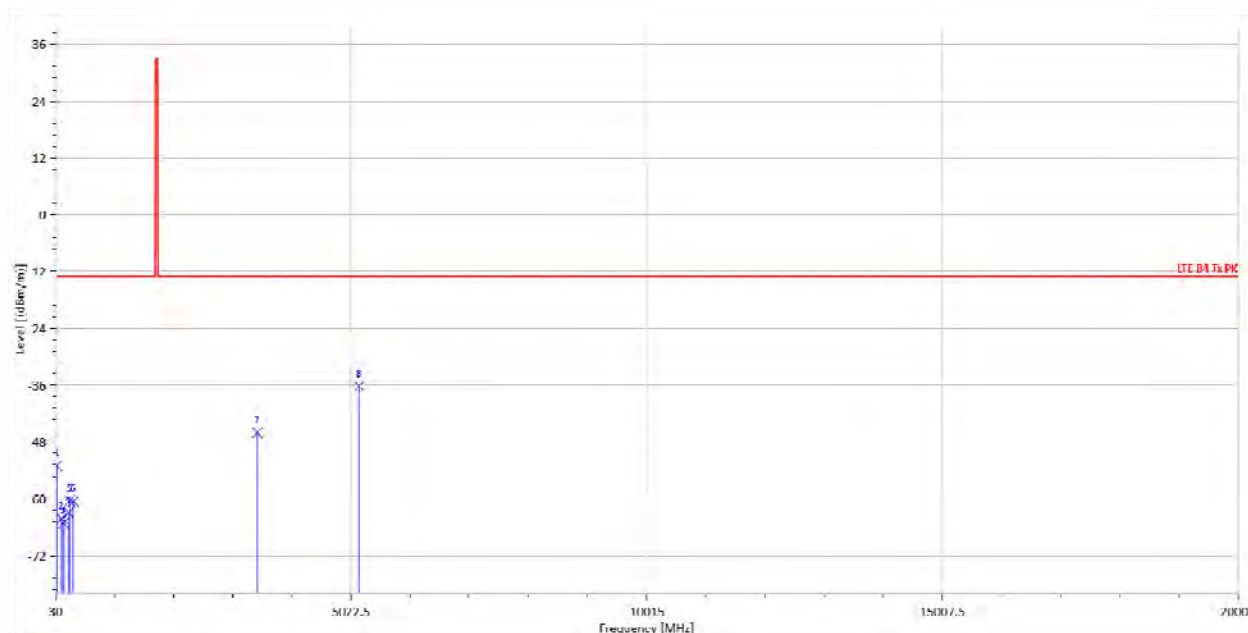
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Operation Mode :	LTE B4 10M 16QAM RB 1.49	Test Date :	2017/3/15
Fundamental Frequency :	1715 MHz	Temp. / Humi. :	22.7deg_C/57RH
Operation Band :	Tx CH Low	Test Engineer :	Ashton
EUT Pol. :	E2	Measurement Antenna Pol. :	Horizontal



Freq.	Note	EIRP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBi	Loss dB	@3m dBm/m	dB
52.31	S	-52.98	-47.79	-3.99	-1.21	-13	-39.98
132.82	S	-64.17	-62.51	0.24	-1.90	-13	-51.17
161.92	S	-65.13	-66.87	3.81	-2.08	-13	-52.13
250.19	S	-62.91	-65.38	5.26	-2.79	-13	-49.91
268.62	S	-60.43	-62.87	5.32	-2.88	-13	-47.43
327.79	S	-60.52	-63.15	5.92	-3.29	-13	-47.52
3436.00	H	-46.00	-51.23	12.17	-6.94	-13	-33.00
5158.00	H	-36.18	-40.12	12.39	-8.46	-13	-23.18

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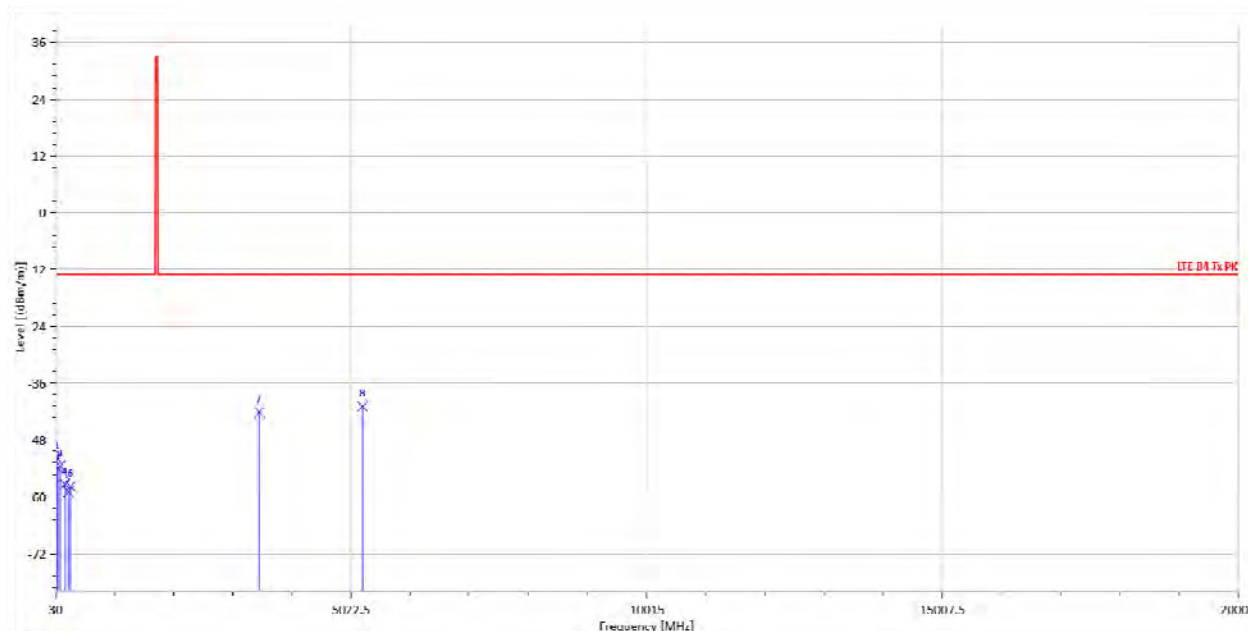
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Operation Mode : LTE B4 10M 16QAM RB 1.49
Fundamental Frequency : 1732.5 MHz
Operation Band : Tx CH Mid
EUT Pol. : E2

Test Date : 2017/3/15
Temp. / Humi. : 22.7deg_C/57RH
Test Engineer : Ashton
Measurement Antenna Pol. : Vertical



Freq.	Note	EIRP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBi	Loss dB	@3m dBm/m	dB
48.43	S	-51.85	-44.86	-5.89	-1.10	-13	-38.85
69.77	S	-53.99	-52.97	0.38	-1.40	-13	-40.99
109.54	S	-53.45	-50.45	-1.25	-1.76	-13	-40.45
188.11	S	-57.36	-61.16	6.10	-2.30	-13	-44.36
247.28	S	-58.89	-61.49	5.39	-2.79	-13	-45.89
282.20	S	-57.84	-60.67	5.78	-2.95	-13	-44.84
3471.00	H	-42.15	-47.53	12.24	-6.85	-13	-29.15
5214.00	H	-40.92	-44.82	12.43	-8.53	-13	-27.92

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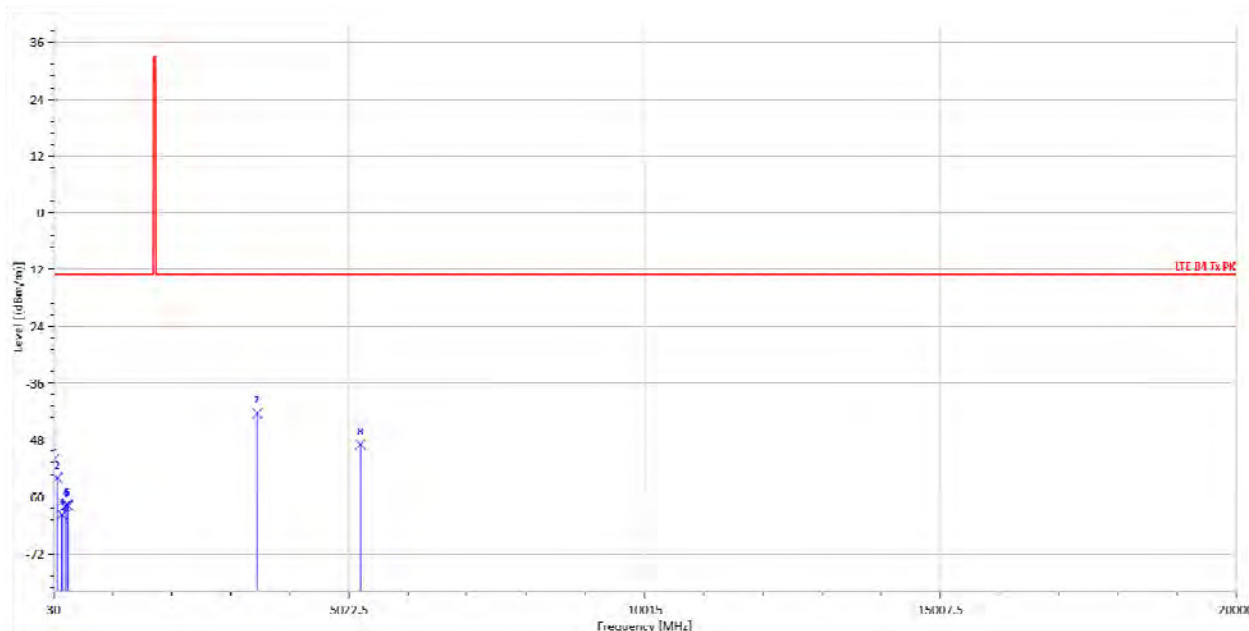
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Operation Mode : LTE B4 10M 16QAM RB 1.49
Fundamental Frequency : 1732.5 MHz
Operation Band : Tx CH Mid
EUT Pol. : E2

Test Date : 2017/3/15
Temp. / Humi. : 22.7deg_C/57RH
Test Engineer : Ashton
Measurement Antenna Pol. : Horizontal



Freq.	Note	EIRP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBi	Loss dB	@3m dBm/m	dB
32.91	S	-52.10	-33.46	-17.72	-0.92	-13	-39.10
92.08	S	-56.02	-54.23	-0.19	-1.60	-13	-43.02
170.65	S	-63.81	-66.39	4.78	-2.20	-13	-50.81
222.06	S	-61.98	-65.90	6.49	-2.57	-13	-48.98
258.92	S	-61.73	-63.62	4.68	-2.79	-13	-48.73
278.32	S	-61.90	-64.66	5.70	-2.94	-13	-48.90
3471.00	H	-42.38	-47.77	12.24	-6.85	-13	-29.38
5214.00	H	-48.94	-52.84	12.43	-8.53	-13	-35.94

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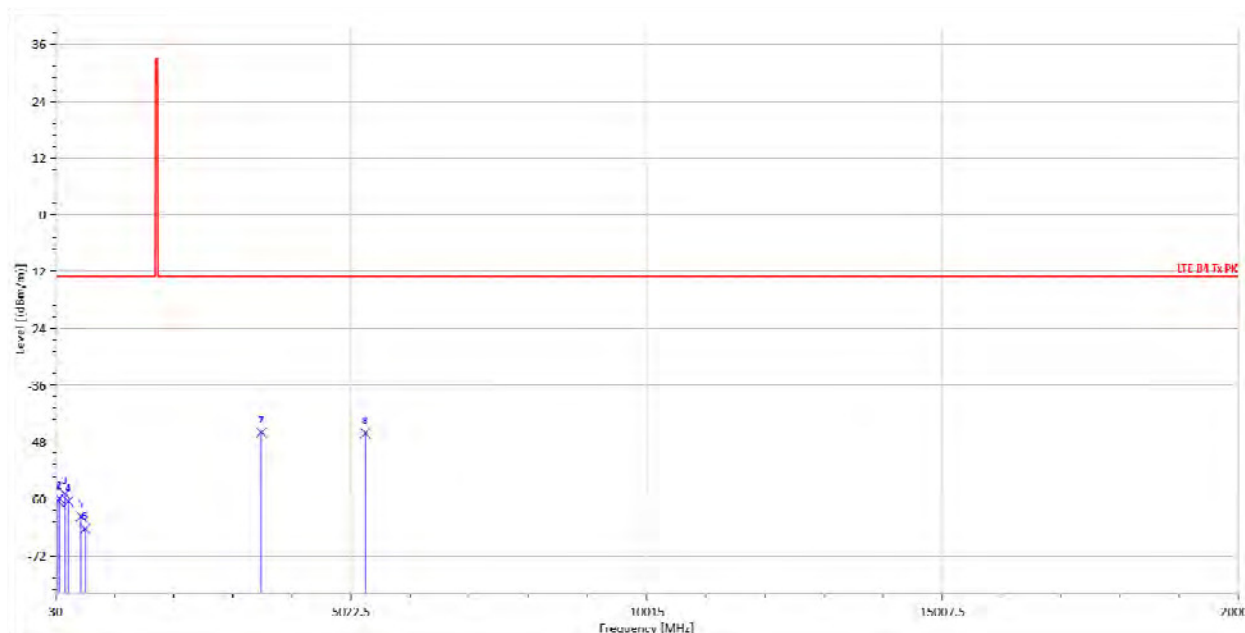
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Operation Mode : LTE B4 10M 16QAM RB 1.49
Fundamental Frequency : 1750 MHz
Operation Band : Tx CH High
EUT Pol. : E2

Test Date : 2017/3/15
Temp. / Humi. : 22.7deg_C/57RH
Test Engineer : Ashton
Measurement Antenna Pol. : Vertical



Freq.	Note	EIRP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBi	Loss dB	@3m dBm/m	dB
60.07	S	-60.26	-58.03	-0.92	-1.31	-13	-47.26
97.90	S	-59.95	-57.61	-0.70	-1.64	-13	-46.95
185.20	S	-58.90	-62.46	5.96	-2.41	-13	-45.90
245.34	S	-60.51	-63.34	5.48	-2.64	-13	-47.51
456.80	S	-63.76	-66.15	6.29	-3.89	-13	-50.76
528.58	S	-66.33	-68.73	6.41	-4.00	-13	-53.33
3506.00	H	-45.96	-51.24	12.30	-7.03	-13	-32.96
5263.00	H	-46.11	-50.01	12.46	-8.56	-13	-33.11

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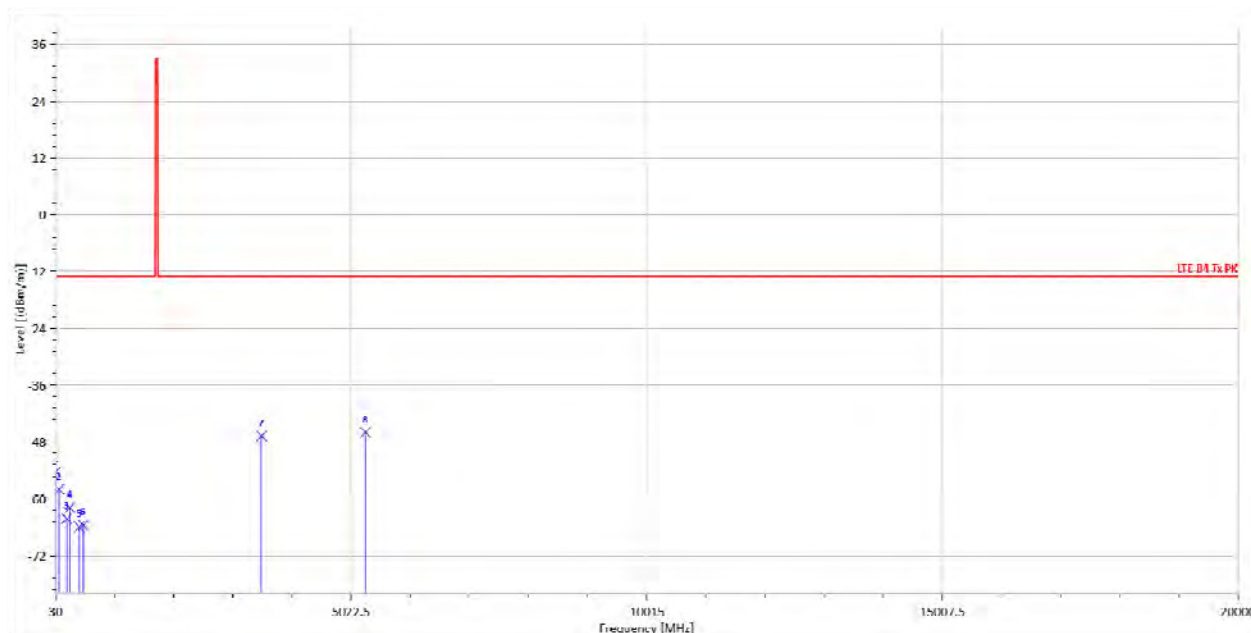
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Operation Mode :	LTE B4 10M 16QAM RB 1.49	Test Date :	2017/3/15
Fundamental Frequency :	1750 MHz	Temp. / Humi. :	22.7deg_C/57RH
Operation Band :	Tx CH High	Test Engineer :	Ashton
EUT Pol. :	E2	Measurement Antenna Pol. :	Horizontal



Freq.	Note	EIRP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBi	Loss dB	@3m dBm/m	dB
31.94	S	-54.24	-34.78	-18.56	-0.90	-13	-41.24
88.20	S	-58.02	-56.59	0.12	-1.55	-13	-45.02
221.09	S	-64.21	-68.16	6.52	-2.58	-13	-51.21
272.50	S	-61.87	-64.53	5.52	-2.86	-13	-48.87
428.67	S	-65.92	-68.18	6.05	-3.79	-13	-52.92
499.48	S	-65.57	-67.86	6.39	-4.10	-13	-52.57
3506.00	H	-46.71	-51.99	12.30	-7.03	-13	-33.71
5263.00	H	-45.92	-49.82	12.46	-8.56	-13	-32.92

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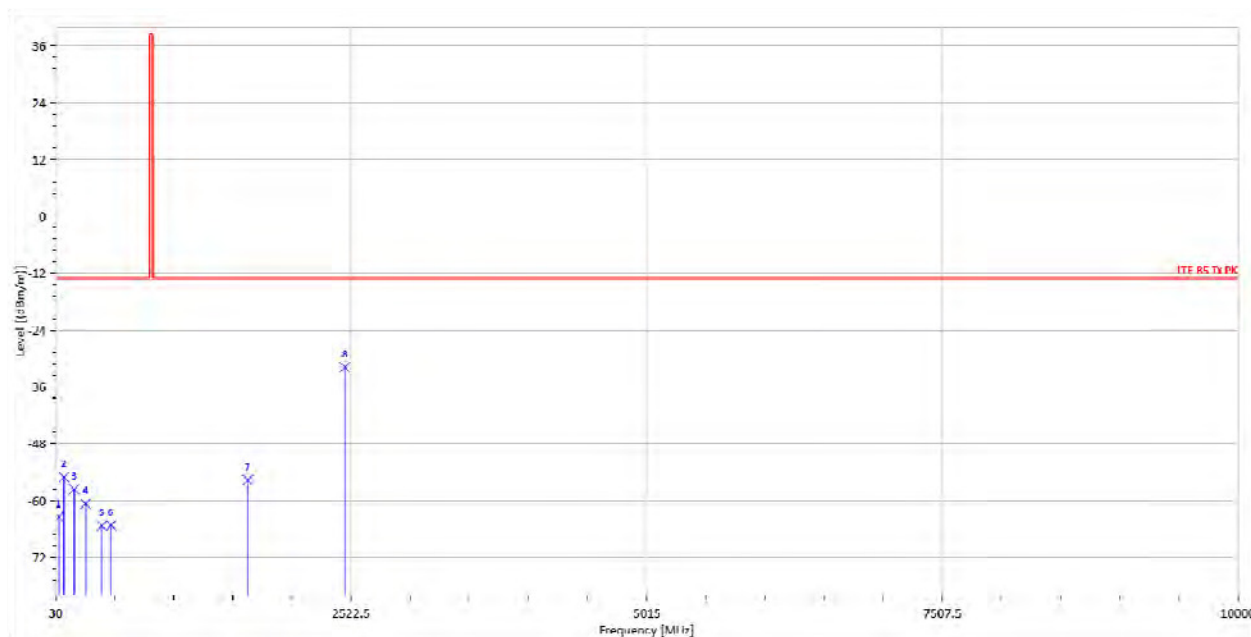
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Radiated Spurious Emission Measurement Result: LTE-Band 5 (The Worst Case)

Operation Mode :	LTE B5 1.4M QPSK RB 1.5	Test Date :	2017/3/15
Fundamental Frequency :	824.7 MHz	Temp. / Humi. :	22.7deg_C/57RH
Operation Band :	Tx CH Low	Test Engineer :	Ashton
EUT Pol. :	H	Measurement Antenna Pol. :	Vertical



Freq.	Note	ERP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBd	Loss dB	@3m dBm/m	dB
59.10	S	-63.44	-59.14	-3.44	-0.87	-13	-50.44
100.81	S	-55.05	-50.80	-3.07	-1.17	-13	-42.05
187.14	S	-57.63	-59.98	3.90	-1.55	-13	-44.63
283.17	S	-60.69	-62.37	3.64	-1.96	-13	-47.69
419.94	S	-65.31	-66.81	3.81	-2.30	-13	-52.31
497.54	S	-65.22	-66.99	4.23	-2.46	-13	-52.22
1651.00	H	-55.70	-57.73	6.76	-4.72	-13	-42.70
2470.00	H	-31.84	-34.23	8.23	-5.84	-13	-18.84

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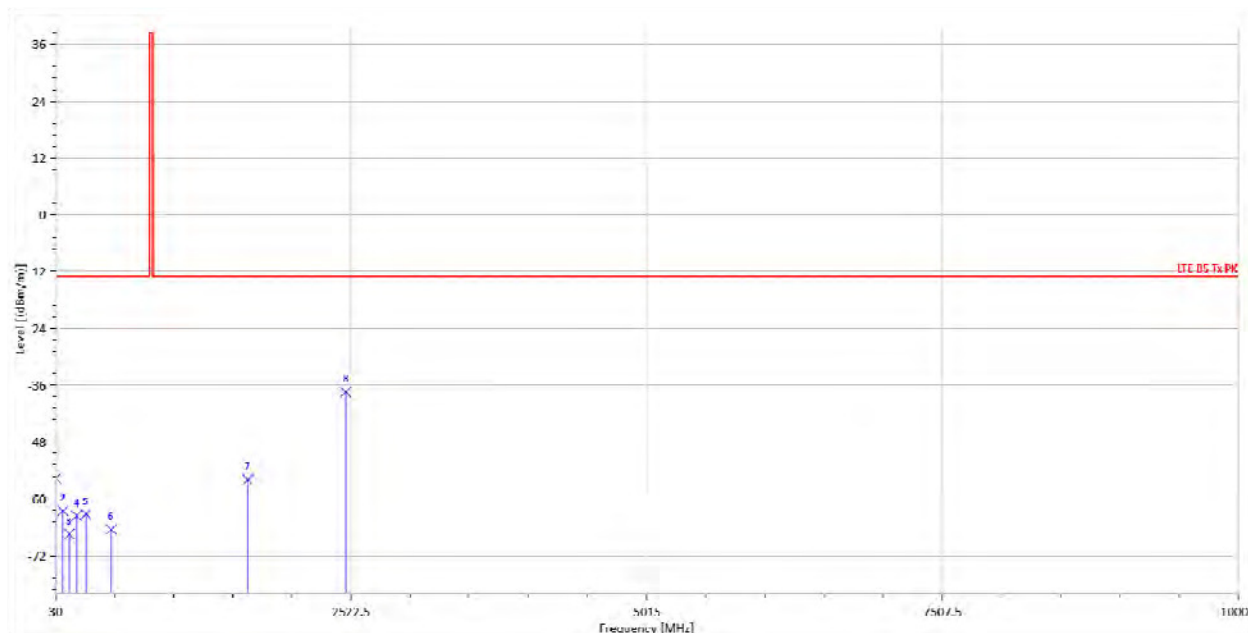
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Operation Mode :	LTE B5 1.4M QPSK RB 1.5	Test Date :	2017/3/15
Fundamental Frequency :	824.7 MHz	Temp. / Humi. :	22.7deg_C/57RH
Operation Band :	Tx CH Low	Test Engineer :	Ashton
EUT Pol. :	H	Measurement Antenna Pol. :	Horizontal



Freq.	Note	ERP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBd	Loss dB	@3m dBm/m	dB
31.94	S	-55.67	-34.29	-20.71	-0.67	-13	-42.67
91.11	S	-62.57	-59.19	-2.25	-1.12	-13	-49.57
146.40	S	-67.42	-65.83	-0.12	-1.47	-13	-54.42
206.54	S	-63.58	-65.74	3.83	-1.67	-13	-50.58
286.08	S	-63.20	-64.88	3.67	-1.99	-13	-50.20
499.48	S	-66.47	-67.97	4.24	-2.74	-13	-53.47
1651.00	H	-55.99	-58.03	6.76	-4.72	-13	-42.99
2477.00	H	-37.43	-39.82	8.24	-5.84	-13	-24.43

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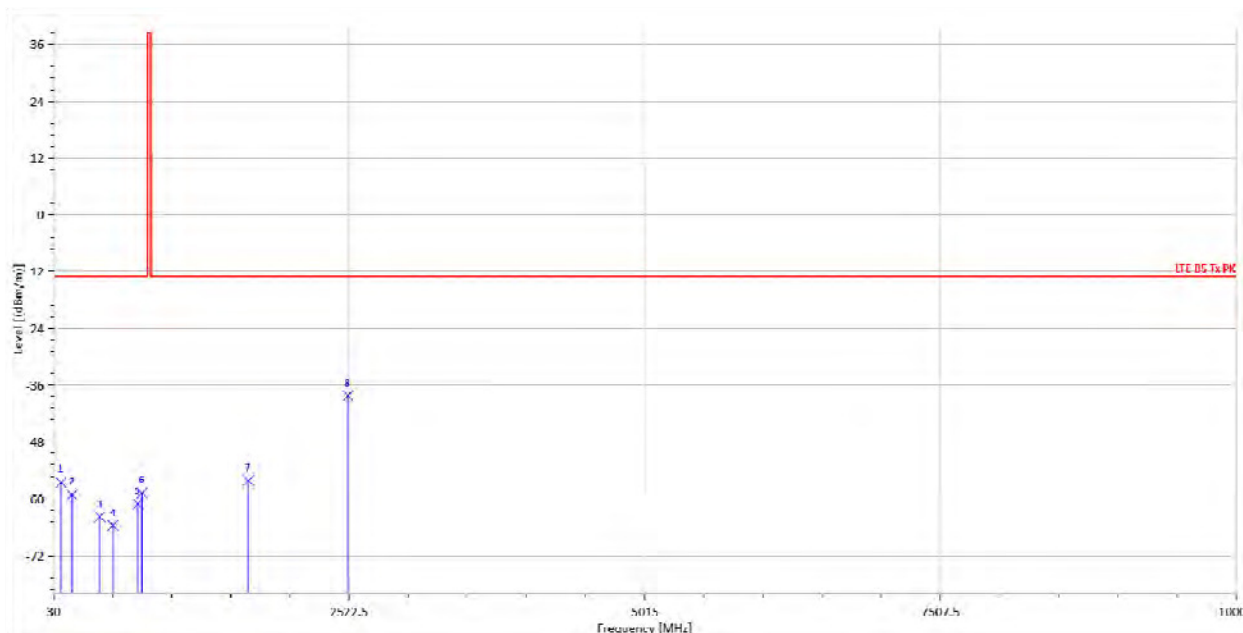
f (886-2) 2298-0488

www.tw.sgs.com

Member of SGS Group

Operation Mode : LTE B5 1.4M QPSK RB 1.5
Fundamental Frequency : 836.5 MHz
Operation Band : Tx CH Mid
EUT Pol. : H

Test Date : 2017/3/15
Temp. / Humi. : 22.7deg_C/57RH
Test Engineer : Ashton
Measurement Antenna Pol. : Vertical



Freq.	Note	ERP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBd	Loss dB	@3m dBm/m	dB
93.05	S	-56.56	-53.00	-2.43	-1.14	-13	-43.56
185.20	S	-59.14	-61.30	3.81	-1.64	-13	-46.14
419.94	S	-63.80	-65.31	3.81	-2.30	-13	-50.80
530.52	S	-65.61	-67.15	4.26	-2.72	-13	-52.61
740.04	S	-61.05	-63.13	5.46	-3.37	-13	-48.05
775.93	S	-58.74	-61.18	5.49	-3.06	-13	-45.74
1672.00	H	-56.17	-58.23	6.83	-4.78	-13	-43.17
2512.00	H	-38.22	-40.60	8.27	-5.89	-13	-25.22

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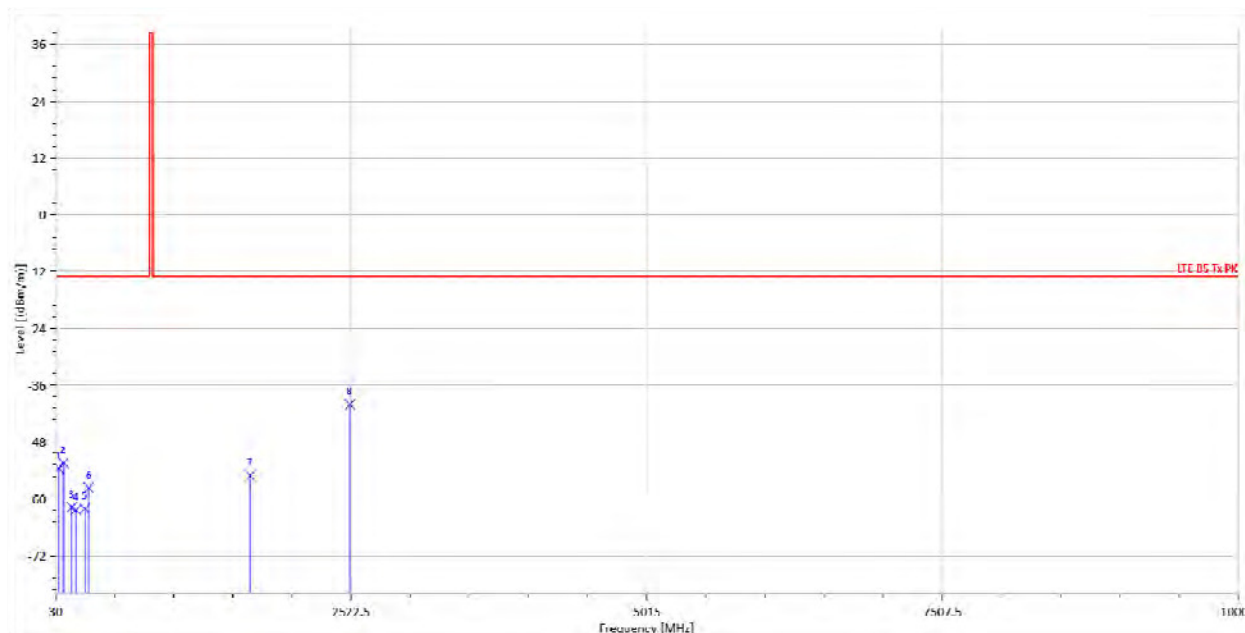
f (886-2) 2298-0488

www.tw.sgs.com

Member of SGS Group

Operation Mode : LTE B5 1.4M QPSK RB 1.5
Fundamental Frequency : 836.5 MHz
Operation Band : Tx CH Mid
EUT Pol. : H

Test Date : 2017/3/15
Temp. / Humi. : 22.7deg_C/57RH
Test Engineer : Ashton
Measurement Antenna Pol. : Horizontal



Freq.	Note	ERP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBd	Loss dB	@3m dBm/m	dB
56.19	S	-53.58	-48.14	-4.59	-0.85	-13	-40.58
95.96	S	-52.39	-48.56	-2.68	-1.15	-13	-39.39
164.83	S	-61.83	-62.29	1.99	-1.52	-13	-48.83
200.72	S	-62.38	-64.42	3.70	-1.65	-13	-49.38
277.35	S	-62.08	-63.62	3.52	-1.98	-13	-49.08
309.36	S	-57.69	-59.50	3.79	-1.98	-13	-44.69
1672.00	H	-55.06	-57.12	6.83	-4.78	-13	-42.06
2512.00	H	-40.03	-42.41	8.27	-5.89	-13	-27.03

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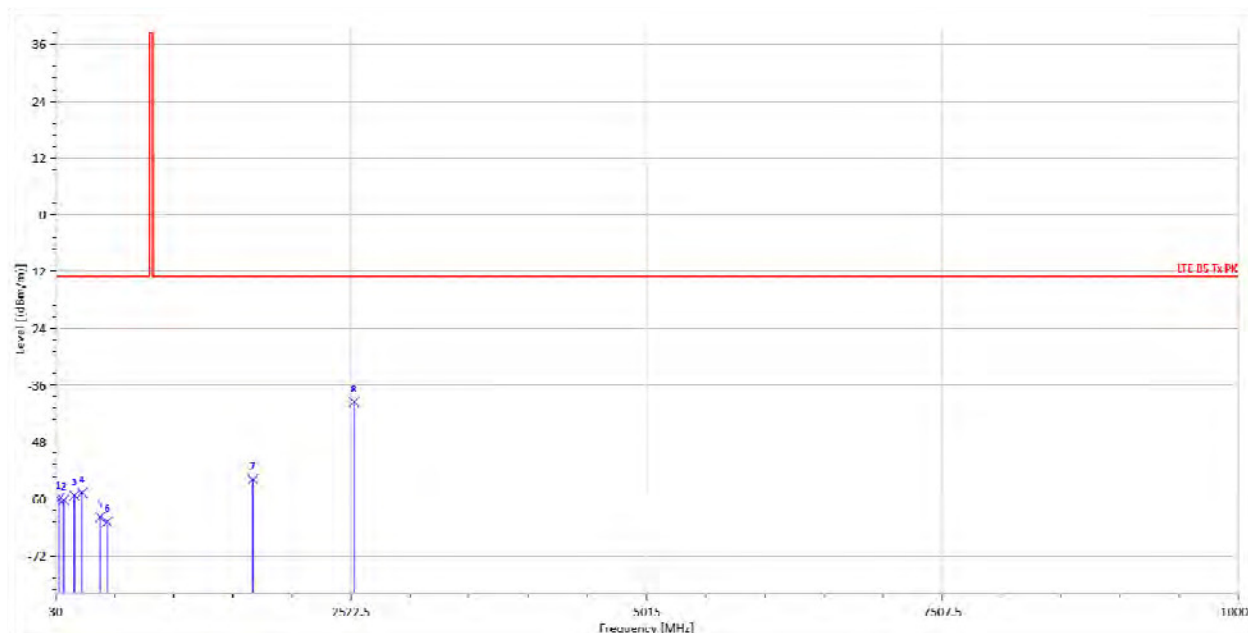
f (886-2) 2298-0488

www.tw.sgs.com

Member of SGS Group

Operation Mode : LTE B5 1.4M QPSK RB 1.5
Fundamental Frequency : 848.3 MHz
Operation Band : Tx CH High
EUT Pol. : H

Test Date : 2017/3/15
Temp. / Humi. : 22.7deg_C/57RH
Test Engineer : Ashton
Measurement Antenna Pol. : Vertical



Freq. MHz	Note F/H/E/S	ERP dBm	SG Output Level dBm	Antenna Gain dBd	Cable Loss dB	Limit @3m dBm/m	Margin dB
59.10	S	-60.04	-55.74	-3.44	-0.87	-13	-47.04
96.93	S	-60.24	-56.32	-2.77	-1.15	-13	-47.24
188.11	S	-59.27	-61.65	3.95	-1.56	-13	-46.27
253.10	S	-58.70	-59.82	2.91	-1.80	-13	-45.70
406.36	S	-63.90	-65.25	3.67	-2.32	-13	-50.90
465.53	S	-64.83	-66.60	4.16	-2.39	-13	-51.83
1693.00	H	-55.93	-58.04	6.91	-4.80	-13	-42.93
2547.00	H	-39.53	-41.95	8.33	-5.91	-13	-26.53

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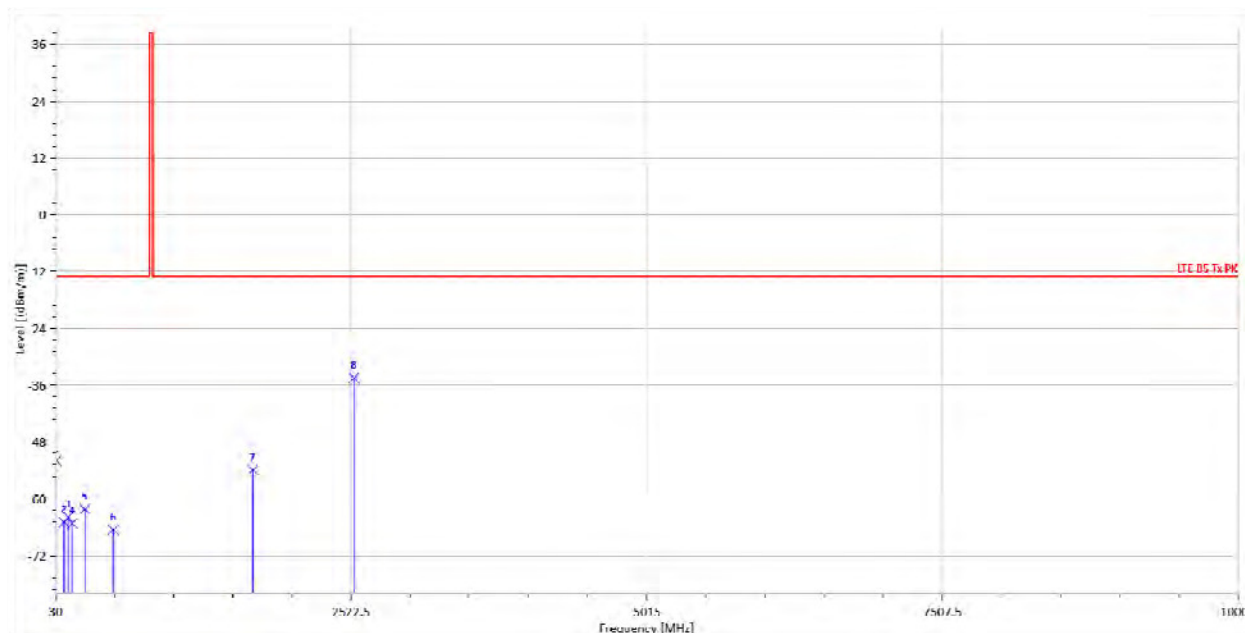
f (886-2) 2298-0488

www.tw.sgs.com

Member of SGS Group

Operation Mode : LTE B5 1.4M QPSK RB 1.5
Fundamental Frequency : 848.3 MHz
Operation Band : Tx CH High
EUT Pol. : H

Test Date : 2017/3/15
Temp. / Humi. : 22.7deg_C/57RH
Test Engineer : Ashton
Measurement Antenna Pol. : Horizontal



Freq. MHz	Note F/H/E/S	ERP dBm	SG Output Level dBm	Antenna Gain dBd	Cable Loss dB	Limit @3m dBm/m	Margin dB
32.91	S	-51.99	-31.44	-19.87	-0.67	-13	-38.99
101.78	S	-64.93	-60.64	-3.11	-1.18	-13	-51.93
135.73	S	-63.90	-60.89	-1.55	-1.46	-13	-50.90
170.65	S	-65.17	-66.31	2.63	-1.49	-13	-52.17
277.35	S	-62.20	-63.74	3.52	-1.98	-13	-49.20
515.97	S	-66.55	-68.44	4.25	-2.35	-13	-53.55
1693.00	H	-53.89	-56.00	6.91	-4.80	-13	-40.89
2547.00	H	-34.46	-36.88	8.33	-5.91	-13	-21.46

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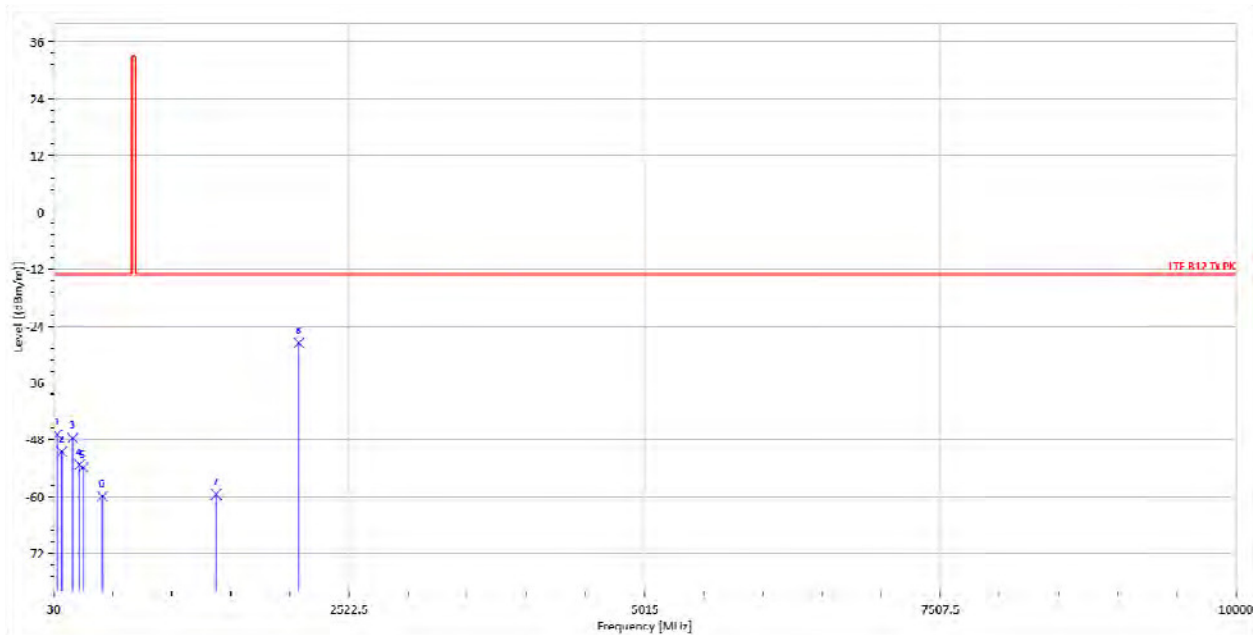
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Radiated Spurious Emission Measurement Result: LTE-Band 12 (The Worst Case)

Operation Mode :	LTE B12 3M QPSK RB 1.0	Test Date :	2017/3/15
Fundamental Frequency :	700.5 MHz	Temp. / Humi. :	19.0deg_C/52RH
Operation Band :	Tx CH Low	Test Engineer :	Ashton
EUT Pol. :	H	Measurement Antenna Pol. :	Vertical



Freq.	Note	ERP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBd	Loss dB	@3m dBm/m	dB
61.04	S	-46.96	-43.07	-2.94	-0.95	-13	-33.96
97.90	S	-50.51	-46.50	-2.85	-1.16	-13	-37.51
191.02	S	-47.67	-50.05	4.00	-1.62	-13	-34.67
248.25	S	-53.27	-54.62	3.20	-1.85	-13	-40.27
278.32	S	-53.94	-55.51	3.55	-1.98	-13	-40.94
441.28	S	-59.95	-61.62	4.03	-2.37	-13	-46.95
1401.00	H	-59.55	-61.07	5.87	-4.36	-13	-46.55
2099.00	H	-27.54	-30.19	8.01	-5.37	-13	-14.54

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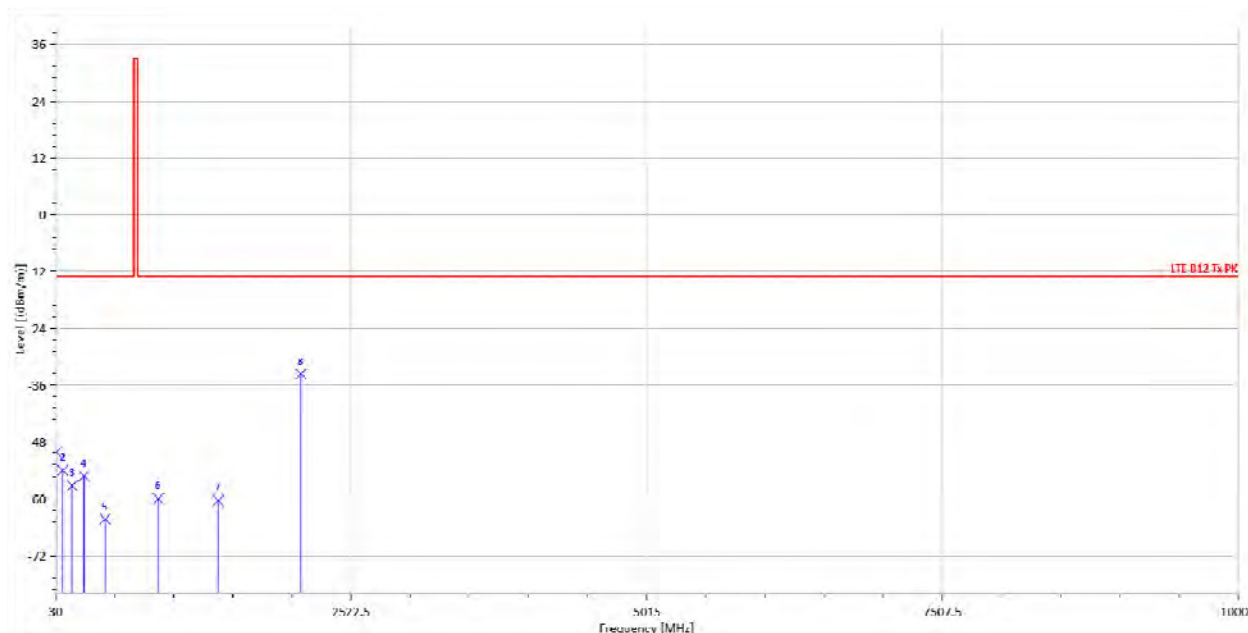
f (886-2) 2298-0488

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Member of SGS Group

Operation Mode : LTE B12 3M QPSK RB 1.0
Fundamental Frequency : 700.5 MHz
Operation Band : Tx CH Low
EUT Pol. : H

Test Date : 2017/3/15
Temp. / Humi. : 19.0deg_C/52RH
Test Engineer : Ashton
Measurement Antenna Pol. : Horizontal



Freq.	Note	ERP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBd	Loss dB	@3m dBm/m	dB
34.85	S	-50.14	-31.24	-18.19	-0.71	-13	-37.14
89.17	S	-53.99	-50.79	-2.10	-1.11	-13	-40.99
169.68	S	-57.25	-58.38	2.53	-1.40	-13	-44.25
269.59	S	-55.18	-56.49	3.25	-1.94	-13	-42.18
448.07	S	-64.29	-65.86	4.10	-2.54	-13	-51.29
896.21	S	-60.02	-62.04	5.63	-3.61	-13	-47.02
1401.00	H	-60.37	-61.89	5.87	-4.36	-13	-47.37
2099.00	H	-33.62	-36.26	8.01	-5.37	-13	-20.62

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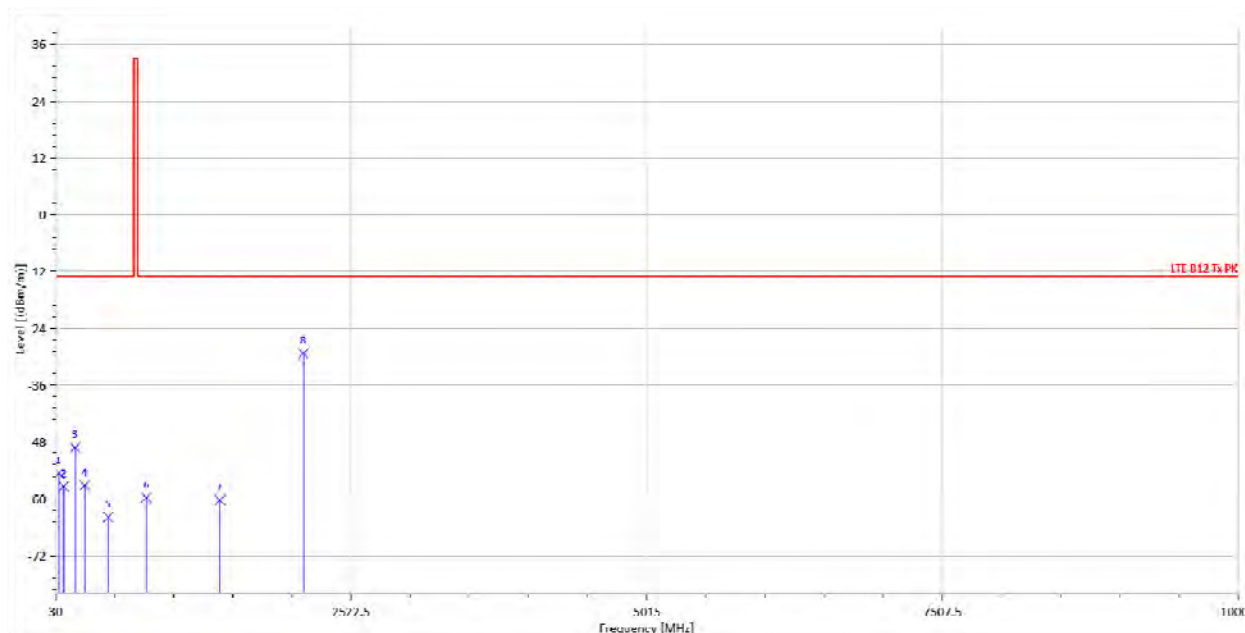
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Operation Mode : LTE B12 3M QPSK RB 1.0
Fundamental Frequency : 707.5 MHz
Operation Band : Tx CH Mid
EUT Pol. : H

Test Date : 2017/3/15
Temp. / Humi. : 19.0deg_C/52RH
Test Engineer : Ashton
Measurement Antenna Pol. : Vertical



Freq. MHz	Note F/H/E/S	ERP dBm	SG Output Level dBm	Antenna Gain dBd	Cable Loss dB	Limit @3m dBm/m	Margin dB
58.13	S	-54.61	-49.91	-3.82	-0.88	-13	-41.61
96.93	S	-57.40	-53.48	-2.77	-1.15	-13	-44.40
194.90	S	-49.20	-51.42	3.86	-1.64	-13	-36.20
275.41	S	-57.18	-58.71	3.46	-1.92	-13	-44.18
473.29	S	-63.91	-65.58	4.18	-2.51	-13	-50.91
795.33	S	-59.74	-62.09	5.52	-3.16	-13	-46.74
1415.00	H	-60.30	-61.85	5.93	-4.38	-13	-47.30
2120.00	H	-29.26	-31.87	8.02	-5.42	-13	-16.26

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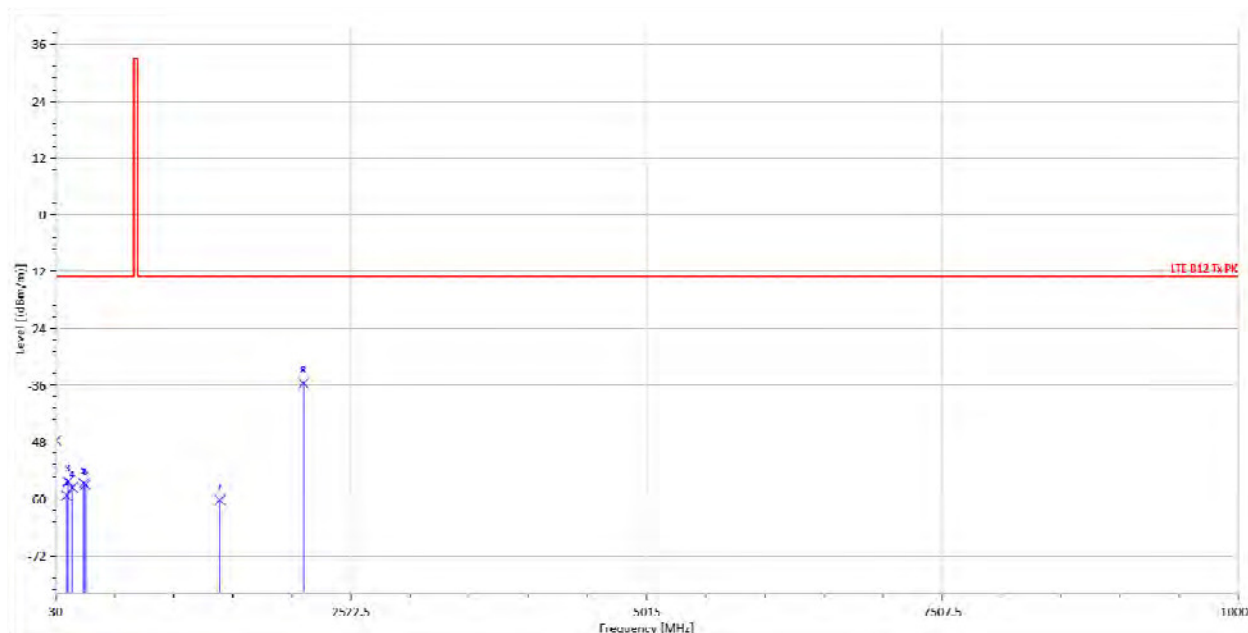
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Member of SGS Group

Operation Mode : LTE B12 3M QPSK RB 1.0
Fundamental Frequency : 707.5 MHz
Operation Band : Tx CH Mid
EUT Pol. : H

Test Date : 2017/3/15
Temp. / Humi. : 19.0deg_C/52RH
Test Engineer : Ashton
Measurement Antenna Pol. : Horizontal



Freq.	Note	ERP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBd	Loss dB	@3m dBm/m	dB
32.91	S	-47.69	-27.15	-19.87	-0.67	-13	-34.69
121.18	S	-59.27	-55.14	-2.87	-1.25	-13	-46.27
134.76	S	-56.37	-53.33	-1.67	-1.38	-13	-43.37
171.62	S	-57.62	-58.78	2.73	-1.57	-13	-44.62
266.68	S	-56.72	-57.82	3.01	-1.90	-13	-43.72
282.20	S	-56.97	-58.63	3.63	-1.97	-13	-43.97
1415.00	H	-60.26	-61.81	5.93	-4.38	-13	-47.26
2120.00	H	-35.60	-38.20	8.02	-5.42	-13	-22.60

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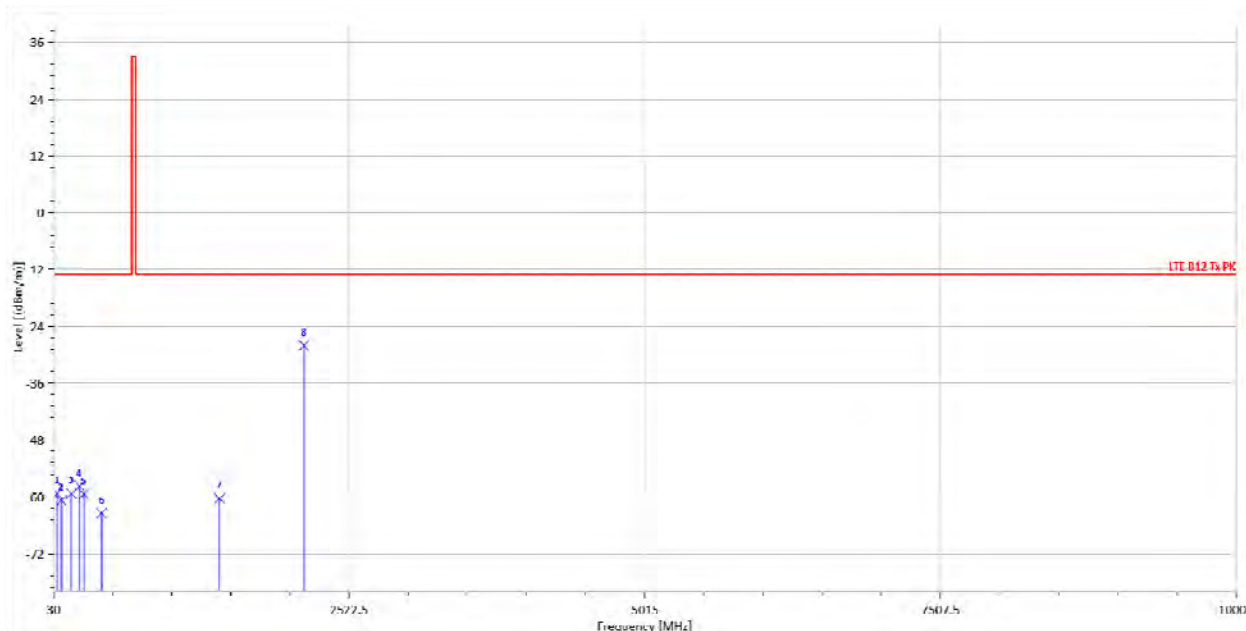
f (886-2) 2298-0488

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Operation Mode : LTE B12 3M QPSK RB 1.0
Fundamental Frequency : 714.5 MHz
Operation Band : Tx CH High
EUT Pol. : H

Test Date : 2017/3/15
Temp. / Humi. : 19.0deg_C/52RH
Test Engineer : Ashton
Measurement Antenna Pol. : Vertical



Freq.	Note	ERP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBd	Loss dB	@3m dBm/m	dB
60.07	S	-59.28	-55.33	-3.07	-0.89	-13	-46.28
95.96	S	-60.78	-56.95	-2.68	-1.15	-13	-47.78
180.35	S	-59.32	-61.32	3.58	-1.58	-13	-46.32
249.22	S	-57.73	-58.99	3.15	-1.89	-13	-44.73
285.11	S	-59.42	-61.12	3.66	-1.96	-13	-46.42
434.49	S	-63.47	-65.10	3.96	-2.33	-13	-50.47
1429.00	H	-60.35	-61.94	5.98	-4.40	-13	-47.35
2141.00	H	-28.06	-30.63	8.03	-5.46	-13	-15.06

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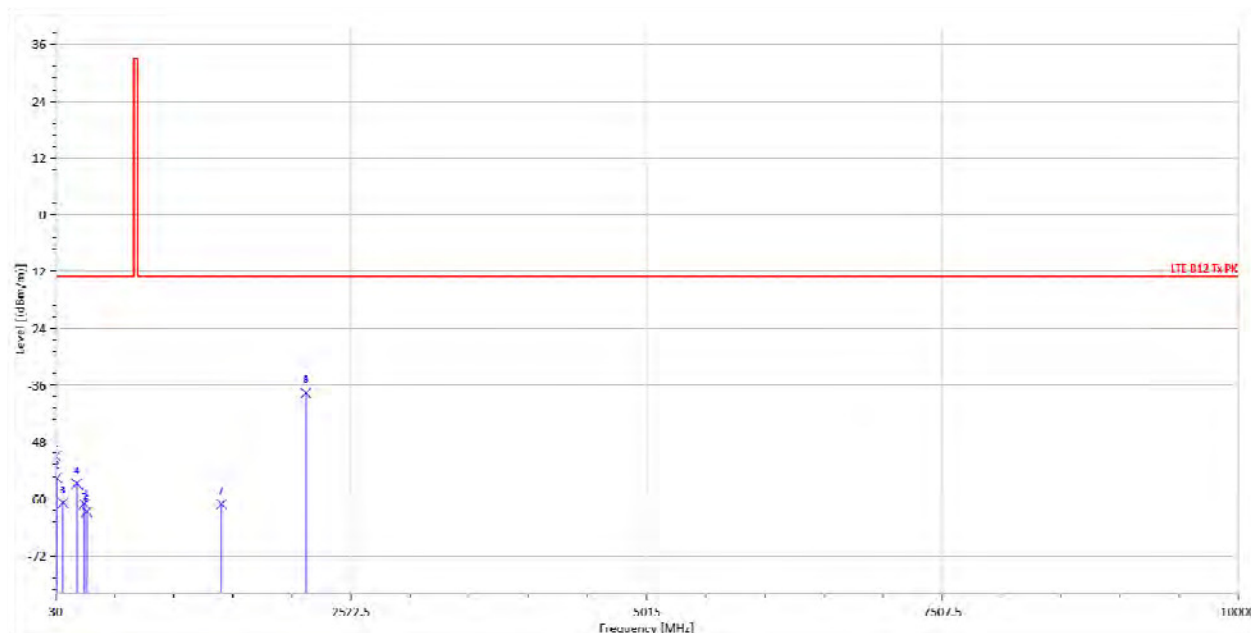
f (886-2) 2298-0488

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Member of SGS Group

Operation Mode : LTE B12 3M QPSK RB 1.0
Fundamental Frequency : 714.5 MHz
Operation Band : Tx CH High
EUT Pol. : H

Test Date : 2017/3/15
Temp. / Humi. : 19.0deg_C/52RH
Test Engineer : Ashton
Measurement Antenna Pol. : Horizontal



Freq.	Note	ERP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBd	Loss dB	@3m dBm/m	dB
31.94	S	-51.00	-29.62	-20.71	-0.67	-13	-38.00
39.70	S	-55.60	-40.62	-14.24	-0.73	-13	-42.60
92.08	S	-60.86	-57.39	-2.34	-1.13	-13	-47.86
208.48	S	-56.76	-58.95	3.87	-1.68	-13	-43.76
272.50	S	-61.02	-62.47	3.37	-1.92	-13	-48.02
293.84	S	-62.71	-64.46	3.74	-1.99	-13	-49.71
1429.00	H	-61.09	-62.68	5.98	-4.40	-13	-48.09
2141.00	H	-37.64	-40.22	8.03	-5.46	-13	-24.64

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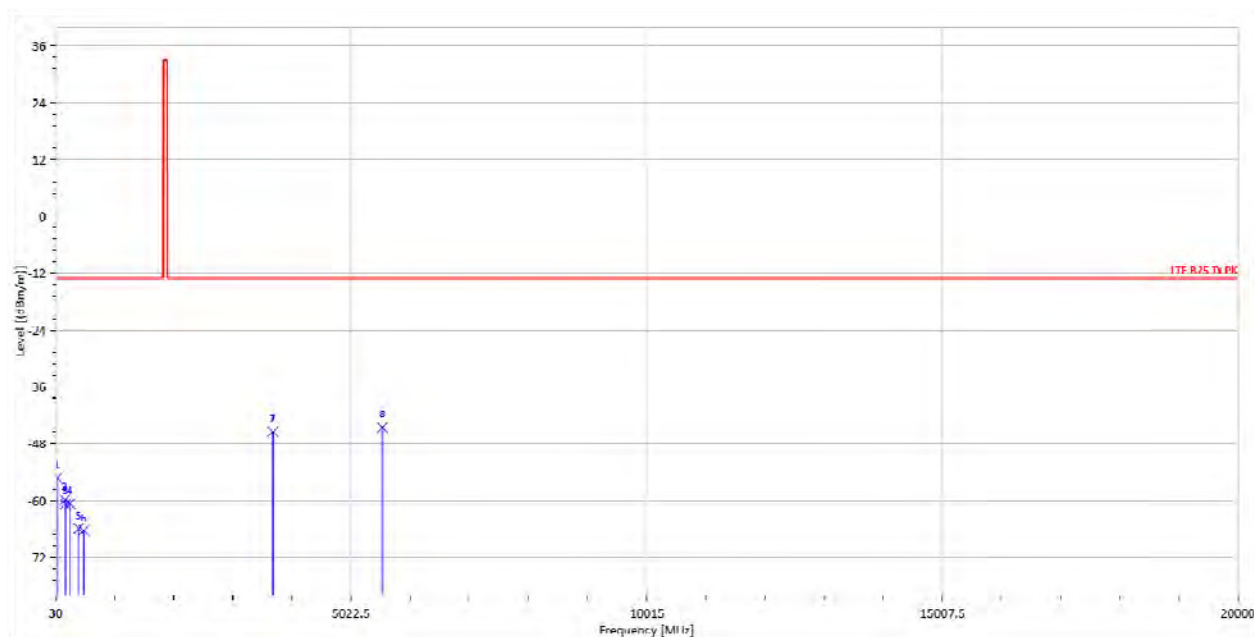
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Radiated Spurious Emission Measurement Result: LTE-Band 25The Worst Case)

Operation Mode :	LTE B25 20M QPSK RB 1.0	Test Date :	2017/3/15
Fundamental Frequency :	1860 MHz	Temp. / Humi. :	22.7deg_C/57RH
Operation Band :	Tx CH Low	Test Engineer :	Ashton
EUT Pol. :	E2	Measurement Antenna Pol. :	Vertical



Freq. MHz	Note F/H/E/S	EIRP dBm	SG Output Level dBm	Antenna Gain dBi	Cable Loss dB	Limit @3m dBm/m	Margin dB
58.13	S	-55.28	-52.73	-1.67	-0.88	-13	-42.28
187.14	S	-59.87	-64.37	6.05	-1.55	-13	-46.87
195.87	S	-60.78	-65.13	5.98	-1.63	-13	-47.78
273.47	S	-60.64	-64.27	5.55	-1.92	-13	-47.64
418.00	S	-65.95	-69.26	5.94	-2.63	-13	-52.95
505.30	S	-66.33	-70.20	6.39	-2.53	-13	-53.33
3702.00	H	-45.48	-50.63	12.30	-7.15	-13	-32.48
5550.00	H	-44.60	-48.52	12.62	-8.70	-13	-31.60

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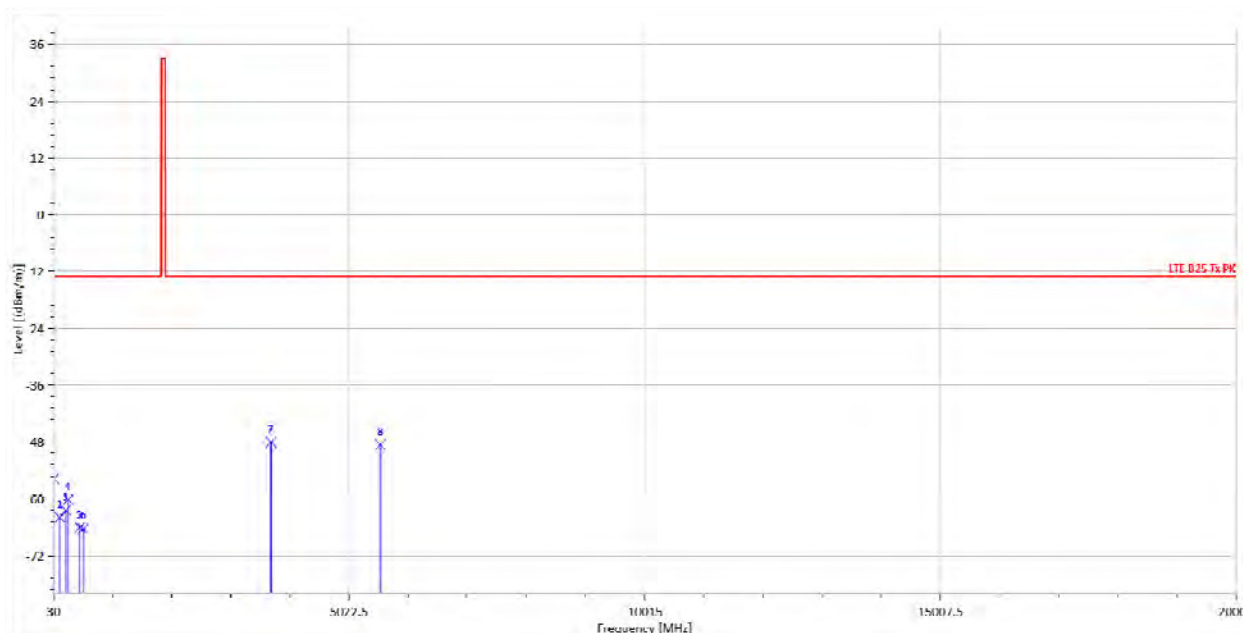
f (886-2) 2298-0488

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Operation Mode : LTE B25 20M QPSK RB 1.0
Fundamental Frequency : 1860 MHz
Operation Band : Tx CH Low
EUT Pol. : E2

Test Date : 2017/3/15
Temp. / Humi. : 22.7deg_C/57RH
Test Engineer : Ashton
Measurement Antenna Pol. : Horizontal



Freq. MHz	Note F/H/E/S	EIRP dBm	SG Output Level dBm	Antenna Gain dBi	Cable Loss dB	Limit @3m dBm/m	Margin dB
33.88	S	-55.74	-38.17	-16.88	-0.68	-13	-42.74
133.79	S	-63.98	-63.02	0.36	-1.32	-13	-50.98
234.67	S	-62.41	-66.68	6.00	-1.73	-13	-49.41
276.38	S	-60.17	-63.86	5.64	-1.95	-13	-47.17
471.35	S	-66.04	-69.80	6.32	-2.56	-13	-53.04
532.46	S	-66.29	-69.73	6.41	-2.96	-13	-53.29
3702.00	H	-48.01	-53.16	12.30	-7.15	-13	-35.01
5550.00	H	-48.59	-52.51	12.62	-8.70	-13	-35.59

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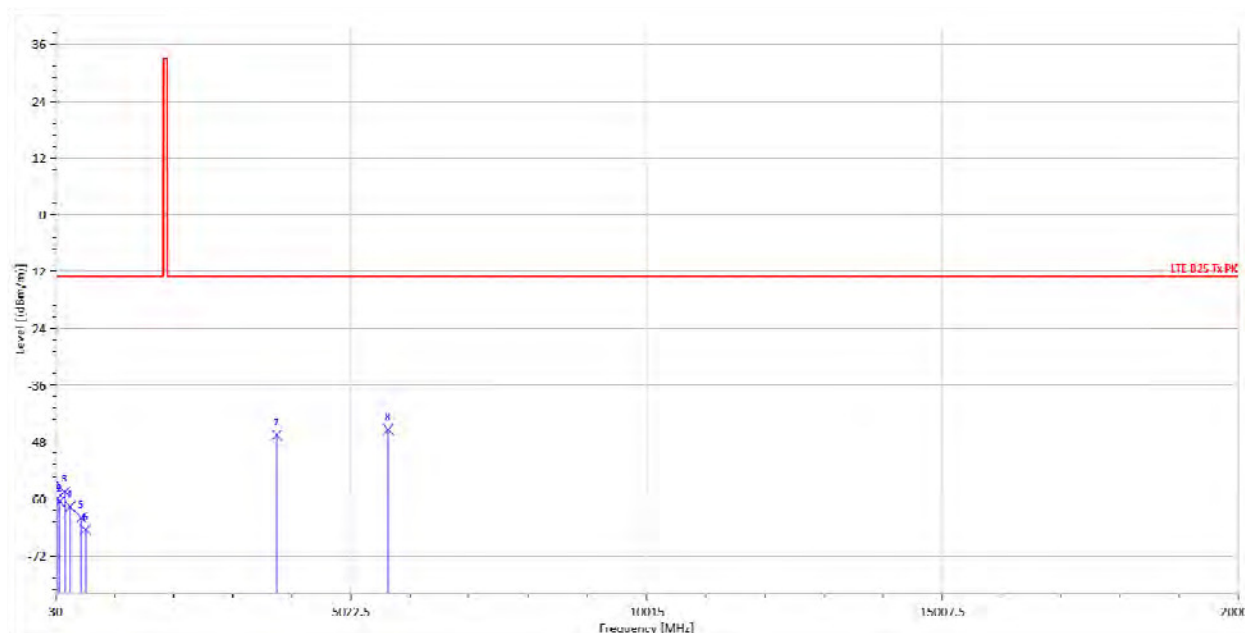
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Operation Mode : LTE B25 20M QPSK RB 1.0
Fundamental Frequency : 1882.5 MHz
Operation Band : Tx CH Mid
EUT Pol. : E2

Test Date : 2017/3/15
Temp. / Humi. : 22.7deg_C/57RH
Test Engineer : Ashton
Measurement Antenna Pol. : Vertical



Freq.	Note	EIRP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBi	Loss dB	@3m dBm/m	dB
60.07	S	-59.93	-58.13	-0.92	-0.89	-13	-46.93
96.93	S	-60.57	-58.80	-0.62	-1.15	-13	-47.57
185.20	S	-58.54	-62.85	5.96	-1.64	-13	-45.54
276.38	S	-61.67	-65.36	5.64	-1.95	-13	-48.67
461.65	S	-64.03	-67.88	6.30	-2.45	-13	-51.03
536.34	S	-66.52	-70.36	6.41	-2.57	-13	-53.52
3765.00	H	-46.53	-51.62	12.30	-7.21	-13	-33.53
5648.00	H	-45.37	-49.20	12.66	-8.83	-13	-32.37

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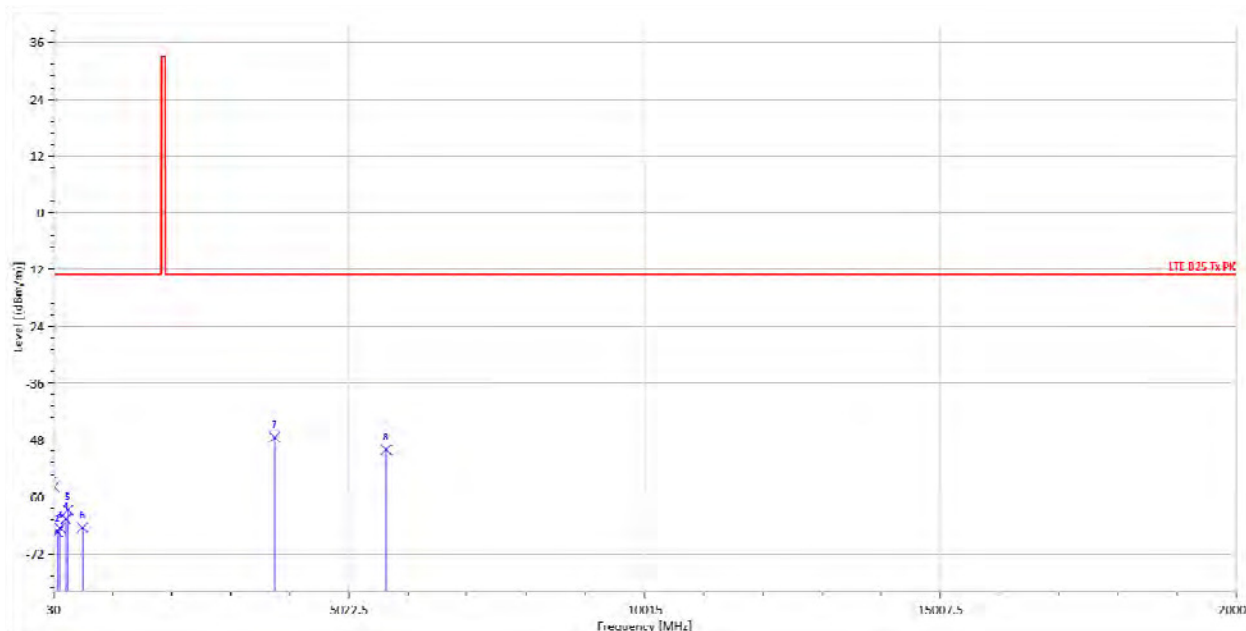
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Member of SGS Group

Operation Mode : LTE B25 20M QPSK RB 1.0
Fundamental Frequency : 1882.5 MHz
Operation Band : Tx CH Mid
EUT Pol. : E2

Test Date : 2017/3/15
Temp. / Humi. : 22.7deg_C/57RH
Test Engineer : Ashton
Measurement Antenna Pol. : Horizontal



Freq. MHz	Note F/H/E/S	EIRP dBm	SG Output Level dBm	Antenna Gain dBi	Cable Loss dB	Limit @3m dBm/m	Margin dB
37.76	S	-57.93	-43.57	-13.67	-0.70	-13	-44.93
97.90	S	-67.37	-65.50	-0.70	-1.16	-13	-54.37
133.79	S	-66.58	-65.62	0.36	-1.32	-13	-53.58
236.61	S	-64.67	-68.76	5.89	-1.80	-13	-51.67
274.44	S	-62.79	-66.45	5.58	-1.91	-13	-49.79
519.85	S	-66.49	-70.12	6.40	-2.78	-13	-53.49
3765.00	H	-47.42	-52.51	12.30	-7.21	-13	-34.42
5648.00	H	-50.02	-53.86	12.66	-8.83	-13	-37.02

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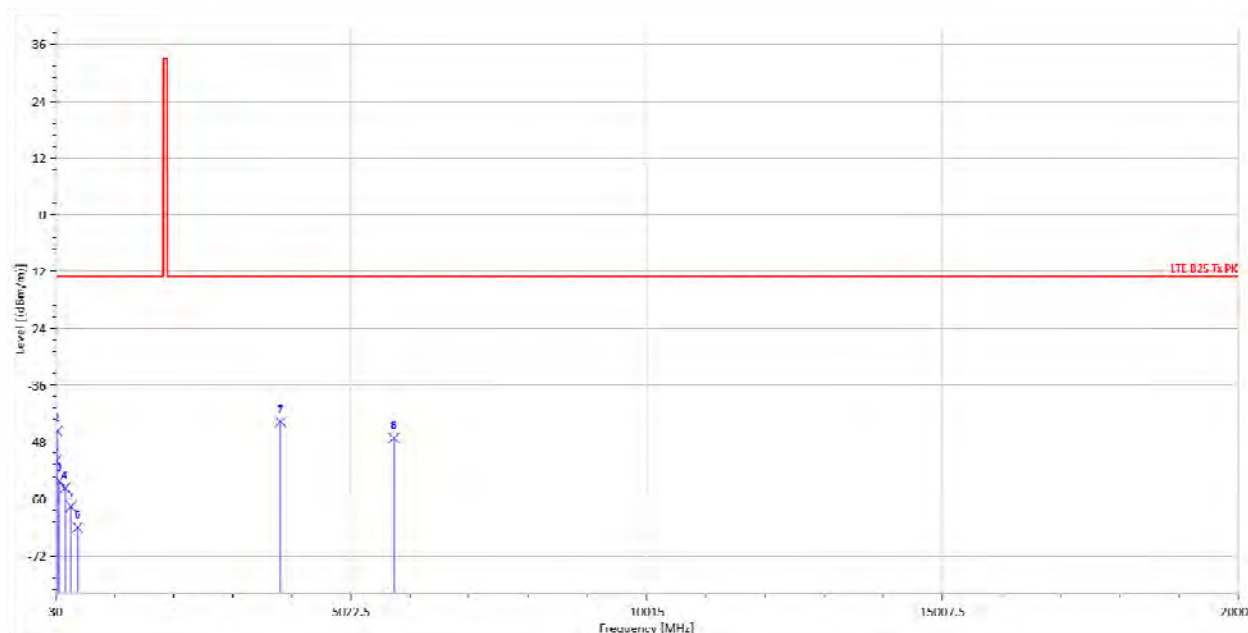
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Operation Mode : LTE B25 20M QPSK RB 1.0
Fundamental Frequency : 1914.3 MHz
Operation Band : Tx CH High
EUT Pol. : E2

Test Date : 2017/3/15
Temp. / Humi. : 22.7deg_C/57RH
Test Engineer : Ashton
Measurement Antenna Pol. : Vertical



Freq. MHz	Note F/H/E/S	EIRP dBm	SG Output Level dBm	Antenna Gain dBi	Cable Loss dB	Limit @3m dBm/m	Margin dB
35.82	S	-51.95	-35.98	-15.24	-0.73	-13	-38.95
58.13	S	-45.65	-43.10	-1.67	-0.88	-13	-32.65
91.11	S	-56.17	-54.95	-0.10	-1.12	-13	-43.17
189.08	S	-57.74	-62.29	6.14	-1.59	-13	-44.74
289.96	S	-61.67	-65.54	5.86	-1.99	-13	-48.67
401.51	S	-66.01	-69.60	5.77	-2.17	-13	-53.01
3828.00	H	-43.72	-48.75	12.30	-7.27	-13	-30.72
5746.00	H	-47.14	-50.92	12.70	-8.92	-13	-34.14

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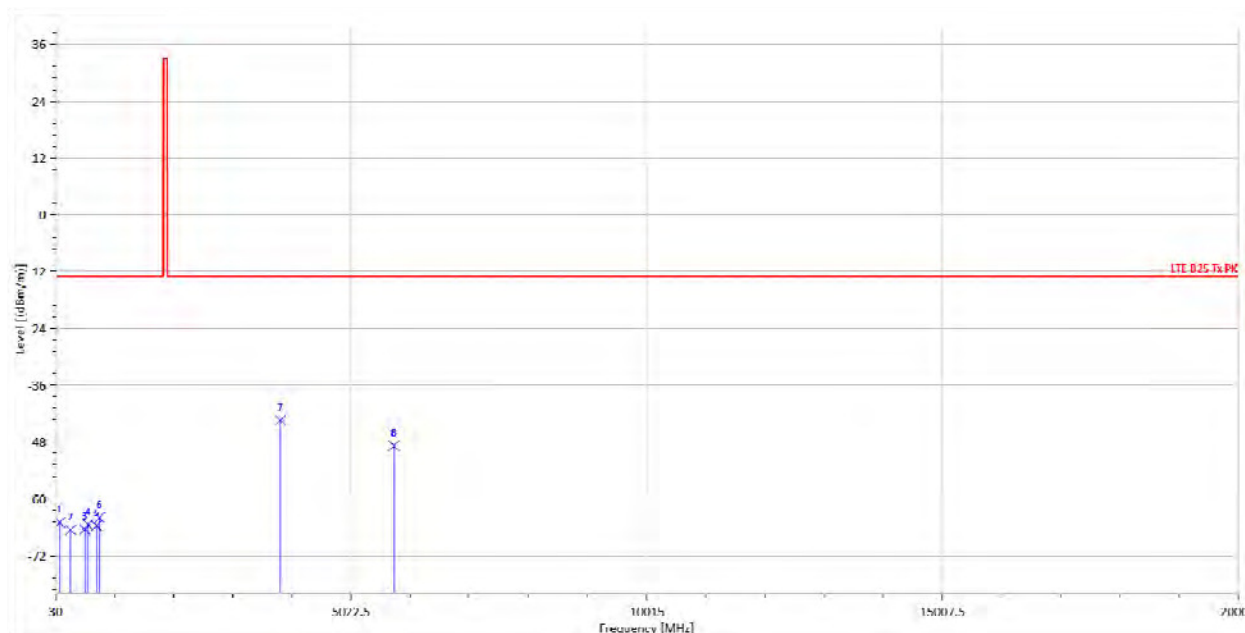
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Operation Mode : LTE B25 20M QPSK RB 1.0
Fundamental Frequency : 1914.3 MHz
Operation Band : Tx CH High
EUT Pol. : E2

Test Date : 2017/3/15
Temp. / Humi. : 22.7deg_C/57RH
Test Engineer : Ashton
Measurement Antenna Pol. : Horizontal



Freq.	Note	EIRP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBi	Loss dB	@3m dBm/m	dB
101.78	S	-64.97	-62.84	-0.96	-1.18	-13	-51.97
282.20	S	-66.58	-70.39	5.78	-1.97	-13	-53.58
527.61	S	-66.48	-70.25	6.40	-2.63	-13	-53.48
576.11	S	-65.44	-69.41	6.66	-2.69	-13	-52.44
723.55	S	-65.67	-70.43	7.61	-2.85	-13	-52.67
772.05	S	-63.98	-68.29	7.64	-3.33	-13	-50.98
3828.00	H	-43.40	-48.44	12.30	-7.27	-13	-30.40
5746.00	H	-48.80	-52.58	12.70	-8.92	-13	-35.80

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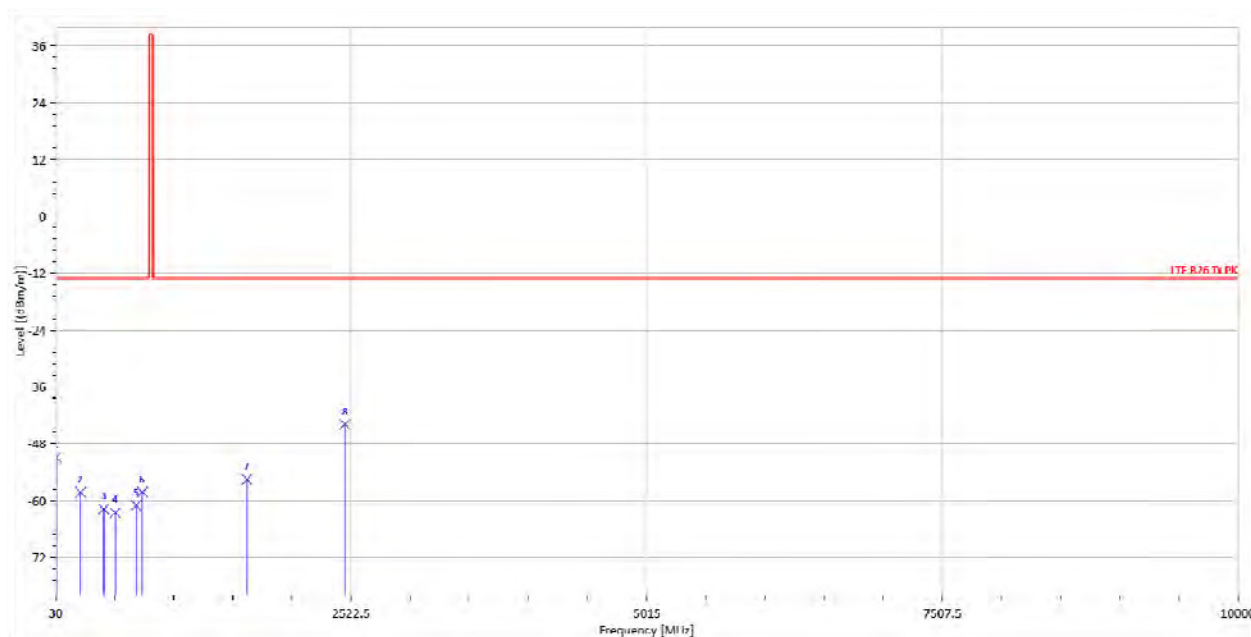
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Radiated Spurious Emission Measurement Result: LTE-Band 26 (The Worst Case)

Operation Mode :	LTE B26 15M QPSK RB 1.0	Test Date :	2017/3/15
Fundamental Frequency :	831.5 MHz	Temp. / Humi. :	19.0deg_C/52RH
Operation Band :	Tx CH Low	Test Engineer :	Ashton
EUT Pol. :	H	Measurement Antenna Pol. :	Vertical



Freq.	Note	ERP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBd	Loss dB	@3m dBm/m	dB
36.79	S	-50.90	-33.58	-16.61	-0.71	-13	-37.90
239.52	S	-58.27	-60.04	3.59	-1.82	-13	-45.27
435.46	S	-61.83	-63.30	3.97	-2.50	-13	-48.83
533.43	S	-62.57	-64.02	4.26	-2.81	-13	-49.57
709.97	S	-61.00	-63.38	5.46	-3.08	-13	-48.00
761.38	S	-58.24	-60.47	5.48	-3.24	-13	-45.24
1644.00	H	-55.55	-57.58	6.74	-4.71	-13	-42.55
2470.00	H	-43.90	-46.29	8.23	-5.84	-13	-30.90

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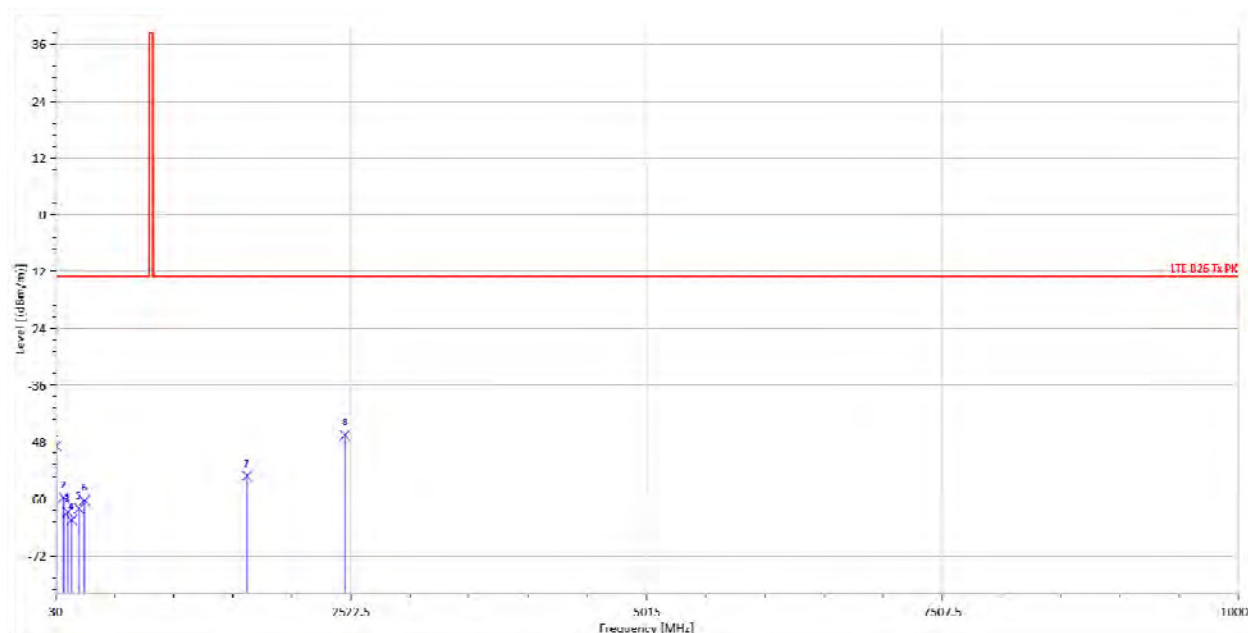
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Operation Mode : LTE B26 15M QPSK RB 1.0
Fundamental Frequency : 831.5 MHz
Operation Band : Tx CH Low
EUT Pol. : H

Test Date : 2017/3/15
Temp. / Humi. : 19.0deg_C/52RH
Test Engineer : Ashton
Measurement Antenna Pol. : Horizontal



Freq. MHz	Note F/H/E/S	ERP dBm	SG Output Level dBm	Antenna Gain dBd	Cable Loss dB	Limit @3m dBm/m	Margin dB
35.82	S	-48.84	-30.72	-17.39	-0.73	-13	-35.84
96.93	S	-59.71	-55.79	-2.77	-1.15	-13	-46.71
132.82	S	-62.81	-59.58	-1.91	-1.32	-13	-49.81
164.83	S	-64.45	-64.92	1.99	-1.52	-13	-51.45
227.88	S	-62.03	-64.41	4.16	-1.78	-13	-49.03
272.50	S	-60.36	-61.81	3.37	-1.92	-13	-47.36
1644.00	H	-55.13	-57.15	6.74	-4.71	-13	-42.13
2470.00	H	-46.55	-48.94	8.23	-5.84	-13	-33.55

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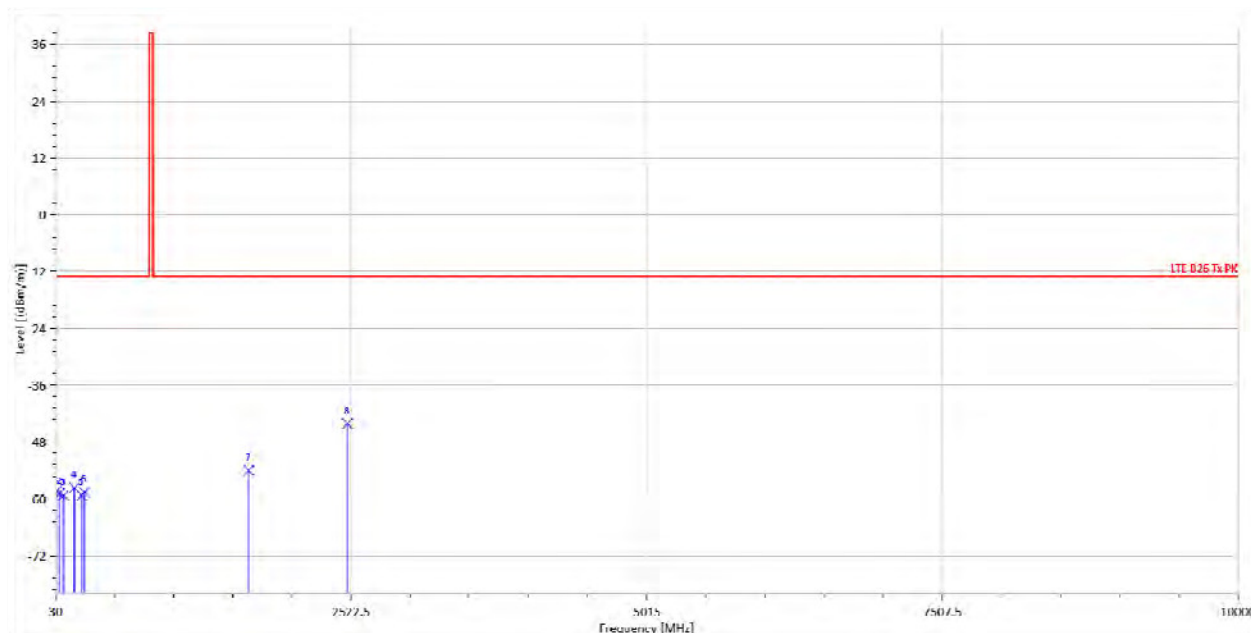
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Operation Mode : LTE B26 15M QPSK RB 1.0
Fundamental Frequency : 836.5MHz
Operation Band : Tx CH Mid
EUT Pol. : H

Test Date : 2017/3/15
Temp. / Humi. : 19.0deg_C/52RH
Test Engineer : Ashton
Measurement Antenna Pol. : Vertical



Freq.	Note	ERP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBd	Loss dB	@3m dBm/m	dB
34.85	S	-58.40	-39.51	-18.19	-0.71	-13	-45.40
61.04	S	-58.85	-54.97	-2.94	-0.95	-13	-45.85
95.96	S	-59.24	-55.41	-2.68	-1.15	-13	-46.24
188.11	S	-57.67	-60.05	3.95	-1.56	-13	-44.67
250.19	S	-59.29	-60.48	3.11	-1.92	-13	-46.29
271.53	S	-58.59	-60.02	3.34	-1.91	-13	-45.59
1658.00	H	-53.97	-56.02	6.79	-4.74	-13	-40.97
2491.00	H	-44.10	-46.47	8.24	-5.87	-13	-31.10

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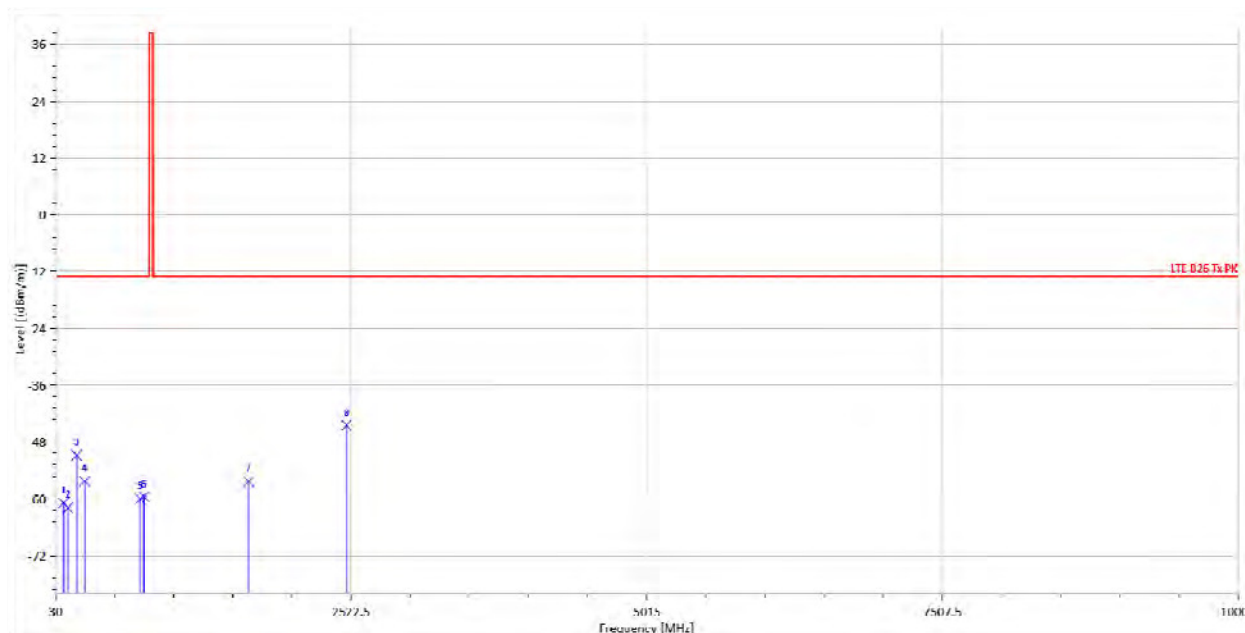
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Operation Mode : LTE B26 15M QPSK RB 1.0
Fundamental Frequency : 836.5MHz
Operation Band : Tx CH Mid
EUT Pol. : H

Test Date : 2017/3/15
Temp. / Humi. : 19.0deg_C/52RH
Test Engineer : Ashton
Measurement Antenna Pol. : Horizontal



Freq.	Note	ERP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBd	Loss dB	@3m dBm/m	dB
96.93	S	-60.86	-56.94	-2.77	-1.15	-13	-47.86
133.79	S	-61.89	-58.78	-1.79	-1.32	-13	-48.89
208.48	S	-50.82	-53.01	3.87	-1.68	-13	-37.82
275.41	S	-56.27	-57.80	3.46	-1.92	-13	-43.27
742.95	S	-60.01	-62.44	5.46	-3.03	-13	-47.01
775.93	S	-59.59	-62.02	5.49	-3.06	-13	-46.59
1658.00	H	-56.36	-58.41	6.79	-4.74	-13	-43.36
2484.00	H	-44.45	-46.84	8.24	-5.85	-13	-31.45

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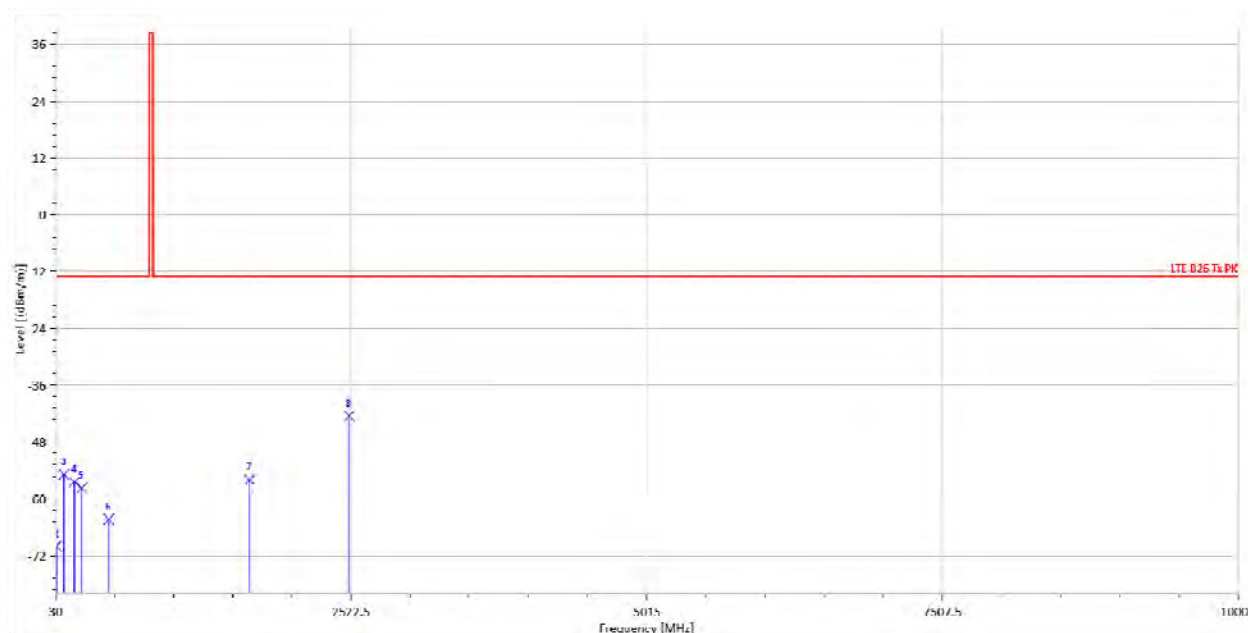
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Operation Mode : LTE B26 15M QPSK RB 1.0
Fundamental Frequency : 841.5 MHz
Operation Band : Tx CH High
EUT Pol. : H

Test Date : 2017/3/15
Temp. / Humi. : 19.0deg_C/52RH
Test Engineer : Ashton
Measurement Antenna Pol. : Vertical



Freq. MHz	Note F/H/E/S	ERP dBm	SG Output Level dBm	Antenna Gain dBd	Cable Loss dB	Limit @3m dBm/m	Margin dB
31.94	S	-69.90	-48.52	-20.71	-0.67	-13	-56.90
39.70	S	-70.05	-55.07	-14.24	-0.73	-13	-57.05
100.81	S	-54.83	-50.59	-3.07	-1.17	-13	-41.83
188.11	S	-56.40	-58.78	3.95	-1.56	-13	-43.40
250.19	S	-57.71	-58.90	3.11	-1.92	-13	-44.71
478.14	S	-64.36	-65.95	4.19	-2.59	-13	-51.36
1665.00	H	-55.98	-58.03	6.81	-4.76	-13	-42.98
2505.00	H	-42.53	-44.90	8.26	-5.89	-13	-29.53

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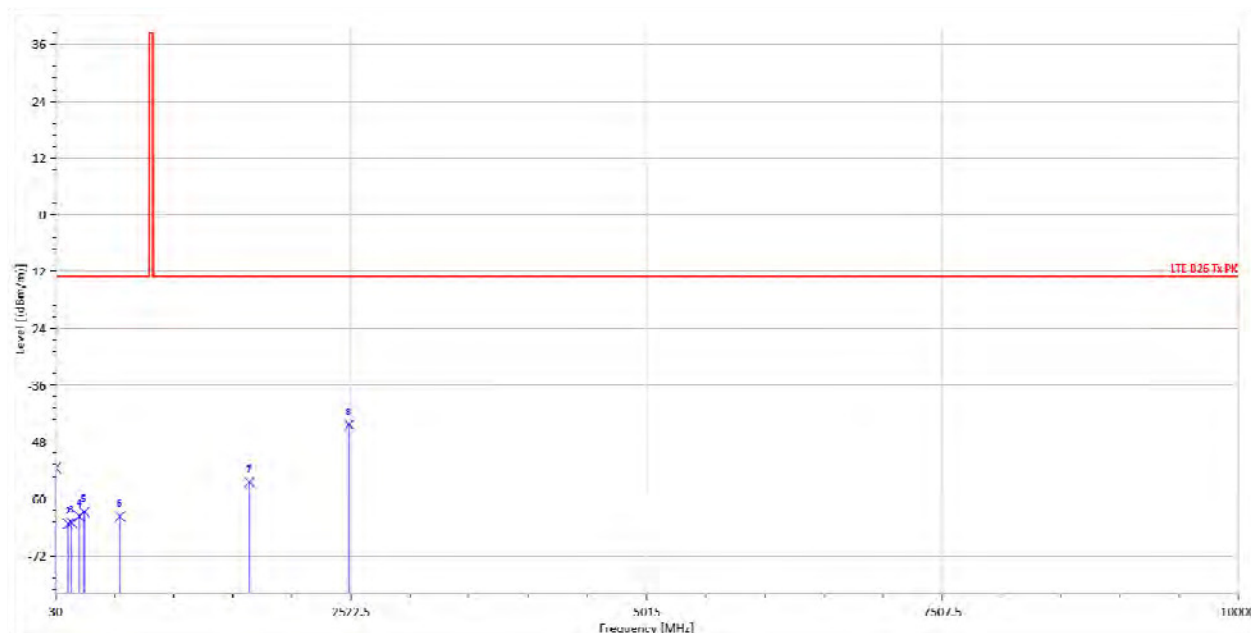
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Operation Mode : LTE B26 15M QPSK RB 1.0
Fundamental Frequency : 841.5 MHz
Operation Band : Tx CH High
EUT Pol. : H

Test Date : 2017/3/15
Temp. / Humi. : 19.0deg_C/52RH
Test Engineer : Ashton
Measurement Antenna Pol. : Horizontal



Freq.	Note	ERP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBd	Loss dB	@3m dBm/m	dB
30.97	S	-53.47	-31.26	-21.56	-0.65	-13	-40.47
134.76	S	-65.27	-62.22	-1.67	-1.38	-13	-52.27
163.86	S	-64.99	-65.29	1.88	-1.58	-13	-51.99
229.82	S	-63.68	-65.98	4.10	-1.80	-13	-50.68
271.53	S	-62.78	-64.21	3.34	-1.91	-13	-49.78
573.20	S	-63.72	-65.18	4.48	-3.02	-13	-50.72
1665.00	H	-56.49	-58.54	6.81	-4.76	-13	-43.49
2505.00	H	-44.28	-46.65	8.26	-5.89	-13	-31.28

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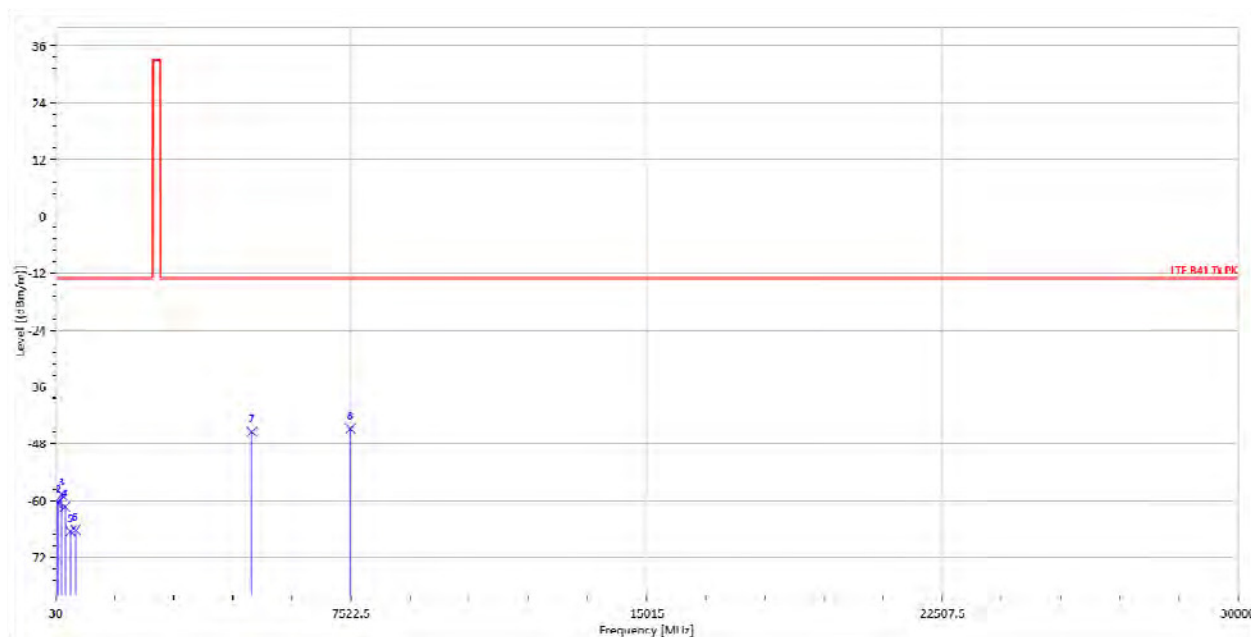
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Radiated Spurious Emission Measurement Result: LTE-Band 41The Worst Case)

Operation Mode :	LTE B41 10M QPSK RB 1.0	Test Date :	2017/3/16
Fundamental Frequency :	2501 MHz	Temp. / Humi. :	22.7deg_C/57RH
Operation Band :	Tx CH Low	Test Engineer :	Ashton
EUT Pol. :	E2	Measurement Antenna Pol. :	Vertical



Freq. MHz	Note F/H/E/S	EIRP dBm	SG Output Level dBm	Antenna Gain dBi	Cable Loss dB	Limit @3m dBm/m	Margin dB
60.07	S	-60.50	-58.70	-0.92	-0.89	-13	-47.50
100.81	S	-60.32	-58.22	-0.92	-1.17	-13	-47.32
186.17	S	-58.82	-63.24	6.01	-1.59	-13	-45.82
272.50	S	-61.33	-64.93	5.52	-1.92	-13	-48.33
409.27	S	-66.52	-69.90	5.85	-2.47	-13	-53.52
535.37	S	-66.27	-70.19	6.41	-2.49	-13	-53.27
5002.00	H	-45.50	-49.51	12.36	-8.36	-13	-32.50
7503.00	H	-44.84	-45.02	10.67	-10.50	-13	-31.84

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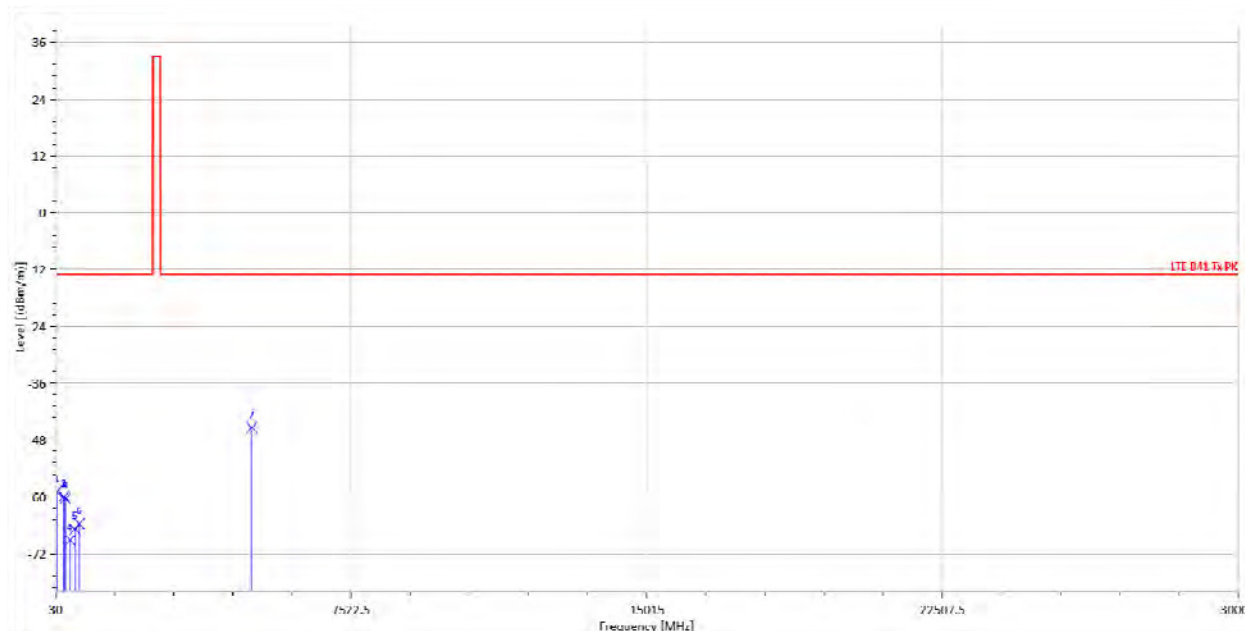
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Operation Mode : LTE B41 10M QPSK RB 1.0
Fundamental Frequency : 2501 MHz
Operation Band : Tx CH Low
EUT Pol. : E2

Test Date : 2017/3/16
Temp. / Humi. : 22.7deg_C/57RH
Test Engineer : Ashton
Measurement Antenna Pol. : Horizontal



Freq.	Note	EIRP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBi	Loss dB	@3m dBm/m	dB
59.10	S	-58.91	-56.76	-1.29	-0.87	-13	-45.91
245.34	S	-59.95	-63.61	5.48	-1.82	-13	-46.95
276.38	S	-60.38	-64.07	5.64	-1.95	-13	-47.38
398.60	S	-69.12	-72.44	5.76	-2.43	-13	-56.12
522.76	S	-66.86	-70.46	6.40	-2.80	-13	-53.86
630.43	S	-65.71	-69.96	6.99	-2.74	-13	-52.71
5002.00	H	-45.40	-49.40	12.36	-8.36	-13	-32.40

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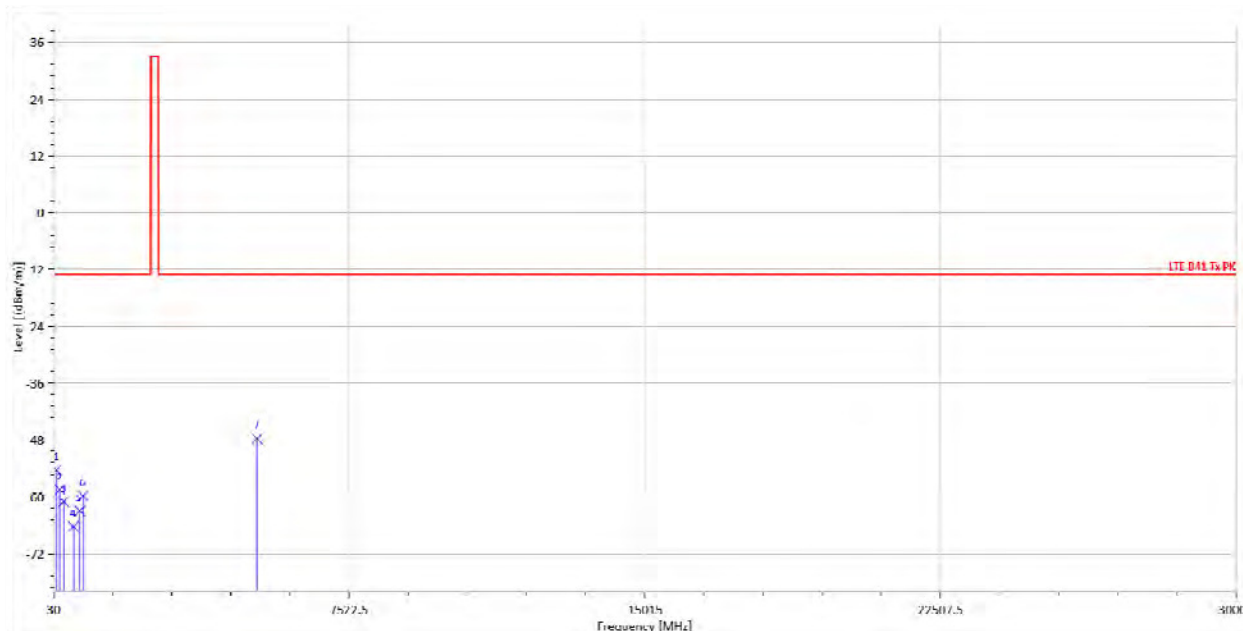
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Operation Mode : LTE B41 10M QPSK RB 1.0
Fundamental Frequency : 2593 MHz
Operation Band : Tx CH Mid
EUT Pol. : E2

Test Date : 2017/3/16
Temp. / Humi. : 22.7deg_C/57RH
Test Engineer : Ashton
Measurement Antenna Pol. : Vertical



Freq.	Note	EIRP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBi	Loss dB	@3m dBm/m	dB
100.81	S	-54.35	-52.26	-0.92	-1.17	-13	-41.35
189.08	S	-58.49	-63.04	6.14	-1.59	-13	-45.49
285.11	S	-60.99	-64.83	5.81	-1.96	-13	-47.99
534.40	S	-66.27	-70.11	6.41	-2.57	-13	-53.27
692.51	S	-62.96	-67.56	7.53	-2.92	-13	-49.96
776.90	S	-59.79	-64.32	7.64	-3.12	-13	-46.79
5186.00	H	-47.74	-51.70	12.42	-8.46	-13	-34.74

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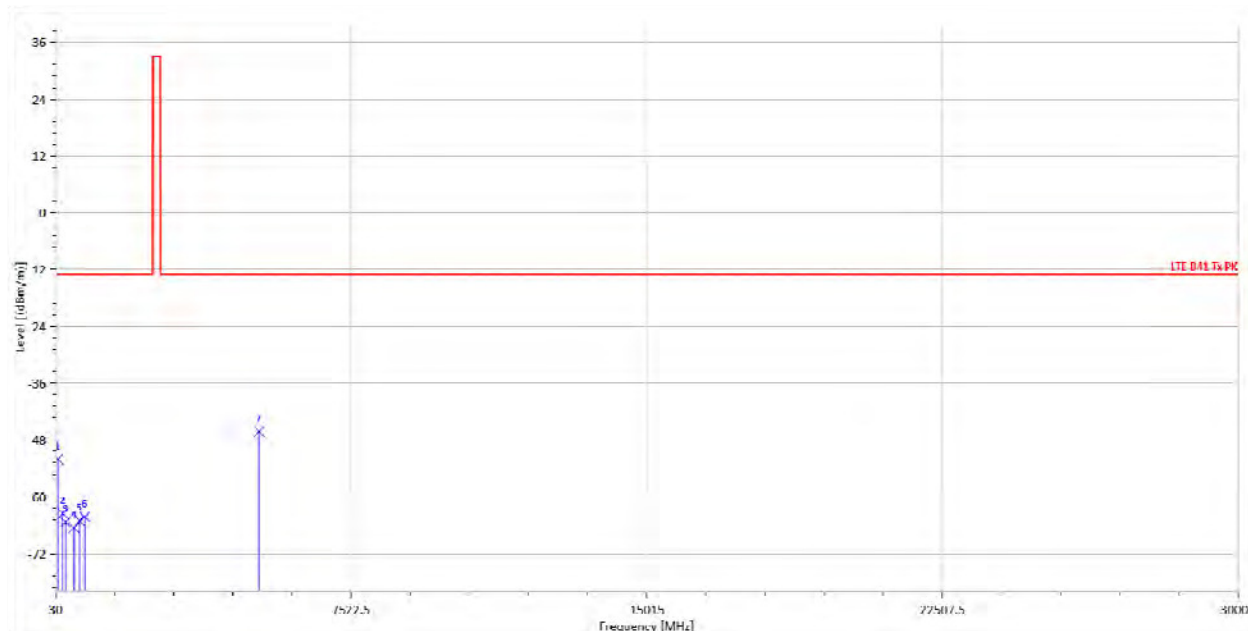
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Operation Mode : LTE B41 10M QPSK RB 1.0
Fundamental Frequency : 2593 MHz
Operation Band : Tx CH Mid
EUT Pol. : E2

Test Date : 2017/3/16
Temp. / Humi. : 22.7deg_C/57RH
Test Engineer : Ashton
Measurement Antenna Pol. : Horizontal



Freq.	Note	EIRP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBi	Loss dB	@3m dBm/m	dB
91.11	S	-52.02	-50.80	-0.10	-1.12	-13	-39.02
211.39	S	-63.52	-67.94	6.12	-1.71	-13	-50.52
278.32	S	-65.35	-69.08	5.70	-1.98	-13	-52.35
494.63	S	-66.53	-70.42	6.38	-2.49	-13	-53.53
638.19	S	-65.02	-69.02	7.02	-3.02	-13	-52.02
767.20	S	-64.24	-68.68	7.63	-3.20	-13	-51.24
5186.00	H	-46.18	-50.13	12.42	-8.46	-13	-33.18

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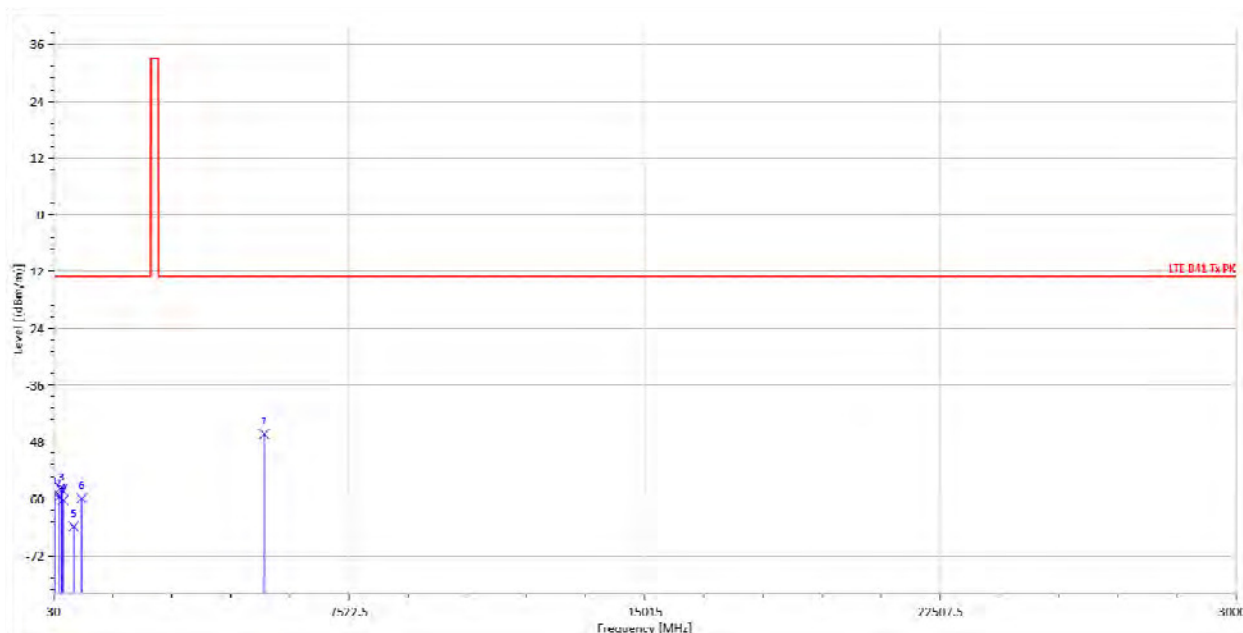
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Operation Mode : LTE B41 10M QPSK RB 1.0
Fundamental Frequency : 2685 MHz
Operation Band : Tx CH High
EUT Pol. : E2

Test Date : 2017/3/16
Temp. / Humi. : 22.7deg_C/57RH
Test Engineer : Ashton
Measurement Antenna Pol. : Vertical



Freq. MHz	Note F/H/E/S	EIRP dBm	SG Output Level dBm	Antenna Gain dBi	Cable Loss dB	Limit @3m dBm/m	Margin dB
60.07	S	-58.92	-57.12	-0.92	-0.89	-13	-45.92
177.44	S	-59.39	-63.34	5.46	-1.51	-13	-46.39
240.49	S	-58.15	-62.00	5.69	-1.85	-13	-45.15
274.44	S	-60.27	-63.94	5.58	-1.91	-13	-47.27
539.25	S	-65.85	-69.70	6.41	-2.56	-13	-52.85
739.07	S	-59.94	-64.17	7.61	-3.38	-13	-46.94
5370.00	H	-46.30	-50.20	12.47	-8.58	-13	-33.30

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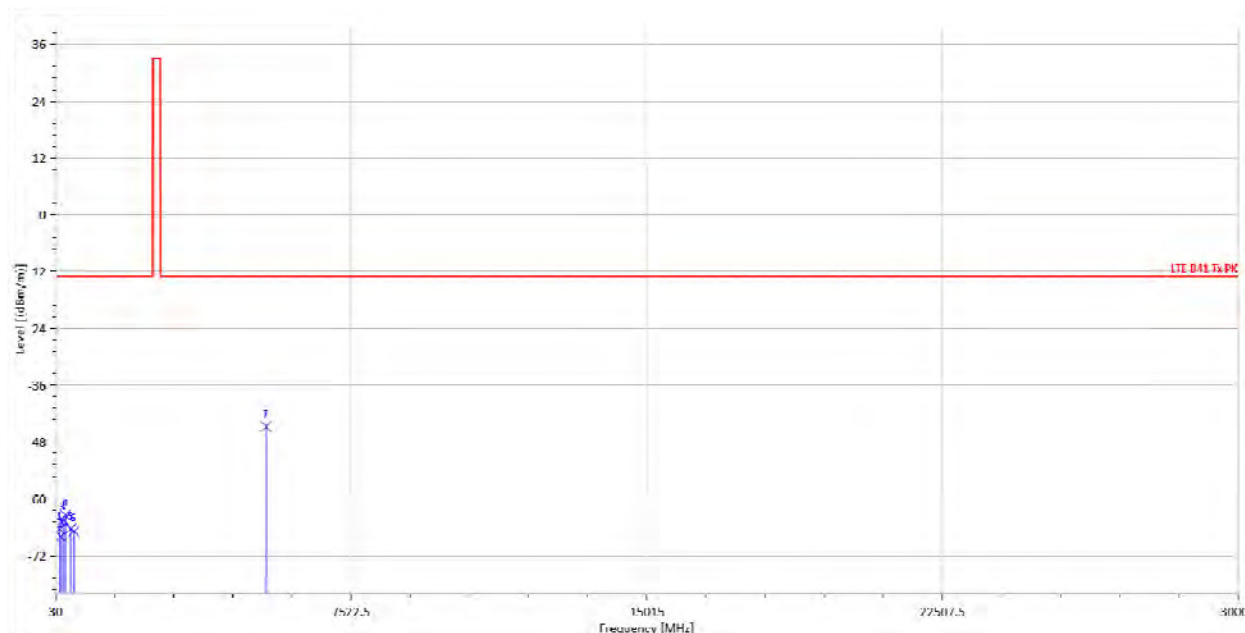
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Member of SGS Group

Operation Mode : LTE B41 10M QPSK RB 1.0
Fundamental Frequency : 2685 MHz
Operation Band : Tx CH High
EUT Pol. : E2

Test Date : 2017/3/16
Temp. / Humi. : 22.7deg_C/57RH
Test Engineer : Ashton
Measurement Antenna Pol. : Horizontal



Freq.	Note	EIRP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBi	Loss dB	@3m dBm/m	dB
133.79	S	-66.36	-65.40	0.36	-1.32	-13	-53.36
165.80	S	-67.97	-70.68	4.25	-1.54	-13	-54.97
224.00	S	-64.45	-69.14	6.43	-1.75	-13	-51.45
277.35	S	-63.45	-67.14	5.67	-1.98	-13	-50.45
416.06	S	-66.32	-69.84	5.92	-2.40	-13	-53.32
492.69	S	-66.84	-70.72	6.37	-2.49	-13	-53.84
5370.00	H	-44.74	-48.64	12.47	-8.58	-13	-31.74

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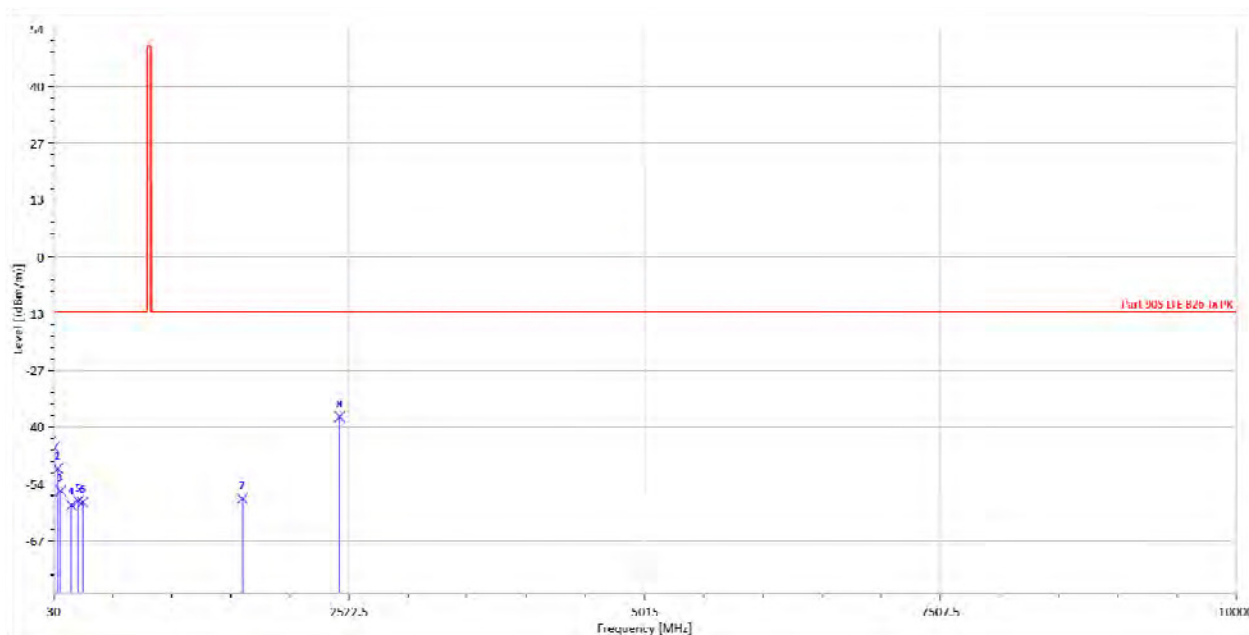
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Radiated Spurious Emission Measurement Result: LTE-Band 26 for Part 90S (The Worst Case)

Operation Mode :	LTE B26 3M QPSK RB 1.0	Test Date :	2017/3/15
Fundamental Frequency :	815.5 MHz	Temp. / Humi. :	19.0deg_C/52RH
Operation Band :	Tx CH Low	Test Engineer :	Ashton
EUT Pol. :	H	Measurement Antenna Pol. :	Vertical



Freq.	Note	ERP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBd	Loss dB	@3m dBm/m	dB
34.85	S	-45.34	-26.44	-18.19	-0.71	-13	-32.34
65.89	S	-50.34	-47.11	-2.29	-0.94	-13	-37.34
88.20	S	-55.57	-52.44	-2.03	-1.10	-13	-42.57
180.35	S	-59.01	-61.02	3.58	-1.58	-13	-46.01
237.58	S	-58.01	-59.86	3.69	-1.84	-13	-45.01
275.41	S	-58.30	-59.83	3.46	-1.92	-13	-45.30
1623.00	H	-57.46	-59.43	6.67	-4.70	-13	-44.46
2442.00	H	-38.00	-40.40	8.22	-5.81	-13	-25.00

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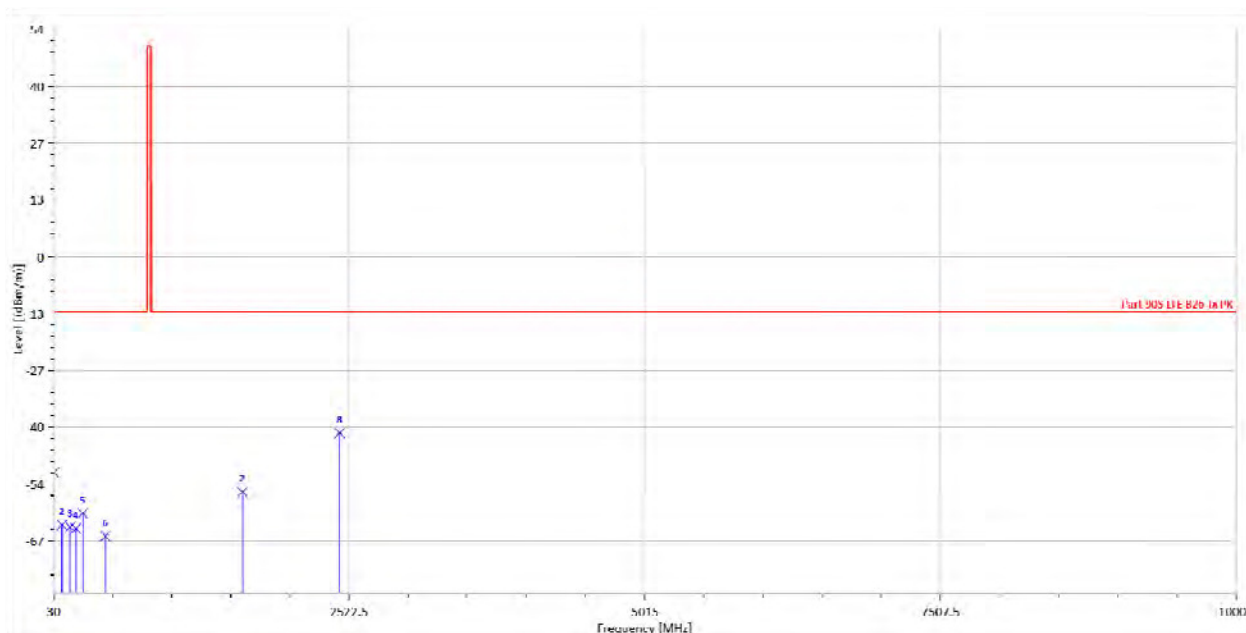
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Operation Mode : LTE B26 3M QPSK RB 1.0
Fundamental Frequency : 815.5 MHz
Operation Band : Tx CH Low
EUT Pol. : H

Test Date : 2017/3/15
Temp. / Humi. : 19.0deg_C/52RH
Test Engineer : Ashton
Measurement Antenna Pol. : Horizontal



Freq. MHz	Note F/H/E/S	ERP dBm	SG Output Level dBm	Antenna Gain dBd	Cable Loss dB	Limit @3m dBm/m	Margin dB
32.91	S	-51.22	-30.68	-19.87	-0.67	-13	-38.22
100.81	S	-63.70	-59.46	-3.07	-1.17	-13	-50.70
169.68	S	-64.18	-65.32	2.53	-1.40	-13	-51.18
219.15	S	-64.57	-67.20	4.37	-1.74	-13	-51.57
276.38	S	-60.96	-62.50	3.49	-1.95	-13	-47.96
466.50	S	-66.38	-68.07	4.16	-2.48	-13	-53.38
1623.00	H	-55.91	-57.88	6.67	-4.70	-13	-42.91
2442.00	H	-41.84	-44.25	8.22	-5.81	-13	-28.84

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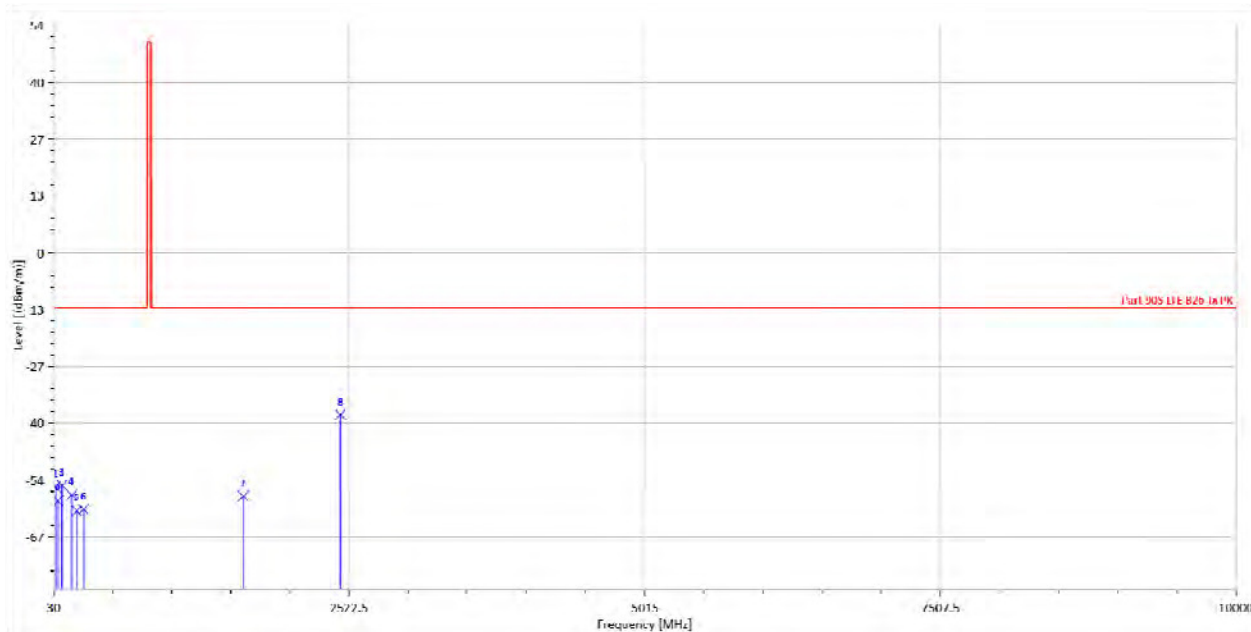
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Operation Mode : LTE B26 3M QPSK RB 1.0
Fundamental Frequency : 819 MHz
Operation Band : Tx CH Mid
EUT Pol. : H

Test Date : 2017/3/15
Temp. / Humi. : 19.0deg_C/52RH
Test Engineer : Ashton
Measurement Antenna Pol. : Vertical



Freq.	Note	ERP	SG Output	Antenna	Cable	Limit	Margin
MHz	F/H/E/S	dBm	Level dBm	Gain dBd	Loss dB	@3m dBm/m	dB
48.43	S	-55.55	-46.70	-8.04	-0.81	-13	-42.55
68.80	S	-58.91	-56.07	-1.90	-0.94	-13	-45.91
100.81	S	-55.28	-51.04	-3.07	-1.17	-13	-42.28
183.26	S	-57.55	-59.66	3.72	-1.60	-13	-44.55
225.94	S	-61.28	-63.79	4.22	-1.72	-13	-48.28
283.17	S	-60.98	-62.66	3.64	-1.96	-13	-47.98
1630.00	H	-57.83	-59.80	6.69	-4.72	-13	-44.83
2449.00	H	-38.42	-40.82	8.22	-5.82	-13	-25.42

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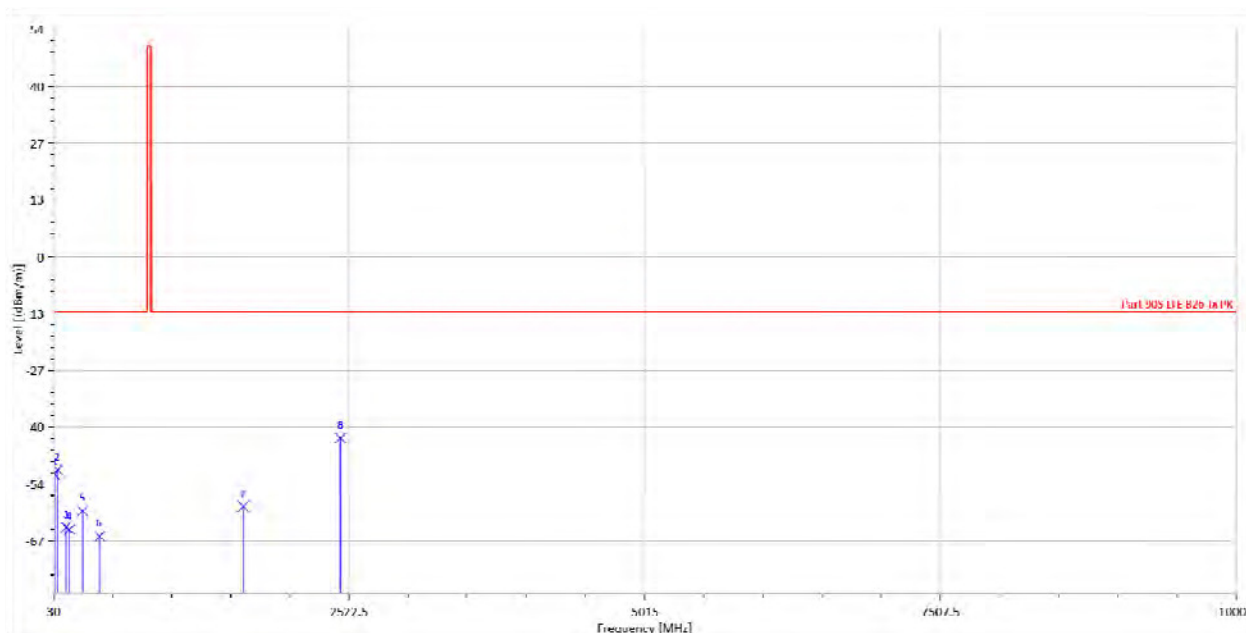
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Operation Mode : LTE B26 3M QPSK RB 1.0
Fundamental Frequency : 819 MHz
Operation Band : Tx CH Mid
EUT Pol. : H

Test Date : 2017/3/15
Temp. / Humi. : 19.0deg_C/52RH
Test Engineer : Ashton
Measurement Antenna Pol. : Horizontal



Freq. MHz	Note F/H/E/S	ERP dBm	SG Output Level dBm	Antenna Gain dBd	Cable Loss dB	Limit @3m dBm/m	Margin dB
37.76	S	-51.62	-35.11	-15.82	-0.70	-13	-38.62
62.98	S	-50.56	-46.90	-2.68	-0.98	-13	-37.56
133.79	S	-64.25	-61.14	-1.79	-1.32	-13	-51.25
162.89	S	-64.78	-64.95	1.77	-1.60	-13	-51.78
274.44	S	-60.45	-61.96	3.43	-1.91	-13	-47.45
418.97	S	-66.42	-67.76	3.80	-2.45	-13	-53.42
1630.00	H	-59.33	-61.30	6.69	-4.72	-13	-46.33
2449.00	H	-43.04	-45.44	8.22	-5.82	-13	-30.04

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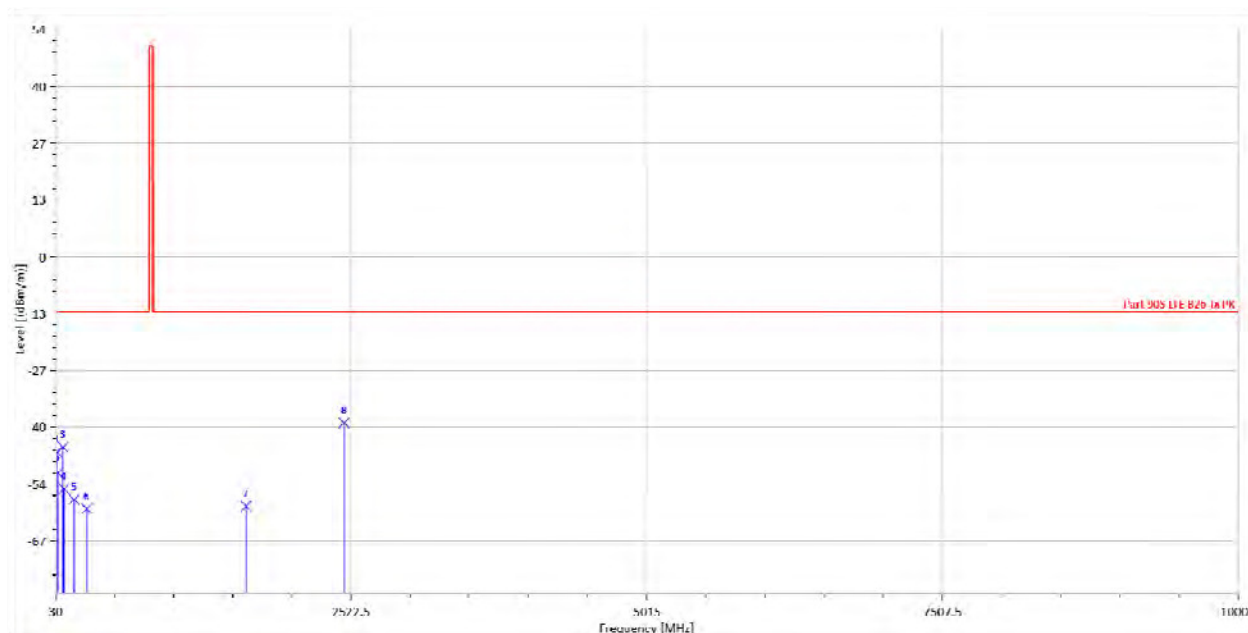
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Operation Mode : LTE B26 3M QPSK RB 1.0
Fundamental Frequency : 822.5 MHz
Operation Band : Tx CH High
EUT Pol. : H

Test Date : 2017/3/15
Temp. / Humi. : 19.0deg_C/52RH
Test Engineer : Ashton
Measurement Antenna Pol. : Vertical



Freq. MHz	Note F/H/E/S	ERP dBm	SG Output Level dBm	Antenna Gain dBd	Cable Loss dB	Limit @3m dBm/m	Margin dB
38.73	S	-46.34	-30.61	-15.03	-0.70	-13	-33.34
51.34	S	-51.32	-43.96	-6.53	-0.83	-13	-38.32
92.08	S	-45.25	-41.78	-2.34	-1.13	-13	-32.25
100.81	S	-55.14	-50.90	-3.07	-1.17	-13	-42.14
185.20	S	-57.66	-59.83	3.81	-1.64	-13	-44.66
292.87	S	-59.86	-61.62	3.74	-1.97	-13	-46.86
1637.00	H	-59.23	-61.23	6.72	-4.72	-13	-46.23
2463.00	H	-39.44	-41.83	8.23	-5.84	-13	-26.44

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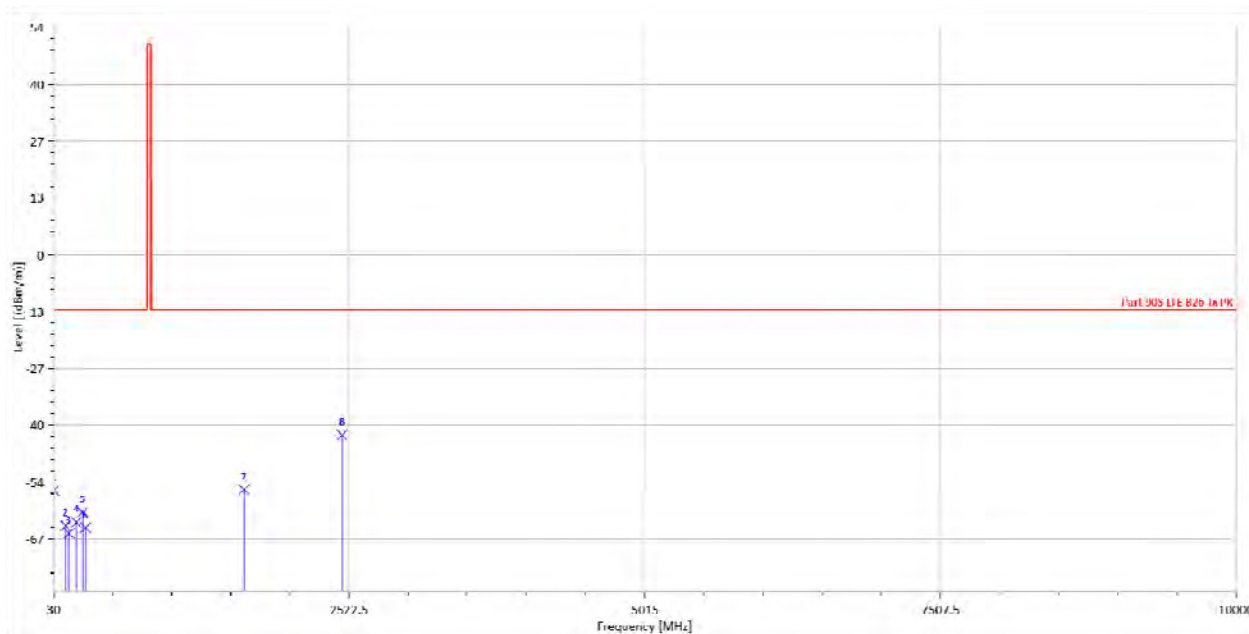
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Operation Mode : LTE B26 3M QPSK RB 1.0
Fundamental Frequency : 822.5 MHz
Operation Band : Tx CH High
EUT Pol. : H

Test Date : 2017/3/15
Temp. / Humi. : 19.0deg_C/52RH
Test Engineer : Ashton
Measurement Antenna Pol. : Horizontal



Freq. MHz	Note F/H/E/S	ERP dBm	SG Output Level dBm	Antenna Gain dBd	Cable Loss dB	Limit @3m dBm/m	Margin dB
32.91	S	-55.96	-35.42	-19.87	-0.67	-13	-42.96
130.88	S	-64.35	-60.88	-2.15	-1.32	-13	-51.35
159.01	S	-66.16	-66.04	1.34	-1.45	-13	-53.16
222.06	S	-63.55	-66.15	4.34	-1.75	-13	-50.55
275.41	S	-61.13	-62.67	3.46	-1.92	-13	-48.13
298.69	S	-64.83	-66.61	3.79	-2.01	-13	-51.83
1637.00	H	-55.77	-57.77	6.72	-4.72	-13	-42.77
2463.00	H	-42.78	-45.18	8.23	-5.84	-13	-29.78

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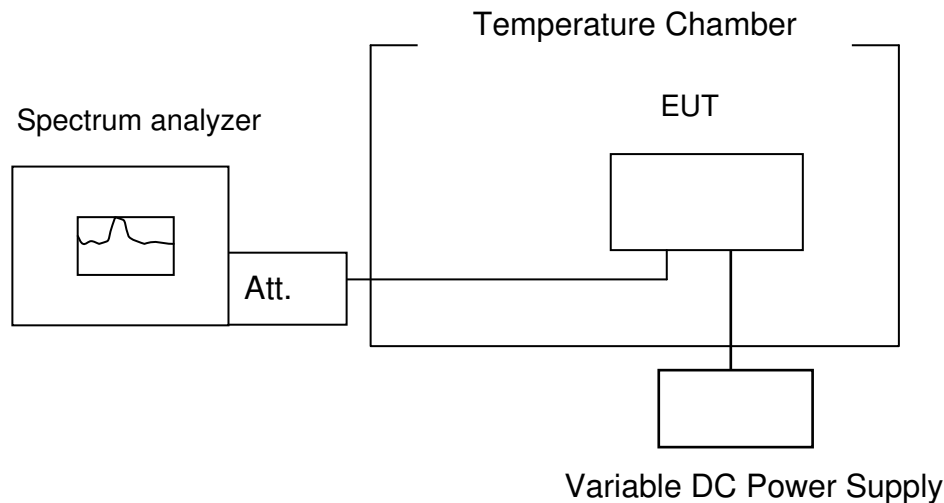
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11. FREQUENCY STABILITY MEASUREMENT

11.1. Standard Applicable:

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

11.2. Test Set-up:



Note: Measurement setup for testing on Antenna connector

11.3. Measurement Procedure:

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

Set chamber temperature to 25°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation (+/- 15%) and endpoint as declared by the manufacturer, record the maximum frequency change.

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11.4. Measurement Equipment Used:

Conducted Emission (measured at antenna port) Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	KEYSIGHT	N9010A	MY54510568	04/14/2016	04/13/2017
Communication Tester	Anritsu	MT8820C	6201107337	05/25/2016	05/24/2017
Coaxial Cable 30cm	WOKEN	00100A1F1A195C	RF01	12/12/2016	12/11/2017
Temperature Chamber	TERCHY	MHK-120LK	1020582	06/16/2016	06/15/2017
DC Block	PASTERNAK	PE8210	RF29	12/12/2016	12/11/2017
Splitter	RF-LAMBDA	RFLT2W1G18G	RF35	12/12/2016	12/11/2017
Attenuator	WOKEN	218FS-10	RF23	12/12/2016	12/11/2017
DC Power Supply	Agilent	E3640A	MY53140006	05/04/2016	05/03/2017
Communication Tester	Anritsu	MT8820C	6201107337	05/25/2016	05/24/2017
Spectrum Analyzer	KEYSIGHT	N9010A	MY54510568	04/14/2016	04/13/2017
Communication Tester	Anritsu	MT8820C	6201107337	05/25/2016	05/24/2017

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11.5. Measurement Result:

FREQUENCY ERROR vs. VOLTAGE

Reference Frequency:		LTE B2 Mid Channel	1880.0	MHz	20M QPSK CH 18900
Limit: +/- 2.5 ppm					
Power Supply	Environment	Frequency	Delta (Hz)	Limit (Hz)	
Vdc	Temperature (°C)	(MHz)			
4.2	25	1880	-2.4	4700	
3.8	25	1880	0	4700	
3.6	25	1880	-3.3	4700	
3.4 (End Point)	25	1880	-3.3	4700	

FREQUENCY ERROR vs. TEMPERATURE

Reference Frequency:		LTE B2 Mid Channel	1880.0	MHz	20M QPSK CH 18900
Limit: +/- 2.5 ppm					
Power Supply	Environment	Frequency	Delta (Hz)	Limit (Hz)	
Vdc	Temperature (°C)	(MHz)			
3.8	-30	1880	1	4700	
3.8	-20	1880	2.8	4700	
3.8	-10	1880	0.6	4700	
3.8	0	1880	3.6	4700	
3.8	10	1880	-0.4	4700	
3.8	20	1880	0	4700	
3.8	30	1880	4.3	4700	
3.8	40	1880	-0.2	4700	
3.8	50	1880	-1.5	4700	

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FREQUENCY ERROR vs. VOLTAGE

Reference Frequency:		LTE B4 Mid Channel	1732.5	MHz	20M QPSK CH 20175
Limit: +/- 2.5 ppm					
Power Supply	Environment	Frequency	Delta (Hz)	Limit (Hz)	
Vdc	Temperature (°C)	(MHz)			
4.2	25	1732.5	0.8	4331	
3.8	25	1732.5	0	4331	
3.6	25	1732.5	-0.1	4331	
3.4 (End Point)	25	1732.5	-0.1	4331	

FREQUENCY ERROR vs. TEMPERATURE

Reference Frequency:		LTE B4 Mid Channel	1732.5	MHz	20M QPSK CH 20175
Limit: +/- 2.5 ppm					
Power Supply	Environment	Frequency	Delta (Hz)	Limit (Hz)	
Vdc	Temperature (°C)	(MHz)			
3.8	-30	1732.5	-3.2	4331	
3.8	-20	1732.5	1	4331	
3.8	-10	1732.5	-3.3	4331	
3.8	0	1732.5	0	4331	
3.8	10	1732.5	1.8	4331	
3.8	20	1732.5	0	4331	
3.8	30	1732.5	1	4331	
3.8	40	1732.5	-0.1	4331	
3.8	50	1732.5	-0.6	4331	

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FREQUENCY ERROR vs. VOLTAGE

Reference Frequency:		LTE B5 Mid Channel	836.5	MHz	10M QPSK CH 20525
Limit: +/- 2.5 ppm					
Power Supply	Environment	Frequency	Delta (Hz)	Limit (Hz)	
Vdc	Temperature (°C)	(MHz)			
4.2	25	836.499997	-6.2	2091	
3.8	25	836.500004	0	2091	
3.6	25	836.5	-3.3	2091	
3.4 (End Point)	25	836.5	-3.3	2091	

FREQUENCY ERROR vs. TEMPERATURE

Reference Frequency:		LTE B5 Mid Channel	836.5	MHz	10M QPSK CH 20525
Limit: +/- 2.5 ppm					
Power Supply	Environment	Frequency	Delta (Hz)	Limit (Hz)	
Vdc	Temperature (°C)	(MHz)			
3.8	-30	836.500003	3.5	2091	
3.8	-20	836.500001	1.4	2091	
3.8	-10	836.499998	-1.8	2091	
3.8	0	836.500002	2.9	2091	
3.8	10	836.5	0.3	2091	
3.8	20	836.499999	0	2091	
3.8	30	836.500002	3.1	2091	
3.8	40	836.499998	-1	2091	
3.8	50	836.500003	3.2	2091	

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FREQUENCY ERROR vs. VOLTAGE

Reference Frequency:		LTE B12 Mid Channel	707.5	MHz	10M QPSK CH 23095
Limit: +/- 2.5 ppm					
Power Supply	Environment	Frequency	Delta (Hz)	Limit (Hz)	
Vdc	Temperature (°C)	(MHz)			
4.2	25	707.499992	-5	1769	
3.8	25	707.499997	0	1769	
3.6	25	707.500011	14.2	1769	
3.4 (End Point)	25	707.50001	12.9	1769	

FREQUENCY ERROR vs. TEMPERATURE

Reference Frequency:		LTE B12 Mid Channel	707.5	MHz	10M QPSK CH 23095
Limit: +/- 2.5 ppm					
Power Supply	Environment	Frequency	Delta (Hz)	Limit (Hz)	
Vdc	Temperature (°C)	(MHz)			
3.8	-30	707.499997	-0.5	1769	
3.8	-20	707.500008	11	1769	
3.8	-10	707.499995	-2.4	1769	
3.8	0	707.500002	5.2	1769	
3.8	10	707.499998	1.3	1769	
3.8	20	707.499997	0	1769	
3.8	30	707.499994	-3.3	1769	
3.8	40	707.500006	8.6	1769	
3.8	50	707.500009	11.8	1769	

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FREQUENCY ERROR vs. VOLTAGE

Reference Frequency:		LTE Band 25 Mid Channel	1882.5	MHz	20M QPSK CH 26365
Limit: +/- 2.5 ppm					
Power Supply	Environment	Frequency	Delta (Hz)	Limit (Hz)	
Vdc	Temperature (°C)	(MHz)			
4.2	25	1882.5	2.4	1775	
3.8	25	1882.5	0	1775	
3.6	25	1882.5	0.9	1775	
3.4 (End Point)	25	1882.5	0.9	1775	

FREQUENCY ERROR vs. TEMPERATURE

Reference Frequency:		LTE Band 25 Mid Channel	1882.5	MHz	20M QPSK CH 26365
Limit: +/- 2.5 ppm					
Power Supply	Environment	Frequency	Delta (Hz)	Limit (Hz)	
Vdc	Temperature (°C)	(MHz)			
3.8	-30	1882.5	-1	1775	
3.8	-20	1882.5	-2.5	1775	
3.8	-10	1882.5	-3.4	1775	
3.8	0	1882.5	0.5	1775	
3.8	10	1882.5	1.5	1775	
3.8	20	1882.5	0	1775	
3.8	30	1882.5	-0.7	1775	
3.8	40	1882.5	2.4	1775	
3.8	50	1882.5	-0.3	1775	

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FREQUENCY ERROR vs. VOLTAGE

Reference Frequency:		LTE B26 Mid Channel	836.5	MHz	15M QPSK CH 26915
Limit: +/- 2.5 ppm					
Power Supply	Environment	Frequency	Delta (Hz)	Limit (Hz)	
Vdc	Temperature (°C)	(MHz)			
4.2	25	836.499988	-31	2091	
3.8	25	836.500019	0	2091	
3.6	25	836.500011	-8	2091	
3.4 (End Point)	25	836.500015	-4	2091	

FREQUENCY ERROR vs. TEMPERATURE

Reference Frequency:		LTE B26 Mid Channel	836.5	MHz	15M QPSK CH 26915
Limit: +/- 2.5 ppm					
Power Supply	Environment	Frequency	Delta (Hz)	Limit (Hz)	
Vdc	Temperature (°C)	(MHz)			
3.8	-30	836.499991	-27	2091	
3.8	-20	836.499989	-29	2091	
3.8	-10	836.499993	-25	2091	
3.8	0	836.500012	-6	2091	
3.8	10	836.499992	-26	2091	
3.8	20	836.500018	0	2091	
3.8	30	836.500014	-4	2091	
3.8	40	836.500007	-11	2091	
3.8	50	836.500013	-5	2091	

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FREQUENCY ERROR vs. VOLTAGE

Reference Frequency:		LTE B41 Mid Channel	2593	MHz	10M QPSK CH 40620
Limit: +/- 2.5 ppm					
Power Supply	Environment	Frequency	Delta (Hz)	Limit (Hz)	
Vdc	Temperature (°C)	(MHz)			
4.2	25	2593.00002	5	6488	
3.8	25	2593.00001	0	6488	
3.6	25	2593.00002	2	6488	
3.4 (End Point)	25	2593.00002	3	6488	

FREQUENCY ERROR vs. TEMPERATURE

Reference Frequency:		LTE B41 Mid Channel	2593	MHz	10M QPSK CH 40740
Limit: +/- 2.5 ppm					
Power Supply	Environment	Frequency	Delta (Hz)	Limit (Hz)	
Vdc	Temperature (°C)	(MHz)			
3.8	-30	2593	1.8	6488	
3.8	-20	2593	0.3	6488	
3.8	-10	2593	-0.6	6488	
3.8	0	2593	5.2	6488	
3.8	10	2593	1.3	6488	
3.8	20	2593	0	6488	
3.8	30	2592.99999	-3.3	6488	
3.8	40	2593.00001	8.6	6488	
3.8	50	2593	1.8	6488	

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FREQUENCY ERROR vs. VOLTAGE (LTE B26 for Part 90S)

Reference Frequency:		LTE B26 Mid Channel	819.0	MHz	1.4M QPSK CH 26740
Limit: +/- 2.5 ppm					
Power Supply	Environment	Frequency	Delta (Hz)	Limit (Hz)	
Vdc	Temperature (°C)	(MHz)			
4.2	25	819	-0.4	2048	
3.8	25	819	0	2048	
3.6	25	819	-1	2048	
3.4 (End Point)	25	819	-1.3	2048	

FREQUENCY ERROR vs. TEMPERATURE

Reference Frequency:		LTE B26 Mid Channel	819.0	MHz	1.4M QPSK CH 26740
Limit: +/- 2.5 ppm					
Power Supply	Environment	Frequency	Delta (Hz)	Limit (Hz)	
Vdc	Temperature (°C)	(MHz)			
3.8	-30	819	5.1	2048	
3.8	-20	819	1.1	2048	
3.8	-10	819	1.5	2048	
3.8	0	819	5.8	2048	
3.8	10	819	1.3	2048	
3.8	20	819	0	2048	
3.8	30	819	1.7	2048	
3.8	40	819	0.2	2048	
3.8	50	819	-0.7	2048	

Note: The battery is rated 3.8Vdc.

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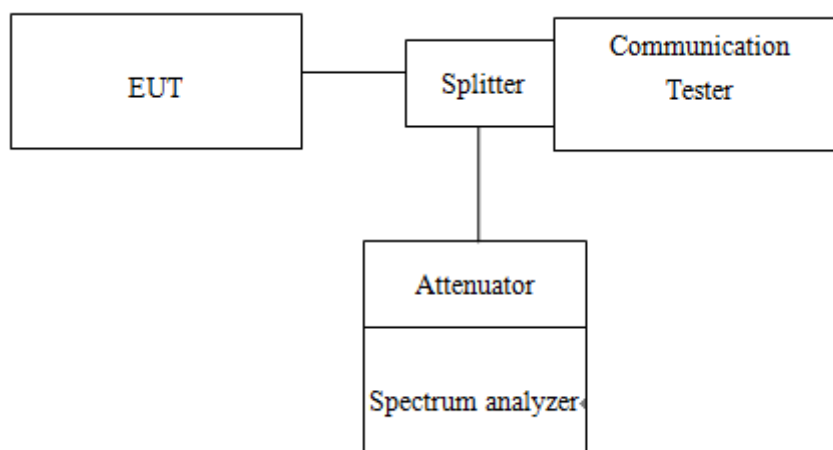
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12. PEAK TO AVERAGE RATIO

12.1. Standard Applicable

The peak-to-average ratio (PAR) of the transmission may not exceed 13dB.

12.2. Test SET-UP



12.3. Measurement Procedure

1. KDB 971168 D01 is employed as the following procedure is proper adjusted accordingly:
2. Set resolution/measurement bandwidth $\geq$ signal's occupied bandwidth; & internal = 1ms
3. Set the number of counts to a value that stabilizes the measured CCDF curve.

12.4. Measurement Equipment Used

Conducted Emission (measured at antenna port) Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	KEYSIGHT	N9010A	MY54510568	04/14/2016	04/13/2017
Communication Tester	Anritsu	MT8820C	6201107337	05/25/2016	05/24/2017
Coaxial Cable 30cm	WOKEN	00100A1F1A195C	RF01	12/12/2016	12/11/2017
Temperature Chamber	TERCHY	MHK-120LK	1020582	06/16/2016	06/15/2017
DC Block	PASTERNAK	PE8210	RF29	12/12/2016	12/11/2017
Splitter	RF-LAMBDA	RFLT2W1G18G	RF35	12/12/2016	12/11/2017
Attenuator	WOKEN	218FS-10	RF23	12/12/2016	12/11/2017
DC Power Supply	Agilent	E3640A	MY53140006	05/04/2016	05/03/2017
Communication Tester	Anritsu	MT8820C	6201107337	05/25/2016	05/24/2017

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12.5. Measurement Result

Tabular Results:

LTE BAND 2							
Channel bandwidth: 1.4MHz				Channel bandwidth: 3MHz			
Freq. (MHz)	CH	Peak-to-Average Ratio (dB)		Freq. (MHz)	CH	Peak-to-Average Ratio (dB)	
		16QAM	LIMIT			16QAM	LIMIT
1850.7	18607	5.92	13	1851.5	18615	5.87	13
1880.0	18900	5.90	13	1880.0	18900	6.08	13
1909.3	19193	5.81	13	1908.5	19185	6.03	13

LTE BAND 2							
Channel bandwidth: 5MHz				Channel bandwidth: 10MHz			
Freq. (MHz)	CH	Peak-to-Average Ratio (dB)		Freq. (MHz)	CH	Peak-to-Average Ratio (dB)	
		16QAM	LIMIT			16QAM	LIMIT
1852.5	18625	5.89	13	1855.0	18650	5.92	13
1880.0	18900	5.84	13	1880.0	18900	5.96	13
1907.5	19175	5.86	13	1905.0	19150	5.86	13

LTE BAND 2							
Channel bandwidth: 15MHz				Channel bandwidth: 20MHz			
Freq. (MHz)	CH	Peak-to-Average Ratio (dB)		Freq. (MHz)	CH	Peak-to-Average Ratio (dB)	
		16QAM	LIMIT			16QAM	LIMIT
1857.5	18675	6.70	13	1860.0	18700	7.05	13
1880.0	18900	6.64	13	1880.0	18900	7.05	13
1902.5	19125	6.64	13	1900.0	19100	6.87	13

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LTE BAND 4							
Channel bandwidth: 1.4MHz				Channel bandwidth: 3MHz			
Freq. (MHz)	CH	Peak-to-Average Ratio (dB)		Freq. (MHz)	CH	Peak-to-Average Ratio (dB)	
		16QAM	LIMIT			16QAM	LIMIT
1710.7	19957	5.70	13	1711.5	19965	5.09	13
1732.5	20175	5.69	13	1732.5	20175	5.03	13
1754.3	20393	5.84	13	1753.5	20385	5.32	13

LTE BAND 4							
Channel bandwidth: 5MHz				Channel bandwidth: 10MHz			
Freq. (MHz)	CH	Peak-to-Average Ratio (dB)		Freq. (MHz)	CH	Peak-to-Average Ratio (dB)	
		16QAM	LIMIT			16QAM	LIMIT
1712.5	19957	5.73	13	1715.0	20000	5.83	13
1732.5	20175	5.76	13	1732.5	20175	5.81	13
1752.5	20375	5.89	13	1750.0	20350	5.89	13

LTE BAND 4							
Channel bandwidth: 15MHz				Channel bandwidth: 20MHz			
Freq. (MHz)	CH	Peak-to-Average Ratio (dB)		Freq. (MHz)	CH	Peak-to-Average Ratio (dB)	
		16QAM	LIMIT			16QAM	LIMIT
1717.5	20025	6.60	13	1720.0	20050	7.03	13
1732.5	20175	6.60	13	1732.5	20175	6.94	13
1747.5	20325	6.60	13	1745.0	20300	7.05	13

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LTE BAND 41							
Channel bandwidth: 5MHz				Channel bandwidth: 10MHz			
Freq. (MHz)	CH	Peak-to-Average Ratio (dB)		Freq. (MHz)	CH	Peak-to-Average Ratio (dB)	
		16QAM	Limit			16QAM	Limit
2498.5	39675	8.83	13	2501.0	39700	9.85	13
2593.0	40620	8.69	13	2593.0	40620	9.3	13
2687.5	41565	9.97	13	2685.0	41540	9.66	13

LTE BAND 41							
Channel bandwidth: 15MHz				Channel bandwidth: 20MHz			
Freq. (MHz)	CH	Peak-to-Average Ratio (dB)		Freq. (MHz)	CH	Peak-to-Average Ratio (dB)	
		16QAM	Limit			16QAM	Limit
2503.5	39725	9.02	13	2506.0	39750	9.25	13
2593.0	40620	9.74	13	2593.0	40620	9.15	13
2682.5	41515	8.91	13	2680.0	41490	11.01	13

Measurement Results:

Please refer to next page.

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LTE_Band2 1.4MHz_16-QAM 6 0_LowCH18607-1850.7



LTE_Band2 3MHz_16-QAM 15 0_LowCH18615-1851.5



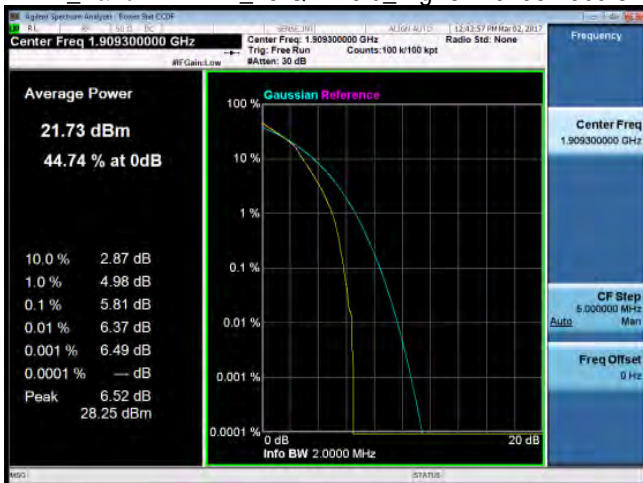
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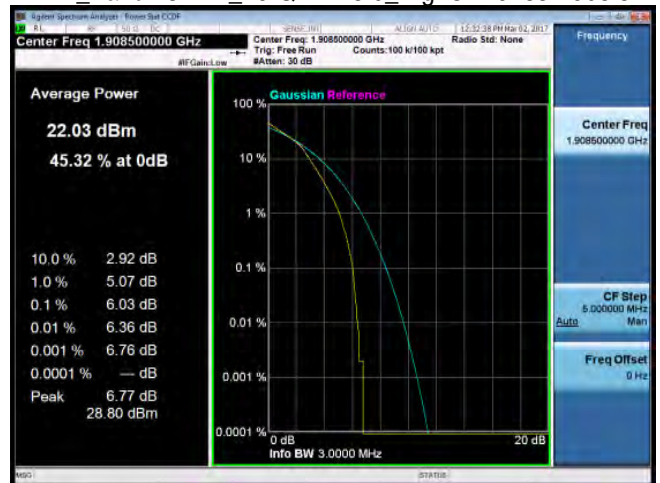
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LTE_Band2 1.4MHz_16-QAM 6 0_HighCH19193-1909.3



LTE_Band2 3MHz_16-QAM 15 0_HighCH19185-1908.5



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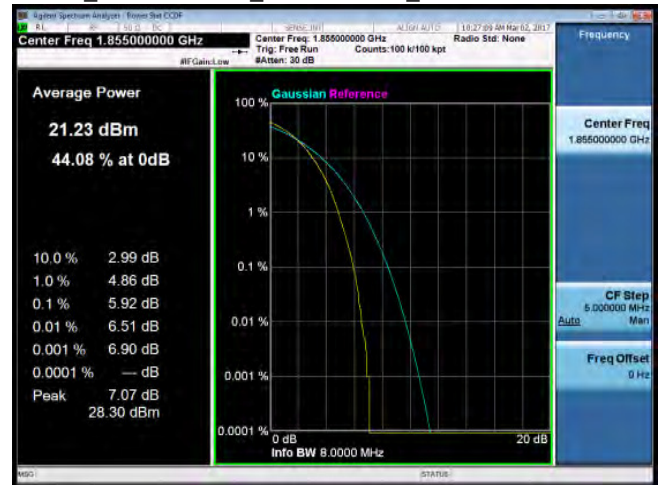
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LTE_Band2 5MHz_16-QAM 25 0_LowCH18625-1852.5



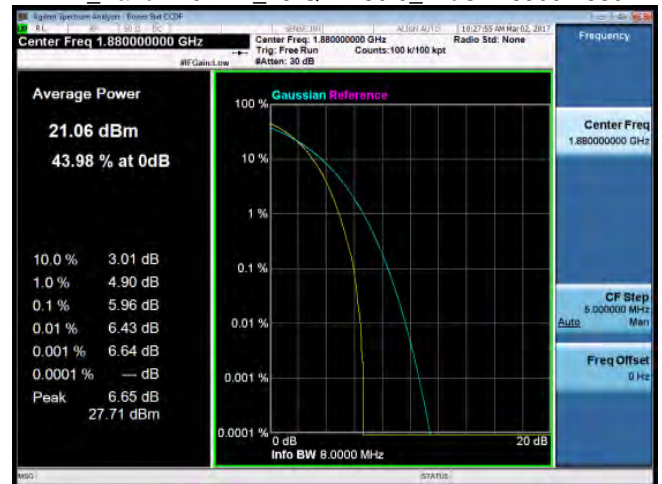
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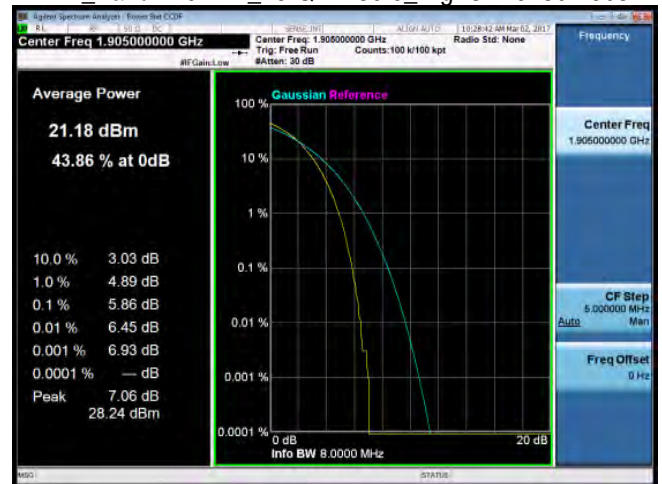
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LTE_Band2 10MHz_16-QAM 50 0_HighCH19150-1905



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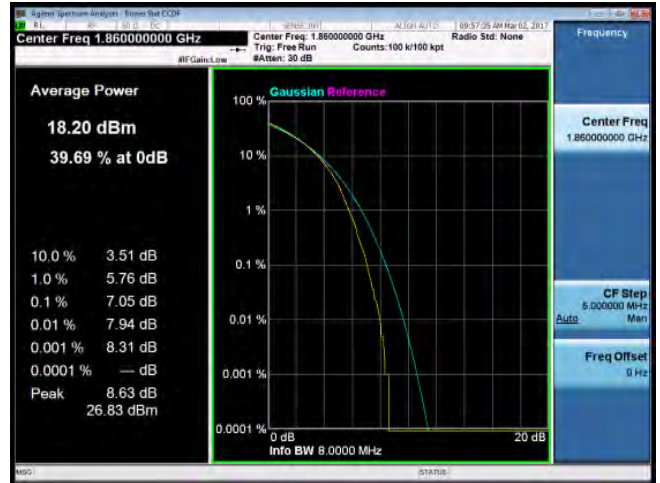
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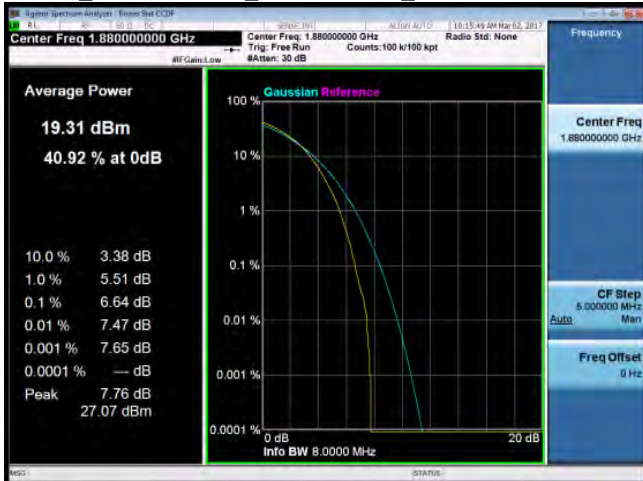
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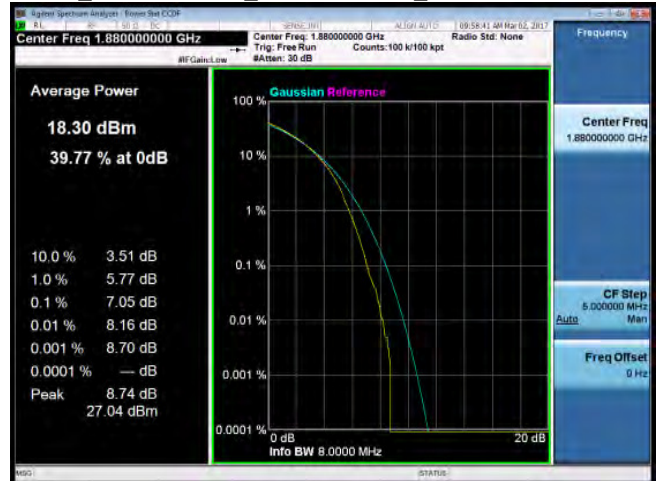
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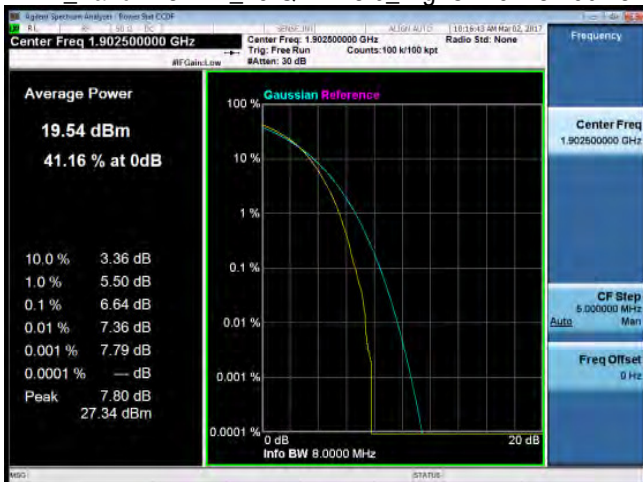
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LTE_Band2 20MHz_16-QAM 100 0_MidCH18900-1880



LTE_Band2 15MHz_16-QAM 75 0_HighCH19125-1902.5



LTE_Band2 20MHz_16-QAM 100 0_HighCH19100-1900



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