





Plot 7-22. Band Edge Plot SISO ANT1 (802.11b - Ch. 13)

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Spectrum Analyzer 1 Swept SA + Ö Frequency Input Z: 50 Ω Atten: 26 dB #Avg Type: Power (RMS 1 2 3 4 5 6 Trig: Free Run KEYSIGHT Input: RF PNO: Fast Center Frequency r CCorr RCal Settings Preamp: Off Gate: Off MWWWW Align: Auto 2.483500000 GHz Freq Ref: Int (S) IF Gain: Low Sig Track: Off PNNNN NEF Off Span ΔMkr1 -22.785 MHz 1 Spectrum 70.0000000 MHz 39.41 dB Scale/Div 10 dB Ref Level 15.00 dBm Swept Span Zero Span Log  $1\Lambda 2$ Full Span L. Lineard Start Freq 2.448500000 GHz Whenter Stop Freq All Martin All 2.518500000 GHz AUTO TUNE CF Step 7.000000 MHz Ht. J. Juger Var And Lloway Withoway Mrs. Marbart Auto Man Freq Offset 0 Hz X Axis Scale Center 2.48350 GHz #Video BW 1.0 MHz Span 70.00 MHz Log Lin #Res BW 100 kHz Sweep 2.00 ms (2001 pts) May 14, 2021 1:51:38 PM ?  $\mathbf{X}$ ···· ÷÷. Ŋ Plot 7-24. Band Edge Plot SISO ANT1 (802.11g - Ch. 11)

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Plot 7-26. Band Edge Plot SISO ANT1 (802.11g - Ch. 13)

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# 7.6 Conducted Spurious Emissions §15.247(d); RSS-247 [5.5]

## **Test Overview and Limit**

All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. For the following out of band conducted spurious emissions plots, the EUT was investigated in all available data rates for "b", "g", "n", "ax" modes. The worst case spurious emissions for the 2.4GHz band were found while transmitting in "b" mode at 1 Mbps and are shown in the plots below.

The limit for out-of-band spurious emissions at the band edge is 20dB below the fundamental emission level, as determined from the in-band power measurement of the DTS channel performed in a 100kHz bandwidth per the procedure in Section 11.1 of ANSI C63.10-2013 and KDB 558074 D01 v05.

## **Test Procedure Used**

ANSI C63.10-2013 – Section 11.11.3 KDB 558074 D01 v05 – Section 8.5 ANSI C63.10-2013 – Section 14.3.3 KDB 662911 D01 v02r01 – Section E)3)b)

#### **Test Settings**

- 1. Start frequency was set to 30MHz and stop frequency was set to 25GHz (separated into two plots per channel)
- 2. RBW = 1MHz
- 3. VBW = 3MHz
- 4. Detector = Peak
- 5. Trace mode = max hold
- 6. Sweep time = auto couple
- 7. The trace was allowed to stabilize

## Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.



Figure 7-5. Test Instrument & Measurement Setup

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# Test Notes

- 1. RBW was set to 1MHz rather than 100kHz in order to increase the measurement speed.
- 2. The display line shown in the following plots denotes the limit at 20dB below the fundamental emission level measured in a 100kHz bandwidth. However, since the traces in the following plots are measured with a 1MHz RBW, the display line may not necessarily appear to be 20dB below the level of the fundamental in a 1MHz bandwidth.
- 3. For plots showing conducted spurious emissions near the limit, the frequencies were investigated with a reduced RBW to ensure that no emissions were present.
- 4. The conducted spurious emissions were measured to relative limits. Therefore, in accordance with ANSI C63.10-2013 and KDB 662911 D01 v02r01 Section E)3)b), it was unnecessary to show compliance through the summation of test results of the individual outputs.

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