



10. Maximum Conducted Output Power

10.1 Block Diagram Of Test Setup



10.2 Limit

According to FCC §15.407

The maximum conduced output power should not exceed:

Frequency Band(MHz)	Limit
5150~5250	0.25W
5250~5350	0.25W
5500~5700	0.25W
5725~5850	1W

10.3 Test Procedure

Maximum conducted output power may be measured using a spectrum analyzer/EMI receiver or an RF power meter.

1. Device Configuration

If possible, configure or modify the operation of the EUT so that it transmits continuously at its maximum power control level (see section II.B.).

a) The intent is to test at 100 percent duty cycle; however a small reduction in duty cycle (to no lower than 98 percent) is permitted if required by the EUT for amplitude control purposes. Manufacturers are expected to provide software to the test lab to permit such continuous operation.

b) If continuous transmission (or at least 98 percent duty cycle) cannot be achieved due to hardware limitations (e.g., overheating), the EUT shall be operated at its maximum power control level with the transmit duration as long as possible and the duty cycle as high as possible.

2. Measurement using a Spectrum Analyzer or EMI Receiver (SA)

Measurement of maximum conducted output power using a spectrum analyzer requires integrating the spectrum across a frequency span that encompasses, at a minimum, either the EBW or the 99-percent occupied bandwidth of the signal.1 However, the EBW must be used to determine bandwidth dependent limits on maximum conducted output power in accordance with § 15.407(a).

a) The test method shall be selected as follows: (i) Method SA-1 or SA-1 Alternative (averaging with the EUT transmitting at full power throughout each sweep) shall be applied if either of the following conditions can be satisfied:

• The EUT transmits continuously (or with a duty cycle ≥ 98 percent).

• Sweep triggering or gating can be implemented in a way that the device transmits at the maximum power control level throughout the duration of each of the instrument sweeps to be averaged. This condition can generally be achieved by triggering the instrument's sweep if the duration of the sweep (with the analyzer configured as in Method SA-1, below) is equal to or shorter than the duration T of each transmission from the EUT and if those transmissions exhibit full power throughout their durations.



(ii) Method SA-2 or SA-2 Alternative (averaging across on and off times of the EUT transmissions, followed by duty cycle correction) shall be applied if the conditions of (i) cannot be achieved and the transmissions exhibit a constant duty cycle during the measurement duration. Duty cycle will be considered to be constant if variations are less than ± 2 percent.

(iii) Method SA-3 (RMS detection with max hold) or SA-3 Alternative (reduced VBW with max hold) shall be applied if the conditions of (i) and (ii) cannot be achieved.

b) Method SA-1 (trace averaging with the EUT transmitting at full power throughout each sweep): (i) Set span to encompass the entire emission bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal.

(ii) Set RBW = 1 MHz.

(iii) Set VBW ≥ 3 MHz.

(iv) Number of points in sweep \geq 2 Span / RBW. (This ensures that bin-to-bin spacing is \leq RBW/2, so that narrowband signals are not lost between frequency bins.)

(v) Sweep time = auto.

(vi) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode. (vii) If transmit duty cycle < 98 percent, use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle \geq 98 percent, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to "free run".

(viii) Trace average at least 100 traces in power averaging (i.e., RMS) mode.

(ix) Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument's band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum

10.4 EUT Operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.



10.5 Test Result

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	DC 24V
Test Mode:	5180-5240MHz		

Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	а	5180	12.49	24	Pass
NVNT	а	5200	12.1	24	Pass
NVNT	а	5240	11.25	24	Pass
NVNT	n20	5180	11.39	24	Pass
NVNT	n20	5200	10.78	24	Pass
NVNT	n20	5240	10.32	24	Pass
NVNT	n40	5190	8.58	24	Pass
NVNT	n40	5230	7.76	24	Pass
NVNT	ac20	5180	9.38	24	Pass
NVNT	ac20	5200	8.82	24	Pass
NVNT	ac20	5240	8.44	24	Pass
NVNT	ac40	5190	8.49	24	Pass
NVNT	ac40	5230	7.8	24	Pass
NVNT	ac80	5210	7.98	24	Pass



Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	DC 24V
Test Mode:	5260-5320MHz		

Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	а	5260	11.6	24	Pass
NVNT	а	5280	10.89	24	Pass
NVNT	а	5320	9.76	24	Pass
NVNT	n20	5260	9.93	24	Pass
NVNT	n20	5280	9.53	24	Pass
NVNT	n20	5320	8.75	24	Pass
NVNT	n40	5270	7.69	24	Pass
NVNT	n40	5310	7.44	24	Pass
NVNT	ac20	5260	8.22	24	Pass
NVNT	ac20	5280	7.62	24	Pass
NVNT	ac20	5320	7.06	24	Pass
NVNT	ac40	5270	7.88	24	Pass
NVNT	ac40	5310	7.49	24	Pass
NVNT	ac80	5290	7.23	24	Pass



Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	DC 24V
Test Mode:	5500-5700MHz		

Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	а	5500	9.72	24	Pass
NVNT	а	5580	9.55	24	Pass
NVNT	а	5700	9.69	24	Pass
NVNT	n20	5500	8.56	24	Pass
NVNT	n20	5580	8.63	24	Pass
NVNT	n20	5700	8.58	24	Pass
NVNT	n40	5510	6.87	24	Pass
NVNT	n40	5550	7.26	24	Pass
NVNT	n40	5670	7.59	24	Pass
NVNT	ac20	5500	8.41	24	Pass
NVNT	ac20	5580	8.54	24	Pass
NVNT	ac20	5700	8.53	24	Pass
NVNT	ac40	5510	6.66	24	Pass
NVNT	ac40	5550	7.2	24	Pass
NVNT	ac40	5670	7.52	24	Pass
NVNT	ac80	5530	6.02	24	Pass

No. : BCTC/RF-EMC-005

Page: 149 of 257



Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	DC 24V
Test Mode:	5745-5825MHz		

Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	а	5745	9.37	30	Pass
NVNT	а	5785	8.63	30	Pass
NVNT	а	5825	7.11	30	Pass
NVNT	n20	5745	7.72	30	Pass
NVNT	n20	5785	7.06	30	Pass
NVNT	n20	5825	5.63	30	Pass
NVNT	n40	5755	7.62	30	Pass
NVNT	n40	5795	6.18	30	Pass
NVNT	ac20	5745	7.72	30	Pass
NVNT	ac20	5785	7.06	30	Pass
NVNT	ac20	5825	5.63	30	Pass
NVNT	ac40	5755	7.37	30	Pass
NVNT	ac40	5795	6.2	30	Pass
NVNT	ac80	5775	6.39	30	Pass

Page: 150 of 257



11. Out Of Band Emissions

11.1 Block Diagram Of Test Setup



11.2 Limit

According to FCC §15.407(b)

Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits: (1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(2) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing

11.3 Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.

Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured

frequency within its operating range, and make sure the instrument is operated in its linear range. 3. Set RBW of spectrum analyzer to 1 MHz with a convenient frequency span.

4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.

5. Repeat above procedures until all measured frequencies were complete.

11.4 EUT Operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data

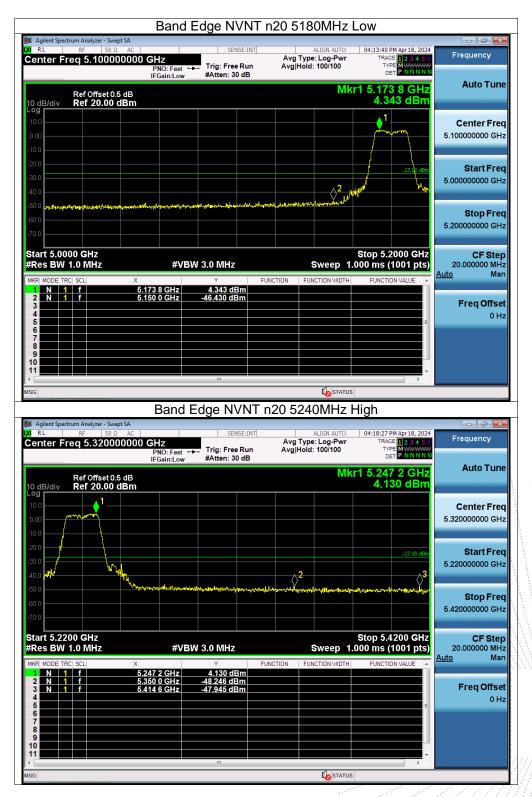


11.5 Test Result

5180-5240MHz













	Band E	Edge NVNT a	ac20 5180MHz	Low	
📕 Agilent Spectrum Analyzer - Swept SA					
ເx RL RF 50Ω AC Center Freq 5.10000000		SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 100/100	04:28:07 PM Apr 18, 2024 TRACE 1 2 3 4 5 6 TYPE M WWWW DET P N N N N N	Frequency
	IFGain:Low	#Atten: 30 dB		r1 5.174 8 GHz	Auto Tune
Ref Offset 0.5 dB 10 dB/div Ref 20.00 dBm Log	1			2.820 dBm	
10.0				1	Center Freq
-10.0					5.10000000 GHz
-20.0				-27.00 dBm	Start Freq
-30.0			3	N/ W	5.00000000 GHz
	and was the stand was the	na internet and the second	washing manufund		Stop Freq
-60.0					5.20000000 GHz
Start 5.0000 GHz				Stop 5.2000 GHz	CF Step
#Res BW 1.0 MHz		W 3.0 MHz	-	000 ms (1001 pts)	20.000000 MHz Auto Man
MKR MODE TRC SCL >	× 5.174 8 GHz	Y FU 2.820 dBm	JNCTION FUNCTION WIDTH	FUNCTION VALUE	
2 N 1 f 3 N 1 f	5.150 0 GHz 5.127 8 GHz	-48.755 dBm -46.350 dBm			Freq Offset
4 5 6					0 Hz
7 8					
9 10 11					
•		m		• •	
MSG		· · · · · · · · · · · · · · · · · · ·	STATUS		
	Band E	dge NVNT a	c20 5240MHz	High	
Agilent Spectrum Analyzer - Swept SA RL RF 50 Ω AC		SENSE:INT	ALIGN AUTO	04:32:44 PM Apr 18, 2024	Frequency
Center Freq 5.3200000	JU GHZ PNO: Fast ← IFGain:Low	 Trig: Free Run #Atten: 30 dB 	Avg Type: Log-Pwr Avg Hold: 100/100	TRACE 1 2 3 4 5 6 TYPE MWWWW DET PNNNN	
Ref Offset 0.5 dB			Mk	r1 5.245 8 GHz 2.075 dBm	Auto Tune
10 dB/div Ref 20.00 dBm				2.010 0.011	Conton From
0.00					Center Freq 5.32000000 GHz
-10.0					
-20.0				-27.00 dBm	Start Freq 5.22000000 GHz
	North Door Long Dillet Hand		<mark>2</mark>	3	
-60.0		₽₽ġĸĸĸ₽₽₩ĸĸ₩ĸ₽₩ĸ₽₽₩₽₽₽₩ <mark>₽</mark> ₽₽₩ĸ	₩₽₩£ [₽] ₩₩₩₩₽₽₩₩₽₽₩ ₩ ₽₩₩₽₩₩₽₩₩₽₩₩₽₩₩₽₩₩₽₩₩₽₩₩₽₩₩₽₩₩₽₩₩₽₩₩₽₩	Mathlewig returning of parts of the	Stop Freq
-70.0					5.420000000 GHz
Start 5.2200 GHz #Res BW 1.0 MHz	#\/B	W 3.0 MHz	Sween_1	Stop 5.4200 GHz 000 ms (1001 pts)	CF Step 20.000000 MHz
MKR MODE TRC SCL			JNCTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Man
	5.245 8 GHz 5.350 0 GHz	2.075 dBm -51.080 dBm			
2 N 1 f	5.350 0 GHZ				Freq Offset
2 N 1 f 3 N 1 f 4	5.394 2 GHz	-47.819 dBm			0 Hz
2 N 1 f 3 N 1 f 4 5 6 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	5.394 2 GHz			E	
2 N 1 f 3 N 1 f 4 5	5.394 2 GHz			E	
2 N 1 f 3 N 1 f 4 5 6 7 8	5.394 2 GHz			E	







	Band E	dge NVNT a	c80 5210MHz	High	
J Agilent Spectrum Analyzer - Swi		SENSE:INT	ALIGN AUTO	04:59:36 PM Apr 18, 2024	
Center Freq 5.5650		→ Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold: 100/100	TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NNNN	Frequency
Ref Offset 0 10 dB/div Ref 20.00	.5 dB		Mkr	1 5.237 88 GHz -3.801 dBm	Auto Tune
Log 10.0					Center Freq
0.00 1 -10.0 pWWWWW					5.565000000 GHz
-20.0				-27.00 dBm	Start Freq
-30.0					5.130000000 GHz
-50.0 -50.0	Man Manual Manus	and the second second second second	๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛	heliologication to photographic and the holiday	Oton From
-60.0					Stop Freq 6.00000000 GHz
-70.0				Of	
Start 5.1300 GHz #Res BW 1.0 MHz	#VBI	N 3.0 MHz	Sweep 1	Stop 6.0000 GHz 467 ms (1001 pts)	CF Step 87.000000 MHz
MKR MODE TRC SCL	× 5.237 88 GHz	Y FUN -3.801 dBm	CTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Man
2 N 1 f 3 N 1 f	5.350 00 GHz 5.607 63 GHz	-51.845 dBm -47.361 dBm			Freq Offset
4 5 6				=	0 Hz
7 8					
9 10					
		III		•	
MSG				•	
📁 Agilent Spectrum Analyzer - Sw		dge NVNT a	c80 5210MHz	Low	
Center Freq 5.1900	Ω AC	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr	04:55:53 PM Apr 18, 2024 TRACE 1 2 3 4 5 6	Frequency
Center Freq 5. 1900	PNO: Fast ← IFGain:Low	 Trig: Free Run #Atten: 30 dB 	Avg Hold: 100/100		
Ref Offset 0 10 dB/div Ref 20.00	.5 dB dBm		Mk	r1 5.182 4 GHz -3.379 dBm	Auto Tune
10.0					Center Freq
0.00		my my mark	and the second		5.190000000 GHz
-10.0					Start Freq
-30.0				-27.00 dBm	5.090000000 GHz
-40.0	seperation provident			Happyohal Annumber	
-60.0					Stop Freq 5.29000000 GHz
-70.0					3.230000000 GHz
Start 5.0900 GHz #Res BW 1.0 MHz	#VBI	N 3.0 MHz	Sweep 1.	Stop 5.2900 GHz 000 ms (1001 pts)	CF Step 20.000000 MHz Auto Man
MKR MODE TRC SCL	× 5.182 4 GHz	Y FUN -3.379 dBm	ICTION FUNCTION WIDTH	FUNCTION VALUE	i Man
1 N 1 f 2 N 1 f 3 N 1 f	5.182 4 GHz 5.150 0 GHz 5.135 0 GHz	-47.047 dBm -46.198 dBm			Freq Offset
4 5 6				E	0 Hz
7 8					
9 10					
		III	<i></i>	• • •	
MSG			🚺 STATUS		



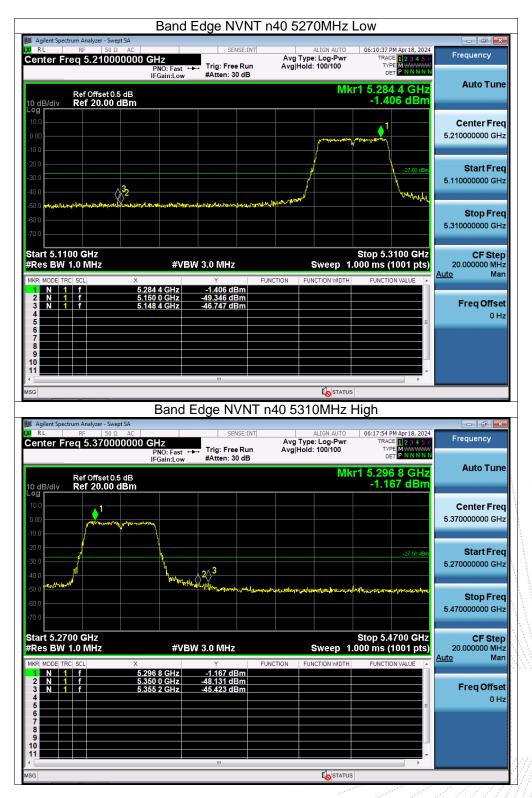
5260-5230MHz





	Band E	dge NVNT r	n20 5260MHz l	_ow	
Jeff Agilent Spectrum Analyzer - Swept SA	<u> </u>	SENSE:INT	ALIGN AUTO	05:55:05 PM Apr 18, 2024	
Center Freq 5.1800000		Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold: 100/100	TRACE 1 2 3 4 5 6 TYPE M WWWW DET P N N N N N	Frequency
Ref Offset 0.5 dE	3		Mki	1 5.255 4 GHz 3.612 dBm	Auto Tune
10.0 0.00 -10.0					Center Freq 5.180000000 GHz
-20.0				-27.00 dBm	Start Freq 5.080000000 GHz
-50.0	ogurinosin on fid shididaa	ใหม่อากๆที่สังข่องหนึ่งสำเติมสะไปได้และ 	Alexand South States and States		Stop Freq 5.280000000 GHz
Start 5.0800 GHz #Res BW 1.0 MHz	#VBW	3.0 MHz	Sweep 1.	Stop 5.2800 GHz 000 ms (1001 pts)	CF Step 20.000000 MHz
MKR MODE TRC SCL	x		CTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Man
1 1 f 2 N 1 f 3 N 1 f 4 5 6 6	5.255 4 GHz 5.150 0 GHz 5.145 2 GHz	3.612 dBm -49.286 dBm -47.551 dBm		а. Б	Freq Offset 0 Hz
7 8 9 10					
11					
MSG			I STATUS		
	Band E	dae NVNT r	20 5320MHz H	ligh	
Mailent Spectrum Analyzer - Swept SA					
₩ RL RF 50Ω A Center Freq 5.4000000	-	. Trig: Free Run #Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 100/100	05:49:29 PM Apr18, 2024 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P N N N N N	Frequency
Ref Offset 0.5 dE			Mki	1 5.326 4 GHz 3.292 dBm	Auto Tune
10.0 0.00					Center Freq 5.400000000 GHz
-10.0				-27.00 dBm	Start Freq
	3 zydrafereni ander andereni	www.https://www.ttp.to	-	erellegrantergramgerellegrader	5.30000000 GHz
-70.0					Stop Freq 5.500000000 GHz
Start 5.3000 GHz #Res BW 1.0 MHz	#VBW	3.0 MHz	Sweep 1.	Stop 5.5000 GHz 000 ms (1001 pts)	CF Step 20.000000 MHz Auto Man
MKR MODE TRC SCL	× 5.326 4 GHz	Y FUI 3.292 dBm	CTION FUNCTION WIDTH	FUNCTION VALUE	
2 N 1 f 3 N 1 f 4 5 6 9	5.350 0 GHz 5.353 2 GHz	-50.116 dBm -46.643 dBm		=	Freq Offset 0 Hz
7 8 9 10					
A MSG		m	I STATUS		







Band Edge NVNT ac20 5260MHz Low	
M Agilent Spectrum Analyzer - Swept SA W RL RF 50 Ω AC SENSE:INT ALIGN AUTO 05:58:13 PM	Apr 19, 2024
Cepter Freg 5 18000000 GHz Avg Type: Log-Pwr TRACE	Frequency
Ref Offset 0.5 dB Mkr1 5.266 10 dB/div Ref 20.00 dBm 1.57	6 GHz Auto Tune 6 dBm
	Center Freq 5.180000000 GHz
-10.0	
	-27 <u>Codem</u> Start Freq 5.080000000 GHz
-60.0 der von hilfen von der von verster einen verster glasse der beiten der der beiten der verster der beiten	Stop Freq 5.28000000 GHz
-70.0	
#Res BW 1.0 MHz #VBW 3.0 MHz Sweep 1.000 ms (1	Auto Man
MKR MODE TRC SCL X Y FUNCTION FUNCTION FUNCTION 1 N 1 f 5.266 6 GHz 1.576 dBm	VALUE
2 N 1 f 5.150 0 GHz -50.659 dBm 3 N 1 f 5.095 0 GHz -47.038 dBm 4	Freq Offset 0 Hz
6 7 8 9	
Band Edge NVNT ac20 5320MHz High	
X RL RF 50 Ω AC SENSE:INT ALIGN AUTO 06:02:58 PM	Apr 18, 2024
PNO: Fast Ing: Free Run Avg Hold: 100/100 Inter IFGain:Low #Atten: 30 dB DET	
Ref Offset 0.5 dB Mkr1 5.326 10 dB/div Ref 20.00 dBm 1.55	0 GHz 2 dBm
	Center Freq 5.40000000 GHz
-10.0	-27.00 dBm Start Freq
	5.30000000 GHz
-60 0 -70 0	5.50000000 GHz
Start 5.3000 GHz Stop 5.50 #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 1.000 ms (10	
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION	Auto Man
1 N 1 f 5.326 0 GHz 1.552 dBm 2 N 1 f 5.350 0 GHz -49.766 dBm 3 N 1 f 5.366 2 GHz -46.844 dBm 4	Freq Offset 0 Hz
5 6 7	



_	Band B	Edge NVNT a	ac40 5270MHz	Low	_
Magilent Spectrum Analyzer - Swept SA	A AC	SENSE:INT	ALIGN AUTO	06:22:49 PM Apr 18, 2024	
Center Freq 5.2100000		► Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold: 100/100	TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NNNNN	Frequency
Ref Offset 0.5 dl	в		Mkr	1 5.285 4 GHz -1.407 dBm	Auto Tune
10 dB/div Ref 20.00 dB					0
0.00					Center Freq 5.21000000 GHz
-10.0					
-20.0				-27.00 dBm	Start Freq 5.110000000 GHz
-40.0				Warker way	5.11000000 GHz
-50.0 aproves and metering relationships	n se top harpon aparticles	and have a for the second second	hot-up - and a second dealer		Stop Freq
-60.0					5.310000000 GHz
Start 5.1100 GHz #Res BW 1.0 MHz	#VB	W 3.0 MHz		Stop 5.3100 GHz 00 ms (1001 pts)	CF Step 20.000000 MHz
MKR MODE TRC SCL	Х	Y F	UNCTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Man
1 N 1 f 2 N 1 f 3 N 1 f	5.285 4 GHz 5.150 0 GHz 5.142 6 GHz	-1.407 dBm -50.311 dBm -47.395 dBm			Freq Offset
4 5	0.142 0 GHZ	-47.595 (1811)		=	0 Hz
6 7 8					
9					
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MSG					
Agilent Spectrum Analyzer - Swept SA		dge NVNT a	ac40 5310MHz I	High	
	AC	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr	06:24:49 PM Apr 18, 2024 TRACE 1 2 3 4 5 6	Frequency
	PNO: Fast ← IFGain:Low	 Trig: Free Run #Atten: 30 dB 	Avg Hold: 100/100		Auto Tuno
Ref Offset 0.5 d 10 dB/div Ref 20.00 dB			Mkr	1 5.295 0 GHz -1.244 dBm	Auto Tune
10.0					Center Freq
-10.0	4mhque#**010				5.370000000 GHz
-20.0				-27.00 dBm	Start Freq
-30.0		A 3			5.270000000 GHz
-50.0	handung	Manner marganet	l) = 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1	milionalisa watili milionalia	
-60.0					Stop Freq 5.47000000 GHz
-70.0					
Start 5.2700 GHz #Res BW 1.0 MHz	#VB	W 3.0 MHz		Stop 5.4700 GHz 100 ms (1001 pts)	CF Step 20.000000 MHz <u>Auto</u> Man
MKR MODE TRC SCL 1 N 1 f 2 N 1 f	× 5.295 0 GHz 5.350 0 GHz	Y F -1.244 dBm -47.706 dBm	UNCTION FUNCTION WIDTH	FUNCTION VALUE	indit
2 N 1 f 3 N 1 f 4	5.350 0 GHz 5.350 2 GHz	-47.706 dBm -45.806 dBm			FreqOffset
5					0 Hz
6					
7 8					
7					



	Band	Edge NVNT a	c80 5290MHz	High	
Agilent Spectrum Analyzer - S	wept SA	SENSE:INT	ALIGN AUTO	06:36:31 PM Apr 18, 2024	
Center Freq 5.605		Trim Free Day	Avg Type: Log-Pwr Avg Hold: 100/100	TRACE 1 2 3 4 5 6 TYPE M WWWWW DET P N N N N N	Frequency
Ref Offset 10 dB/div Ref 20.0	0.5 dB		Mkr	5.262 14 GHz -4.063 dBm	Auto Tune
10.0					Center Freq
0.00					5.605000000 GHz
-10.0					
-20.0				-27.00 dBm	Start Freq 5.21000000 GHz
-40.0	2 <mark></mark>	¢	}³		5.21000000 GH
-50.0	Why we have the set of	and a superior of the boundary of	haden marked and the sample handes to	แห่งไป <mark>ใน</mark> สารางที่สามารถสมุขาว ^ส ารก็ไป	Stop Fred
-60.0					6.00000000 GH
Start 5.2100 GHz				Stop 6.0000 GHz	CF Step
Res BW 1.0 MHz		3W 3.0 MHz	Sweep 1.	333 ms (1001 pts)	79.000000 MHz <u>Auto</u> Mar
MKR MODE TRC SCL 1 N 1 f 2 N 1 f	× 5.262 14 GHz 5.350 00 GHz	-4.063 dBm -47.080 dBm	NCTION FUNCTION WIDTH	FUNCTION VALUE	
3 N 1 f	5.670 57 GHz	-45.292 dBm			Freq Offse 0 Hi
5 6				=	011
7 8 9					
10					
<pre></pre>		III	STATUS	•	
ISG	Dond		<u> </u>		
🎽 Agilent Spectrum Analyzer - S			c80 5290MHz	LOW	
⁴ RL RF 50 Center Freq 5.185	000000 GHz	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr	06:34:06 PM Apr18, 2024 TRACE 1 2 3 4 5 6	Frequency
	PNO: Fast IFGain:Low	#Atten: 30 dB	Avg Hold: 100/100	TYPE MWWWWW DET PNNNNN	
Ref Offset 10 dB/div Ref 20.0	0.5 dB 0 dBm		Mkr	5.263 07 GHz -4.081 dBm	Auto Tune
10.0			1		Center Free
0.00				<u> </u>	5.185000000 GH
-10.0					04
-30.0				-27.00 dBm	Start Free 5.000000000 GH
-40.0	3	2	al annangland	Wenner	
-50.0 	ŊĸġĸŎĸĔĸŢŖĸĸġĸŔĸŢĿŶĊĬĸĸĿĸĬĬĬĸĬĬŔŔĬŶĬĸŔĔŊŔĸ	nder and general frank and frank and dates and date			Stop Free
-70.0					5.370000000 GH
		3W 3.0 MHz	Sweep 1.	Stop 5.3700 GHz 000 ms (1001 pts)	CF Step 37.000000 MH
	#VE			FUNCTION VALUE	<u>Auto</u> Mai
Start 5.0000 GHz #Res BW 1.0 MHz	Х		NCTION FUNCTION WIDTH	PONCTION VALUE	
#Res BW 1.0 MHz MKR MODE TRC SCL 1 N 1 f 2 N 1 f	× 5.263 07 GHz 5.150 00 GHz	-4.081 dBm -49.979 dBm	NCTION FUNCTION WIDTH		Freq Offse
*Res BW 1.0 MHz	× 5.263 07 GHz	-4.081 dBm	NCTION FUNCTION WIDTH		
#Res BW 1.0 MHz MKR MODE TRC SCL 1 N 2 N 1 3 N 1 4 - - 5 - - 6 - - 7 - -	× 5.263 07 GHz 5.150 00 GHz	-4.081 dBm -49.979 dBm	NCTION FUNCTION WIDTH	FORCHORVALUE	Freq Offse 0 H:
#Res BW 1.0 MHz MkR, MODE, TRC, SCL 1 N 1 f 2 N 1 f 3 N 1 f 4 - - - 5 - - - 6 - - - 7 - - - 8 - - - 9 - - -	× 5.263 07 GHz 5.150 00 GHz	-4.081 dBm -49.979 dBm	NCTION FUNCTION WIDTH		
#Res BW 1.0 MHz MKR MODE TRC SCL 1 N 2 N 1 3 N 1 4	× 5.263 07 GHz 5.150 00 GHz	-4.081 dBm -49.979 dBm	NCTION FUNCTION WIDTH		



5500-5700MHz





















	Band E	dge NVNT a	c80 5530MHz	High	
Magilent Spectrum Analyzer - Swept S	SA AC	SENSE:INT	ALIGN AUTO	11:33:18 AM Apr 22, 2024	- ē ×
Center Freq 5.725000	0000 GHz PNO: Fast ↔	→ Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold: 100/100	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N N	Frequency
10 dB/div Ref 20.00 dB	IFGain:Low	#Atten: 50 dB	Mkr	5.530 30 GHz -4.698 dBm	Auto Tune
10 dB/div Ref 20.00 dB					Center Freq
0.00					5.725000000 GHz
-10.0 AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA					
-30.0	harden harden			-27.00 dBm	Start Freq 5.45000000 GHz
-40.0	with the second		3		
-60.0			¹ 24491-Yest History Truck <u>U</u> ddaniwy - Alar-Wid	ฟะฟิษากฟหมมฟฟิ _ม สองใบทุกส่งไปอยุไ	Stop Freq 6.00000000 GHz
-70.0					
Start 5.4500 GHz #Res BW 1.0 MHz	#VBW	/ 3.0 MHz	Sweep 1.	Stop 6.0000 GHz 000 ms (1001 pts)	CF Step 55.000000 MHz
MKR MODE TRC SCL	X	Y FU -4.698 dBm	NCTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Man
2 N 1 f 3 N 1 f	5.530 30 GHz 5.725 00 GHz 5.766 80 GHz	-48.689 dBm -48.689 dBm			Freq Offset
4 5 6				E	0 Hz
7 8					
9 10 11					
MSG		III	STATUS	•	
	Pond E		c80 5530MHz		
Agilent Spectrum Analyzer - Swept S		ugenvinia	000 00000000000000000000000000000000000	LOW	
RL RF 50 Ω Center Freq 5.510000	AC 0000 GHz	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr	11:25:47 AM Apr 22, 2024 TRACE 2 3 4 5 6	Frequency
	PNO: Fast ++ IFGain:Low	 Trig: Free Run #Atten: 30 dB 	Avg Hold: 100/100	TYPE MWWWW DET PNNNNN	Auto Tune
10 dB/div Ref 20.00 dB	3m		Mk	r1 5.530 0 GHz -3.979 dBm	Auto Tune
10.0					Center Freq
0.00		m m m			5.510000000 GHz
-10.0				07.00.0	Start Freq
-30.0	Martin Value Arth				5.410000000 GHz
-40.0	HAPPING AND A TO T				
-60.0					Stop Freq 5.61000000 GHz
-70.0					
Start 5.4100 GHz #Res BW 1.0 MHz	#VBW	/ 3.0 MHz		Stop 5.6100 GHz 000 ms (1001 pts)	CF Step 20.000000 MHz Auto Man
MKR MODE TRC SCL 1 N 1 f 2 N 1 f	× 5.530 0 GHz 5.470 0 GHz	-3.979 dBm	NCTION FUNCTION WIDTH	FUNCTION VALUE	
2 N 1 f 3 N 1 f 4	5.470 0 GHz 5.468 8 GHz	-40.906 dBm -37.421 dBm			Freq Offset 0 Hz
5 6				E	U HZ
7					
10				Ψ.	



5745-5825 MHz

























12. Spurious RF Conducted Emissions

12.1 Block Diagram Of Test Setup



12.2 Limit

Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits: (1)For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(2)For transmitters operating in the 5.725-5.85 GHz band(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

(3)For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(4)For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

12.3 Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.

Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
 Set RBW of spectrum analyzer to 1 MHz with a convenient frequency span.

4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.

5. Repeat above procedures until all measured frequencies were complete.

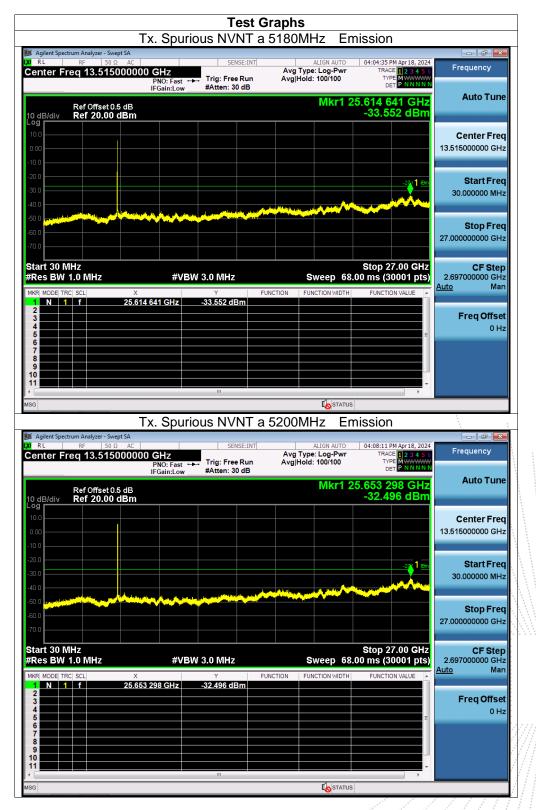
12.4 Test Result

Remark: The measurement frequency range is from 9KHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the spurious emissions and bandege measurement data.

About:26.5GHz-40GHz, The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



5180-5240MHz





	DΩ AC	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr	04:10:52 PM Apr 18, 2024 TRACE 1 2 3 4 5 6	Frequency
enter Freq 13.51	5000000 GHZ PNO: Fast IFGain:Low	→→→ Trig: Free Run #Atten: 30 dB	Avg Hold: 100/100	TYPE MWWWWW DET P N N N N N	
Ref Offset	0.5 dB		Mkr1 2	5.655 096 GHz	Auto Tun
0 dB/div Ref 20.0	0 dBm			-33.228 dBm	
10.0					Center Fre 13.515000000 GH
10.0					13.51500000 GI
20.0				-274(1 IBm	Start Fre
30.0					30.000000 MH
40.0 50.0 	and the second second second	المقطرة المتصافح بعانية المريبي	and the second states of the		
50.0					Stop Fre 27.000000000 GH
70.0					
tart 30 MHz	#\/F		Swoon 69.0	Stop 27.00 GHz	CF Ste 2.697000000 GH
Res BW 1.0 MHz	#VI	3W 3.0 MHz	UNCTION FUNCTION WIDTH	FUNCTION VALUE	Auto Ma
1 N 1 f	25.655 096 GHz	-33.228 dBm			
3 4					FreqOffse 0⊢
5 6					
7 8 9					
				~	
		III		• •	
G			I STATUS	· ·	
G		 ous NVNT n2		mission	
SG Agilent Spectrum Analyzer - S R L RF SI	wept SA D Ω AC	m DUS NVNT n2	0 5180MHz Ei	04:14:10 PM Apr 18, 2024	Frequency
G Agilent Spectrum Analyzer - S	wept SA D Q AC 5000000 GHz PNO: Fast	SENSE:INT	0 5180MHz Er		
Agilent Spectrum Analyzer - S RL RF 5 enter Freq 13.51	wept SA D Ω AC 50000000 GHz PNO: Fast IFGain:Low	SENSE:INT	0 5180MHz Et Align Auto Avg Type: Log-Pwr Avg[Hold: 100/100	04:14:10 PM Apr 18, 2024 TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P NNNNN	Frequency
SG Agilent Spectrum Analyzer - S R L RF SI	weet SA 0 Ω AC 5000000 GHz PN0: Fast IFGain:Low 0.5 dB	SENSE:INT	0 5180MHz Et Align Auto Avg Type: Log-Pwr Avg[Hold: 100/100	04:14:10 PM Apr18, 2024 TRACE 1 2 3 4 5 6 TYPE M WWWW DET P N N N N N	Frequency
Agilent Spectrum Analyzer - S RL RF Si enter Freq 13.51 Ref Offset 0 dB/div Ref 20.0	weet SA 0 Ω AC 5000000 GHz PN0: Fast IFGain:Low 0.5 dB	SENSE:INT	0 5180MHz Et Align Auto Avg Type: Log-Pwr Avg[Hold: 100/100	04:14:10 PM Apr 18, 2024 TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P NNNNN	Frequency Auto Tun Center Fre
Agilent Spectrum Analyzer - Si RL RF Si enter Freq 13.51 Ref Offset 0 dB/div Ref 20.0 9 10 0	weet SA 0 Ω AC 5000000 GHz PN0: Fast IFGain:Low 0.5 dB	SENSE:INT	0 5180MHz Et Align Auto Avg Type: Log-Pwr Avg[Hold: 100/100	04:14:10 PM Apr 18, 2024 TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P NNNNN	Frequency Auto Tun Center Fre
Agilent Spectrum Analyzer - S RL RF Si enter Freq 13.51 Ref Offset 0 dB/div Ref 20.0	weet SA 0 Ω AC 5000000 GHz PN0: Fast IFGain:Low 0.5 dB	SENSE:INT	0 5180MHz Et Align Auto Avg Type: Log-Pwr Avg[Hold: 100/100	04:14:10 PM Apr 18, 2024 TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P NNNNN	Auto Tun Center Fre 13.515000000 GH
Aglient Spectrum Analyzer - 5 RL RF 5 enter Freq 13.51 Ref Offset dB/div Ref 20.0 9 0 0 0 0	weet SA 0 Ω AC 5000000 GHz PN0: Fast IFGain:Low 0.5 dB	SENSE:INT	0 5180MHz Et Align Auto Avg Type: Log-Pwr Avg[Hold: 100/100	04:14:10 PM Apr 18, 2024 TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P NNNNN	Frequency Auto Tun Center Fre
Agilent Spectrum Analyzer - 5 RL RF Si enter Freq 13.51 Ref Offset 0 dB/div Ref 20.0 9 0	weet SA 0 Ω AC 5000000 GHz PN0: Fast IFGain:Low 0.5 dB	SENSE:INT	0 5180MHz Et Align Auto Avg Type: Log-Pwr Avg[Hold: 100/100	04:14:10 PM Apr 18, 2024 TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P NNNNN	Frequency Auto Tun Center Fre 13.515000000 GH Start Fre
Agilent Spectrum Analyzer - 5 RL	weet SA 0 Ω AC 5000000 GHz PN0: Fast IFGain:Low 0.5 dB	SENSE:INT	0 5180MHz Et Align Auto Avg Type: Log-Pwr Avg[Hold: 100/100	04:14:10 PM Apr 18, 2024 TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P NNNNN	Frequency Auto Tun Center Fre 13.515000000 GH Start Fre 30.000000 MH Stop Fre
Agilent Spectrum Analyzer - 5 RL RF Si enter Freq 13.51 Ref Offset 0 dB/div Ref 20.0 9 0	weet SA 0 Ω AC 5000000 GHz PN0: Fast IFGain:Low 0.5 dB	SENSE:INT	0 5180MHz Et Align Auto Avg Type: Log-Pwr Avg[Hold: 100/100	04:14:10 PM Apr 18, 2024 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NNNNN 6615 540 GHz	Frequency Auto Tun Center Fre 13.515000000 GH Start Fre 30.000000 MH Stop Fre
Agilent Spectrum Analyzer - 5 RL RF Si enter Freq 13.51 Ref Offset 0 dB/div Ref 20.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	weet SA 0 Ω AC 5000000 GHz PN0: Fast IFGain:Low 0.5 dB	SENSE:INT	0 5180MHz Et Align Auto Avg Type: Log-Pwr Avg[Hold: 100/100	04:14:10 PM Apr18, 2024	Frequency Auto Tun Center Fre 13.515000000 GH Start Fre 30.0000000 MH Stop Fre 27.000000000 GH
Agilent Spectrum Analyzer - 5 RL RF 51 enter Freq 13.51 Ref Offset 0 dB/div Ref 20.0 00 0	weept SA 2 Q AC 5000000 GHz PN0: Fast IFGain:Low	SENSE:INT	0 5180MHz Er	04:14:10 PM Apr 18, 2024 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NNNNN 6615 540 GHz	Frequency Auto Tun Center Fre 13.515000000 GH Start Fre 30.000000 MH Stop Fre 27.00000000 GH CF Ste 2.697000000 GH
Agilent Spectrum Analyzer - 5 RL RF Si enter Freq 13.51 0 dB/div Ref Offset 0 dB/div Ref 20.0 0 dB/div	x	SENSE:INT Trig: Free Run #Atten: 30 dB	0 5180MHz Er	04:14:10 PM Apr18, 2024 TRACE 1 2 3 4 3 0 TYPE MWWWW DET P NNNNN 5.615 540 GHz -33.334 dBm -22,1 @n	Frequency Auto Tun Center Fre 13.515000000 GH Start Fre 30.000000 MH Stop Fre 27.00000000 GH CF Ste 2.697000000 GH
Image: sector of the sector	wept SA 2 Q AC 5000000 GHz PN0: Fast IFGain:Low 0.5 dB 0 dBm 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	SENSE:INT	0 5180MHz Er	04:14:10 PM Apr18, 2024 TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P NNNN 5.615 540 GHz -33.334 dBm -27,1 6m -27,1 6m -27,1 6m -27,00 GHz -27,00 GHz 0 ms (30001 pts)	Frequency Auto Tun Center Fre 13.515000000 GF Start Fre 30.000000 MF Stop Fre 27.00000000 GF CF Ste 2.697000000 GF Auto Made
Image: sector of the sector	x	SENSE:INT Trig: Free Run #Atten: 30 dB	0 5180MHz Er	04:14:10 PM Apr18, 2024 TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P NNNN 5.615 540 GHz -33.334 dBm -27,1 6m -27,1 6m -27,1 6m -27,00 GHz -27,00 GHz 0 ms (30001 pts)	Frequency Auto Tun Center Fre 13.515000000 GH Start Fre 30.000000 MH Stop Fre 27.00000000 GH CF Ste 2.697000000 GH
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RL RF SI RL RF SI enter Freq 13.51 Ref Offset 0 dB/div Ref 20.0 0 0	x	SENSE:INT Trig: Free Run #Atten: 30 dB	0 5180MHz Er	04:14:10 PM Apr18, 2024 TRACE 1] 2 3 4 5 6 TYPE MWWWWW DET P NNNN 5.615 540 GHz -33.334 dBm 227 1 Em 227 1 Em 2	Frequency Auto Tun Center Fre 13.515000000 GF Start Fre 30.000000 MF Stop Fre 27.00000000 GF 2.697000000 GF Auto Mato Freq Offse



