#### 2.11.5 900 MHz Channel

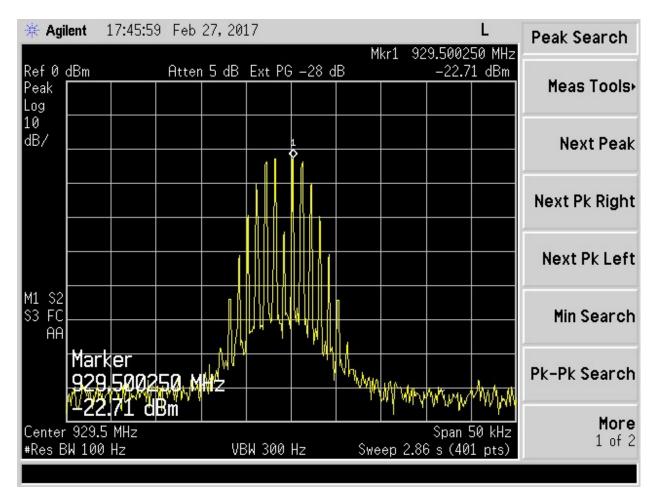


Figure 104. Input 929.5 MHz @ 12.5 kHz

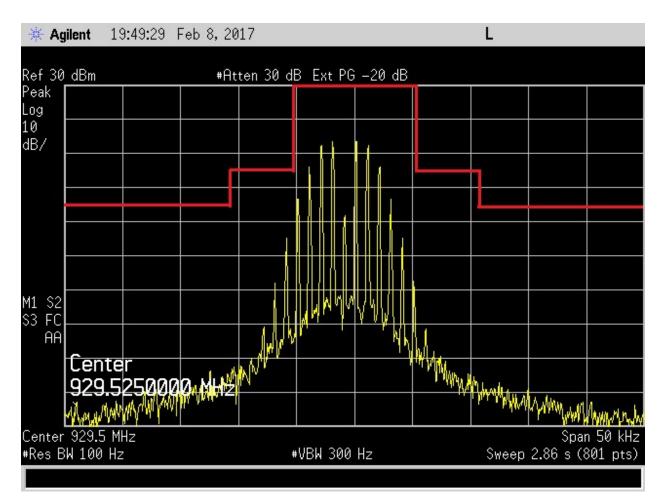


Figure 105. 929.5 MHz @ 12.5 kHz, Mask B

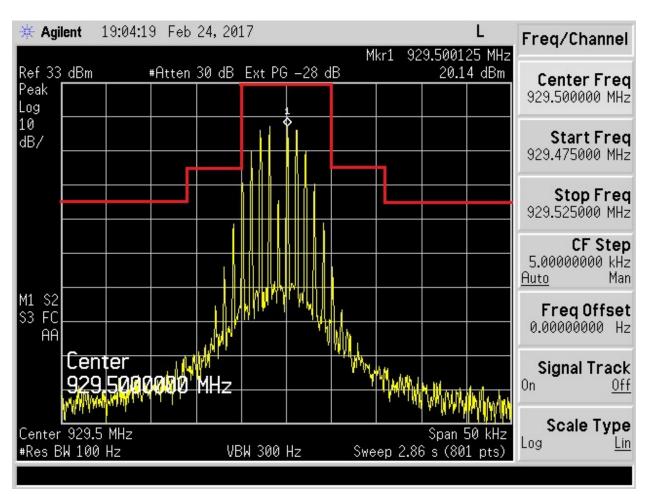


Figure 106. 929.5 MHz @ 12.5 +3.0 dB, Mask B

🔆 Agi	lent 1	7:49:30	0 Feb	27,20	17			L	Peak Search
Ref Ø Peak Log	dBm		Atten	5 dB	Ext PG	6 –28 d	Mkr1 B	929.503125 M -24.88 dB	
10 dB/									Next Peak
									Next Pk Right
									Next Pk Left
M1 S2 S3 FC AA									Min Search
	Mark 929.		25 M	Hz_		ιγ. 		White Mark	Pk-Pk Search
Center #Res B	929.5 W 100		DIIII	V	L BW 300	Hz	Sweep	Span 50 kH 2.86 s (401 pts	

Figure 107. Input 929.5 MHz @ 25 kHz

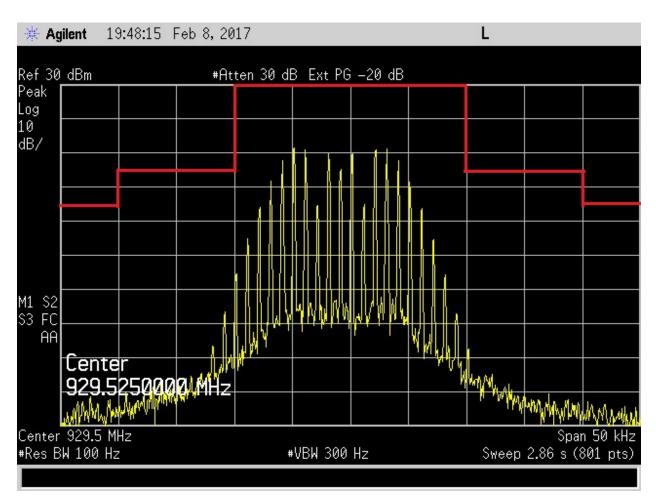


Figure 108. 929.5 MHz @ 25 kHz, Mask B

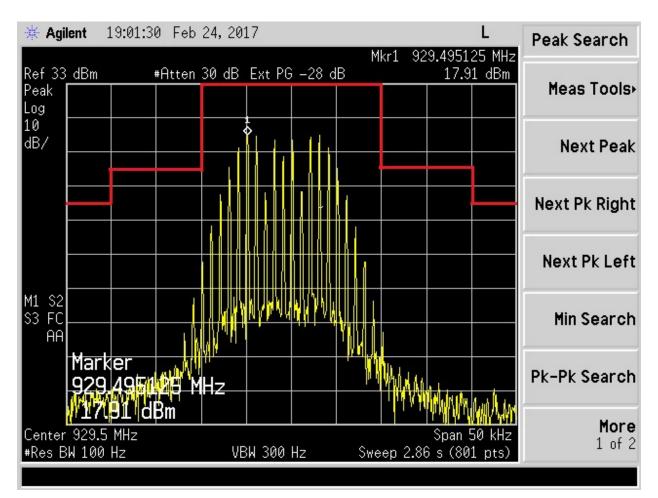


Figure 109. 929.5 MHz @ 25 kHz +3.0 dB, Mask

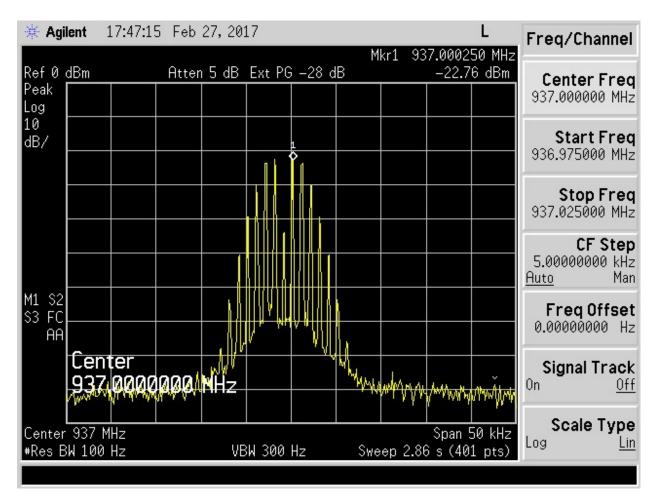


Figure 110. Input 937 MHz @ 12.5 kHz

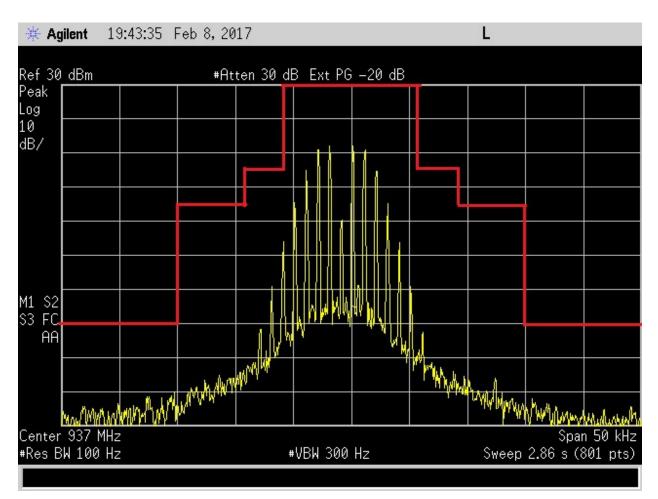


Figure 111. 937 MHz @ 12.5 kHz, Mask I

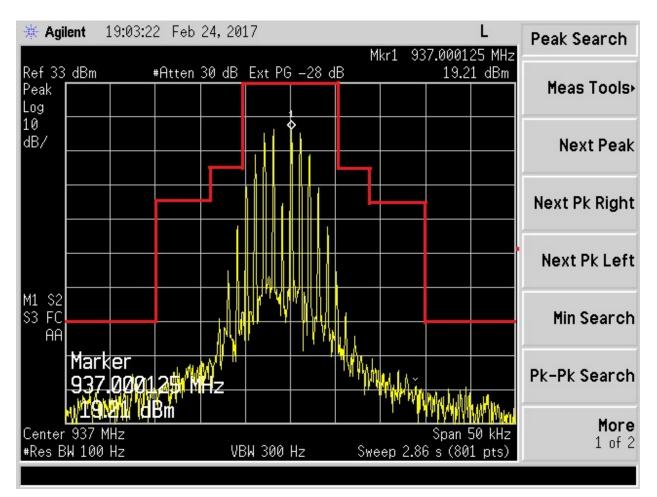


Figure 112. 937 MHz @ 12.5 kHz +3.0 dB, Mask I

🔆 Agi	lent 1	7:48:19	9 Feb	27,20	017			L		k Search
Ref Ø Peak Log	dBm		Atter	5 dB	Ext PO	€ -28 c	Mkr1 IB	937.003125	dBm	eas Tools•
10 dB/										Next Peak
									Nex	t Pk Right
									Ne	xt Pk Left
M1 S2 S3 FC AA									•	lin Search
	Mark 937	er 0031	25/M	₩// Hz		Υ <u>Υ</u>	WWWWWWWW	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Pk-I	Pk Search
Center #Res B	937 M 100			V	L BW 300	Hz	Sweep	Span 50 2.86 s (401 )		<b>More</b> 1 of 2

Figure 113. Input 937 MHz @ 25 kHz

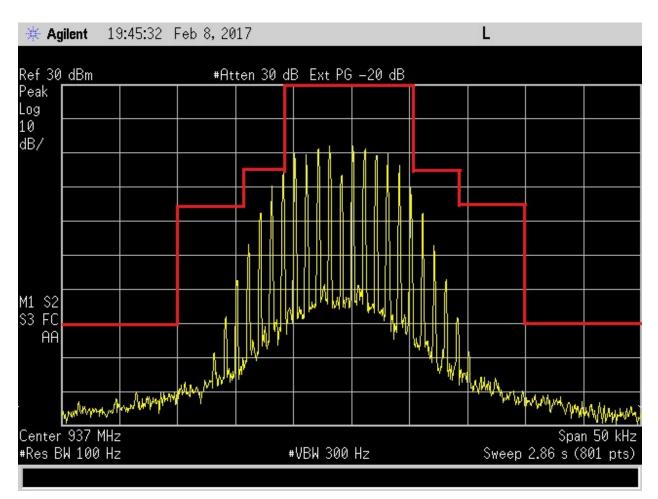


Figure 114. 937 MHz @ 25 kHz, Mask I

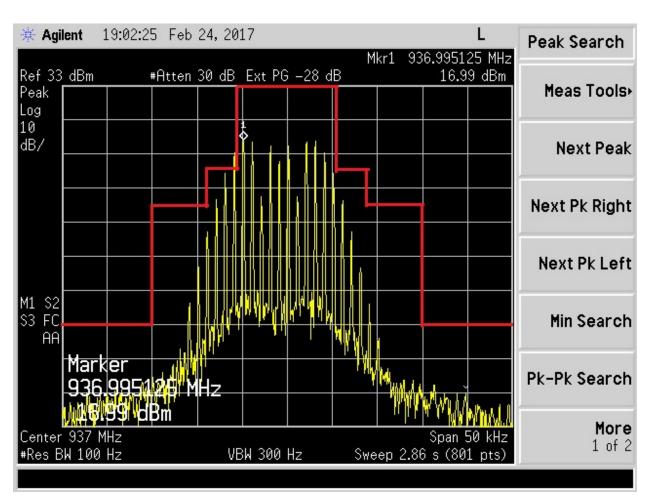


Figure 115. 937 MHz @ 25 kHz +3.0 dB, Mask I

### 2.12 Intermodulation (FCC Section 90.219(d)(6i) and RSS-131, 6.3)

FCC requires good engineering practice to be used in regard to the radiation of intermodulation products and noise, such that interference to licensed communications systems is avoided. In the event of harmful interference caused by any given deployment, the FCC may require additional attenuation or filtering of the emissions and/or noise from signal boosters or signal booster systems, as necessary, to eliminate the interference.

The EUT only takes fiber optic as its input; therefore testing for intermodulation cannot be applied here.

### 2.13 Frequency Stability (FCC 2.1055, 90.213 and RSS-131 5.2.4)

The EUT has no input signal processing capability, the frequency stability measurements in this section are not required.

### 2.14 Spurious Emissions (FCC Section 90.219(d)(e)(3) and RSS-131, 6.5)

Spurious Emissions from a signal booster must not exceed -13 dBm within any 100 kHz measurement bandwidth.

### 2.14.1 Radiated Spurious Emissions Measurement

The EUT was tested in a semi-anechoic chamber with the turntable set 3m from the receiving antenna. A spectrum analyzer was used to verify that the EUT met the requirements for Radiated Emissions. The EUT was tested by rotating it 360° with the receiving antenna in both the vertical then horizontal position. The receive antenna was elevated from 1 m to 4 m to ensure that the maximum emission was captured. A signal generator was used to provide a CW signal that was FM modulated to the EUT. The EUT output was terminated with a 50 ohm non-radiating load.

The RBW was set to 100 KHz for measurements below 1 GHz and 1 MHz for measurements above 1 GHz. The VBW was 3 times the RBW.

FCC limit = -13 dBm (Assuming EIPR) Radiated emission limit = -13 dBm - 20 log(3m) +104.8 = 82.25 dBuV/m

The following plots show the worst-case results, which were measured with the antennas in the vertical position.

# 2.14.1.1 VHF Radiated Spurious Emissions Plots

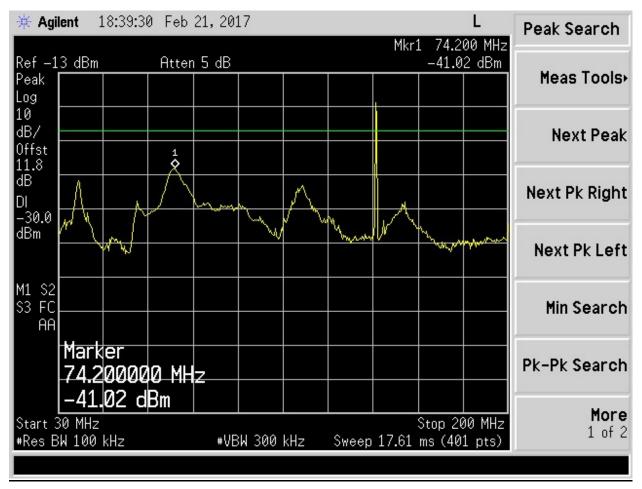


Figure 116. 150 MHz Vertical 30 – 200 MHz

₩ Agilent     18:52:06     Feb     21, 2017     L	Peak Search
Mkr1_302 MHz	
Ref -13 dBm Atten 5 dB -37.67 dBm Peak	Meas Tools+
Log	nous room.
10	
	Next Peak
0ffst 🕹	ļ
dB	Novt Dk Dight
	Next Pk Right
-30.0 dBm _ 116.	
man have been and been and have and have a second and the second a	Next Pk Left
M1 S2	Min Coursel
S3 FC	Min Search
Marker	Pk-Pk Search
302.000000 MHz	
-37.67 dBm	More
Start 200 MHz Stop 1 GHz Stop 1 GHz	1 of 2
#Res BW 100 kHz	

# Figure 117. 150 MHz Vertical 200- 1000 MHz

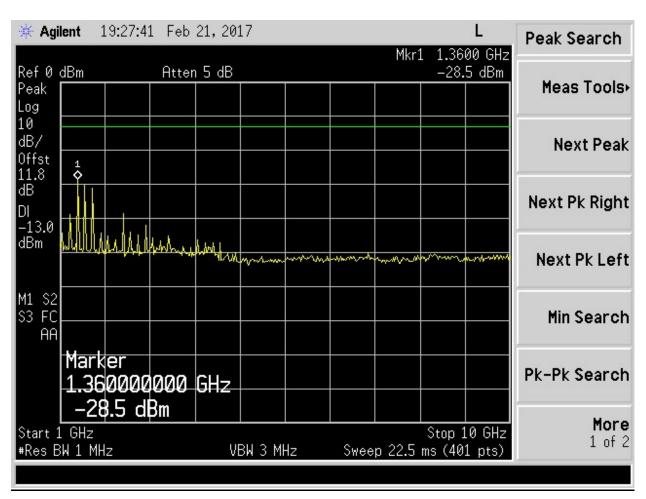


Figure 118. 150 MHz Vertical 1- 10 GHz

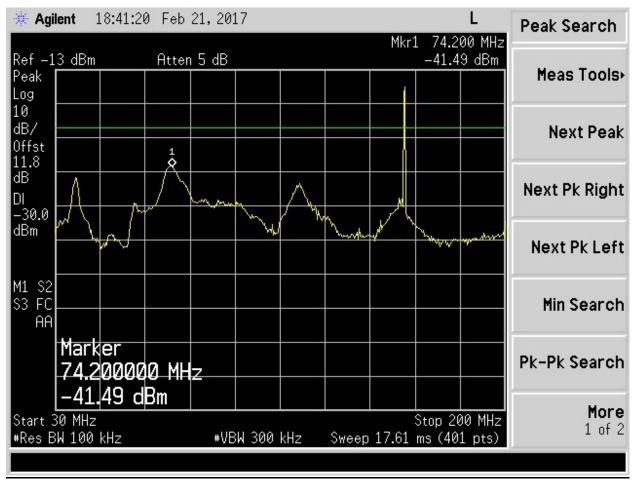


Figure 119. 162 MHz Vertical 30 -200 MHz

₩ Agilent 18:53:38 Feb 21, 2017 L	Peak Search
Mkr1 326 MHz Ref -13 dBm Atten 5 dB -37.89 dBm Peak Log	Meas Tools⊦
10 dB/ Offst \$	Next Peak
dB DI -30.0	Next Pk Right
dBm whill more many many many many many many many many	Next Pk Left
S3 FC AA	Min Search
Marker 326.000000 MHz -37.89 dBm	Pk-Pk Search
Start 200 MHz Stop 1 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 82.88 ms (401 pts)	More 1 of 2

# Figure 120. 162 MHz Vertical 200 – 1000 MHz

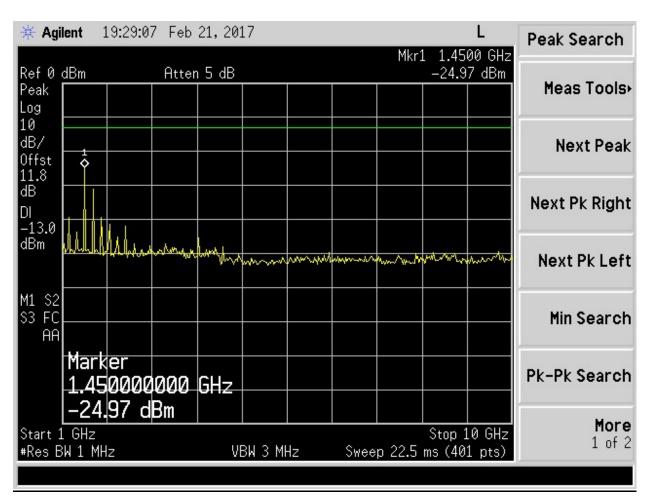


Figure 121. 162 MHz Vertical 1 -10 GHz

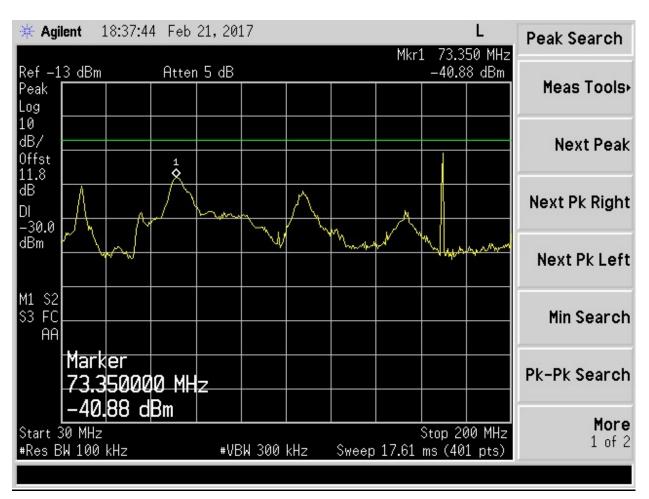


Figure 122. 174 MHz Vertical 30- 200 MHz

Mkr1     872     MHz       Ref     -13     dBm     Atten 5     dB     -34.58     dBm       Peak	<b>Agilent</b> 18:54:53 Fe
Peak Meas Too   Log 10   10 10   dB/ 10   0ffst 10   11.8 10   dB 10   Offst 10   11.8 10   dB 10   Mass Too   Next Pe   Next Pk Rig   Mass Too   Mass Too   Next Pk Le	12 JPm 0+1
10 dB/ Offst 11.8 dB DI -30.0 dBm M1 S2	ak 🛛 👘
dB DI -30.0 dBm MMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM	st 🛛
dBm MI S2	
	m k k . K
AA	FC
Marker 872.000000 MHz 24.50 JP	872.000000
	rt 200 MHz

Figure 123. 174 MHz Vertical 200- 1000 MHz

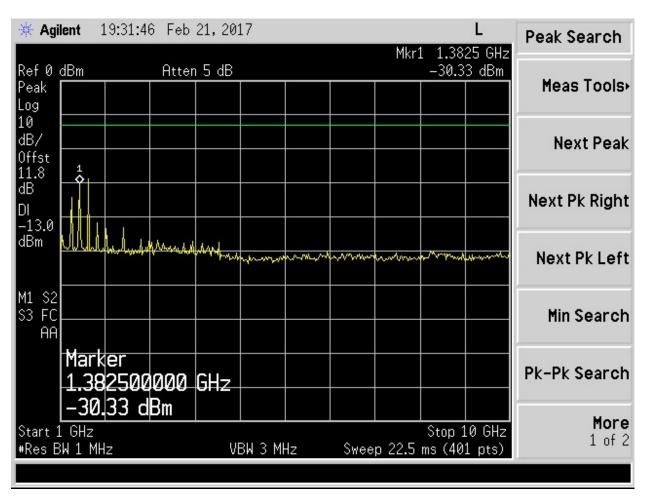


Figure 124. 174 MHz Vertical 1 -10 GHz