

TEST REPORT

REPORT NUMBER: 12197499-E41V2

COMPANY NAME: Google LLC

EUT DESCRIPTION: Multimedia Device with BLE/BT, 2.4GHz and 5GHz Radios

MODEL: NC2-6A5

SERIAL NUMBER: PROTO 1

ISSUE DATE: 29-Jun-18

DATE TESTED: 8/06/2015 to 8/12/2015, 4/30/18 to 5/10/18, and 6/29/18

APPLICABLE STANDARDS: JAPAN RADIO LAW RADIO EQUIPMENT REGULATIONS

TEST METHOD: Notice 88 of Ordinance Concerning Technical Regulations Conformity Certification of Specified Radio Equipment

Place of Testing: UL Verification Services Inc.
47173 BENICIA ST, FREMONT, CA 94538, USA

Test Result: Pass

Classification of Specified Radio Equipment: Article 2 Clause 1 Item 19-3

Type of radio wave, Frequency and antenna power: G1D, D1D 5260-5320MHz (Interval of 20MHz 4ch) 0.001981W/MHz

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted

Approved & Released For UL Verification Services Inc. By:



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NVLAP LAB CODE 200065-0

1. EUT Information

Report No. : 12197499-E41V2
Applicant : Google LLC
Equipment Description: Multimedia Device with BLE/BT, 2.4GHz and 5GHz Radios
Model No. : NC2-6A5
SerialNo. : PROTO 1
The number of Tx Antenna : 1
Max Antenna Gain : 4.0dBi
Mode : IEEE802.11n HT20
Type of Radio wave : G1D, D1D

Supply Voltage <input checked="" type="radio"/> DC <input type="radio"/> AC 5.00V _____ _____	Modulation <input checked="" type="radio"/> OFDM (OBW<19MHz) <input type="radio"/> OFDM (OBW<19-38MHz) <input type="radio"/> OFDM (OBW<18MHz) <input type="radio"/> Other Modulation (OBW<18MHz)
Voltage Condition <input checked="" type="radio"/> Non-Extreme <input type="radio"/> Extreme Normal DC5V Normal-10% - Normal+10% -	EUT has <input checked="" type="radio"/> ANT Connector distance - <input type="radio"/> No ANT Connector
Band <input type="radio"/> W52 <input checked="" type="radio"/> W53	EUT has <input type="radio"/> TPC Function <input checked="" type="radio"/> No TPC Function

The worst-case data rate for each mode is determined to be as follows, based on preliminary test of the chipset utilized in this radio.

All final tests were made at the Lowest Rate.

Factors

	[MHz]	Other than for Power and ACP		For Power	
		Cable Loss [dB]	ATT/ [dB]	Cable Loss [dB]	ATT/ [dB]
Low Channel (Tx1)	5260	1.00	10.00	1.00	10.00
Middle Channel (Tx2)	5300	4.10	10.00	1.00	10.00
High Channel (Tx3)	5320	1.00	10.00	1.00	10.00

* Cable loss and ATT are not taken into account for ACP.

2.TEST Result

2.1. Frequency Tolerance

Job No. 12197499-E41V2

Remark1

Remark2

[DATA]

Voltage	Freq. [MHz]	Result [MHz]	Tolerance [kHz]	Tolerance [ppm]	Limit [ppm]
DC5V	5260	5259.9701	-29.9496	-5.69	±20.0
	5300	5299.9764	-23.6158	-4.46	±20.0
	5320	5319.9803	-19.6921	-3.70	±20.0

Tx1_Freq_Nom

Agilent 13:26:45 Aug 10, 2015

R L

Cntr1 5 259 970 050.419 Hz

Ref 20 dBm

#Atten 40 dB

6.95 dBm

#Peak
Log
10
dB/

LgAv

H1 S2
S3 FS
AA

E(f):
f<50k
Swp

Start 5.259 955 016 GHz

Stop 5.259 985 016 GHz

#Res BW 300 Hz

#VBW 300 Hz

Sweep 401.9 ms (1201 pts)

Tx2_Freq_Nom

Agilent 13:33:23 Aug 10, 2015

R L

Cntr1 5 299 976 384.210 Hz

6.35 dBm

Ref 30 dBm

#Atten 40 dB

#Peak
Log
10
dB/

LgAv

M1 S2
S3 FS
AA

E(f):
f<50k
Swp

Start 5.299 961 376 GHz

Stop 5.299 991 376 GHz

#Res BW 300 Hz

#VBW 300 Hz

Sweep 401.9 ms (1201 pts)

Tx3_Freq_Nom

Agilent 13:38:55 Aug 10, 2015

R L

Cntr1 5 319 980 307.857 Hz

6.76 dBm

Ref 10 dBm

#Atten 40 dB

#Peak
Log
10
dB/

LgAv

M1 S2
S3 FS
AA

E(f):
f<50k
Swp

Start 5.319 965 269 GHz

Stop 5.319 995 269 GHz

#Res BW 300 Hz

#VBW 300 Hz

Sweep 401.9 ms (1201 pts)

2.2. Occupied Bandwidth

Job No. 12197499-E41V2

Remark1

Remark2

[DATA]

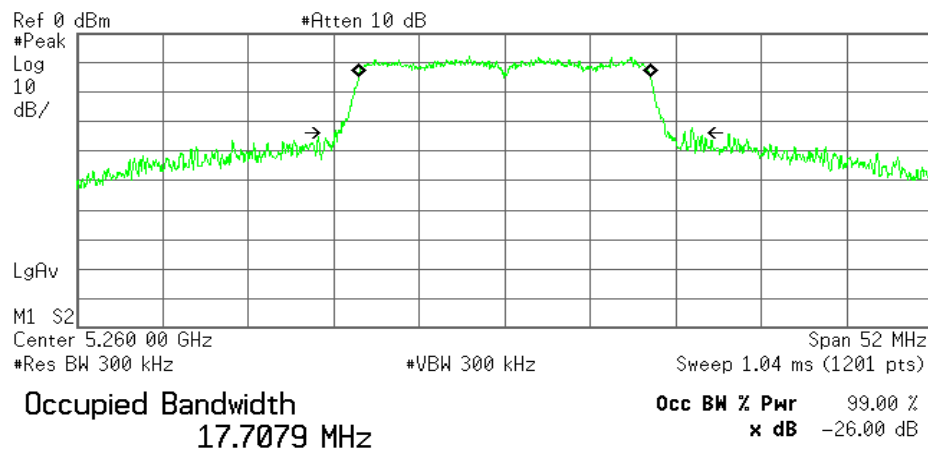
99% Occupied Frequency Bandwidth

Voltage	Freq. [MHz]	Result [MHz]	Limit [MHz]
DC5V	5260	17.7079	19
	5300	17.7098	19
	5320	17.6578	19

Tx1_99OBW_Nom

Agilent 13:28:22 Aug 10, 2015

R L



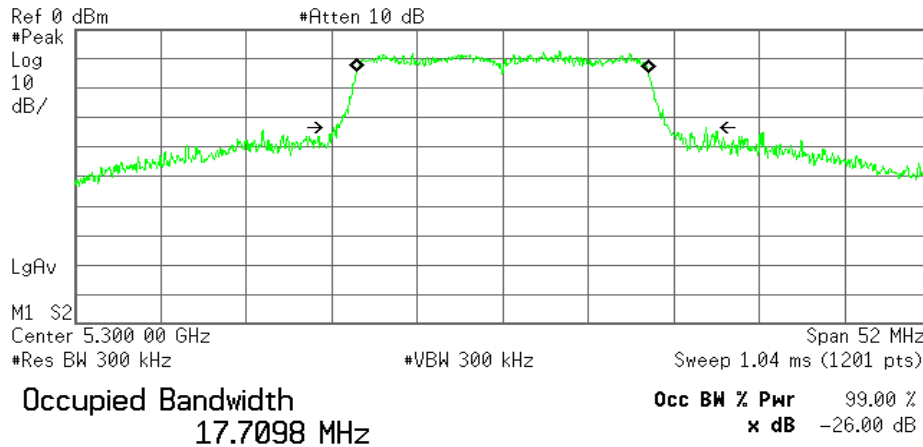
Transmit Freq Error -13.200 kHz

x dB Bandwidth 21.755 MHz

Tx2_99OBW_Nom

Agilent 13:34:57 Aug 10, 2015

R L

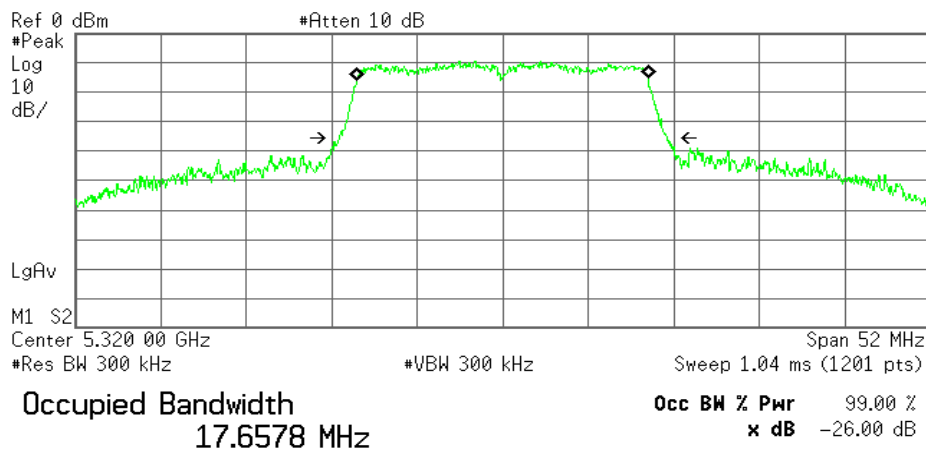


Transmit Freq Error -1.768 kHz
x dB Bandwidth 22.020 MHz

Tx3_99OBW_Nom

Agilent 13:40:48 Aug 10, 2015

R L



Transmit Freq Error -5.496 kHz
x dB Bandwidth 19.852 MHz

2.3.Unwanted Emission Strength (Normal Voltage)

Job No. 12197499-E41 V2

Remark1

Remark2

[DATA]

Voltage	Freq.	Freq.	S/A Reading	Cable Loss	Atten. Loss	Result	Result	Limit	Remark
	[MHz]	[MHz]	[dBm]	[dB]	[dB]	[dBm]	[uW]	[uW]	
DC5V	5260	30.80	-70.38	1.00	10.00	-59.38	0.001	2.500	♣1
		3507.00	-65.49	1.00	10.00	-54.49	0.004	2.500	♣1
		5108.00	-60.70	1.00	10.00	-49.70	0.011	2.500	♣1
		5404.00	-62.22	1.00	10.00	-51.22	0.008	2.500	♣2
		10525.00	-58.11	1.00	10.00	-47.11	0.019	2.500	♣2
		15775.00	-56.22	1.00	10.00	-45.22	0.030	2.500	♣2
		25140.00	-62.21	1.00	10.00	-51.21	0.008	2.500	♣2
	5300	34.00	-70.88	4.10	10.00	-56.78	0.002	2.500	♣1
		4977.00	-63.72	4.10	10.00	-49.62	0.011	2.500	♣1
		5071.00	-61.99	4.10	10.00	-47.89	0.016	2.500	♣1
		5379.00	-56.52	4.10	10.00	-42.42	0.057	2.500	♣2
		10600.00	-58.67	4.10	10.00	-44.57	0.035	2.500	♣2
		15904.00	-57.35	4.10	10.00	-43.25	0.047	2.500	♣2
		24860.00	-61.60	4.10	10.00	-47.50	0.018	2.500	♣2
	5320	637.10	-71.28	1.00	10.00	-60.28	0.001	2.500	♣1
		3547.00	-65.95	1.00	10.00	-54.95	0.003	2.500	♣1
		5092.00	-62.83	1.00	10.00	-51.83	0.007	2.500	♣1
		5396.00	-58.58	1.00	10.00	-47.58	0.017	2.500	♣2
		10638.00	-58.45	1.00	10.00	-47.45	0.018	2.500	♣2
		15954.00	-61.52	1.00	10.00	-50.52	0.009	2.500	♣2
		24740.00	-62.08	1.00	10.00	-51.08	0.008	2.500	♣2

Sample Calculation :

Result = Reading + Cable Loss + Attenuator

♣1:Freq Range1 (< 5,135MHz)

♣2:Freq Range2 (> 5,365MHz)

Tx1_SpuriousM_Nom

Agilent 13:29:46 Aug 10, 2015

R L

Mkr1 30.8 MHz
-70.38 dBm

Ref 0 dBm

#Atten 10 dB

#Peak
Log
10
dB/

LgAv

V1 S2

Start 30.0 MHz

Stop 1.000 0 GHz

#Res BW 1 MHz

#VBW 1 MHz

Sweep 1.68 ms (1201 pts)

Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	30.8 MHz	-70.38 dBm

Tx1_SpuriousG1_Nom

Agilent 13:28:48 Aug 10, 2015

R L

Mkr1 3.507 GHz
-65.49 dBm

Ref 0 dBm

#Atten 10 dB

#Peak
Log
10
dB/

LgAv

V1 S2

Start 1.000 GHz

Stop 5.000 GHz

#Res BW 1 MHz

#VBW 1 MHz

Sweep 6.72 ms (1201 pts)

Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	3.507 GHz	-65.49 dBm

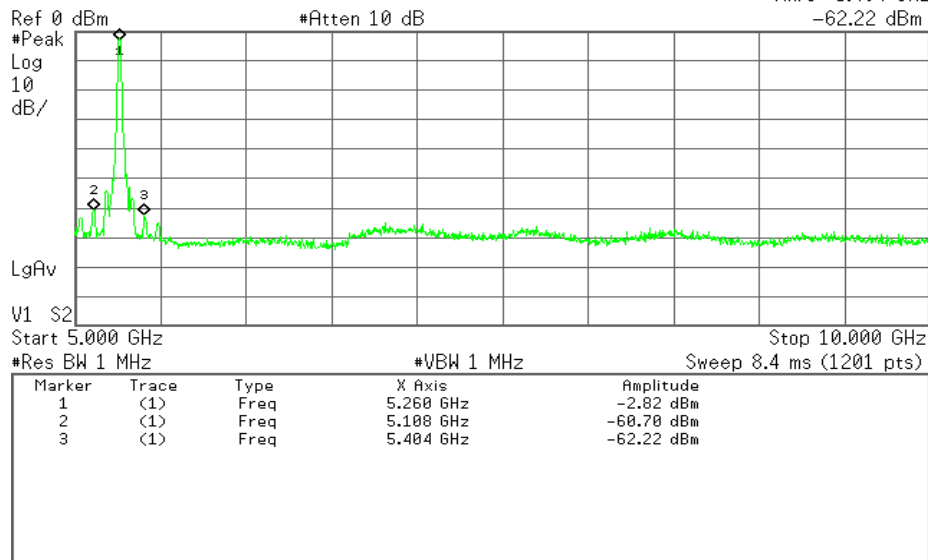
Tx1_SpuriousG2_Nom

Agilent 13:28:59 Aug 10, 2015

R L

Mkr3 5.404 GHz

-62.22 dBm



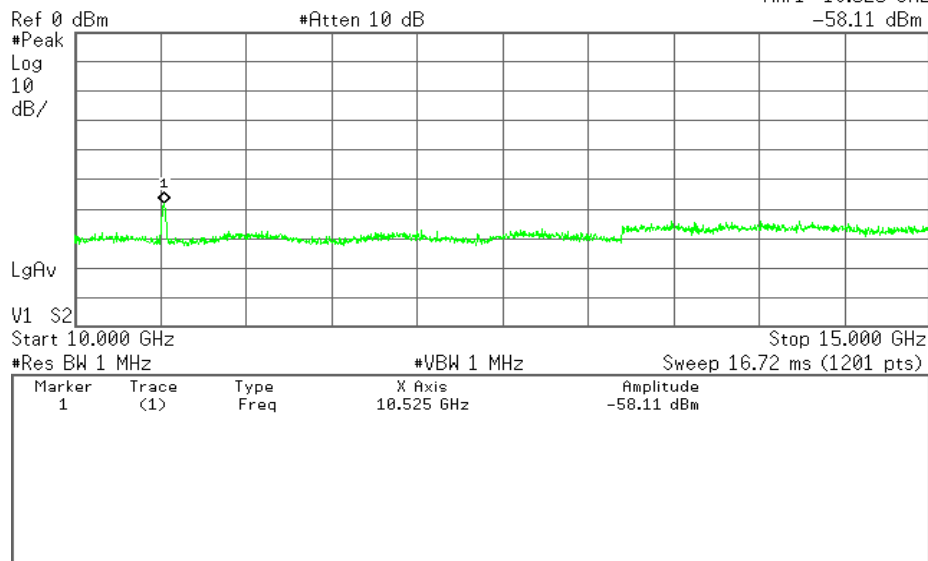
Tx1_SpuriousG3_Nom

Agilent 13:29:11 Aug 10, 2015

R L

Mkr1 10.525 GHz

-58.11 dBm

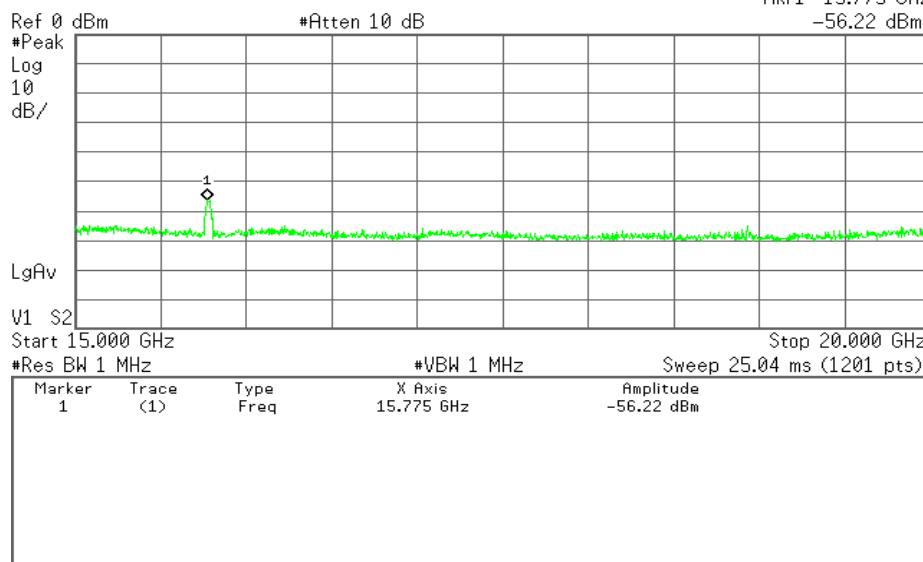


Tx1_SpuriousG4_Nom

Agilent 13:29:22 Aug 10, 2015

R L

Mkr1 15.775 GHz
-56.22 dBm

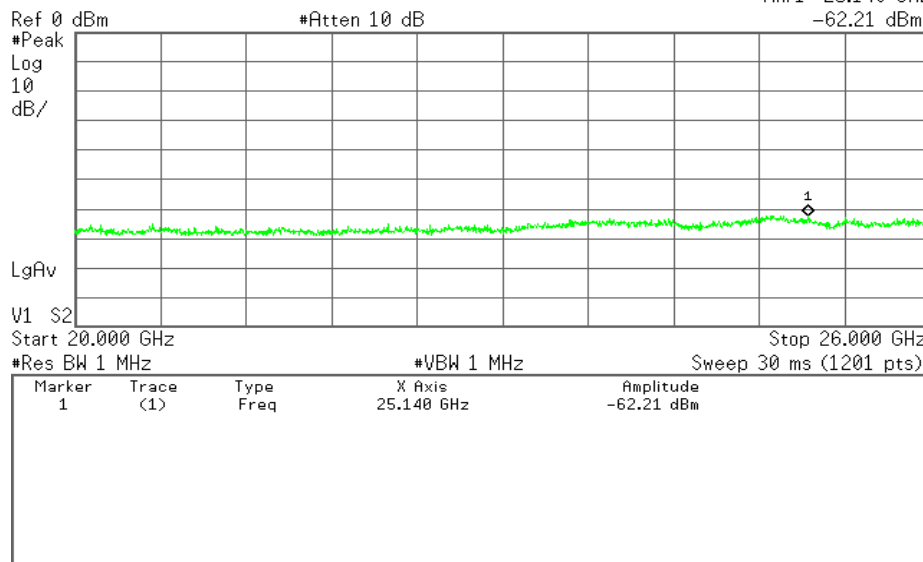


Tx1_SpuriousG5_Nom

Agilent 13:29:33 Aug 10, 2015

R L

Mkr1 25.140 GHz
-62.21 dBm

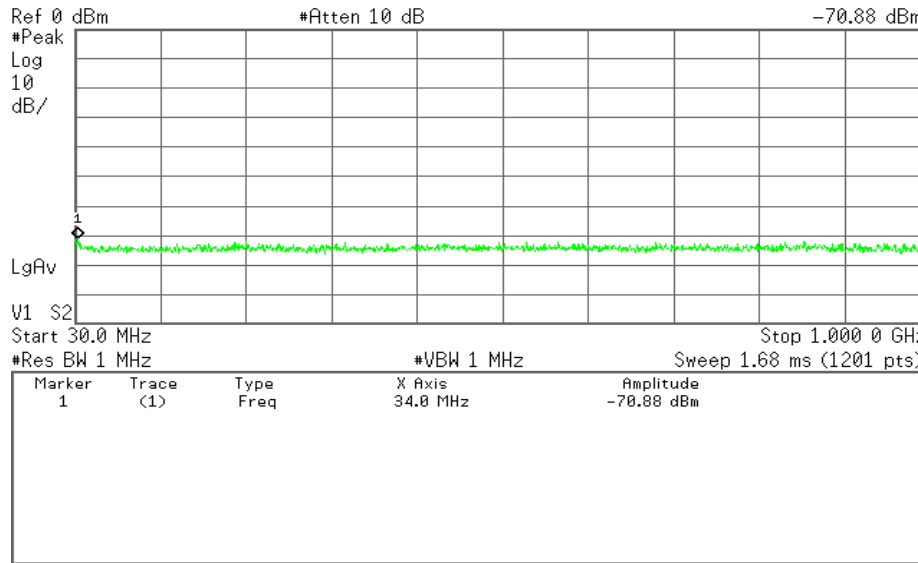


Tx2_SpuriousM_Nom

Agilent 13:36:20 Aug 10, 2015

R L

Mkr1 34.0 MHz
-70.88 dBm

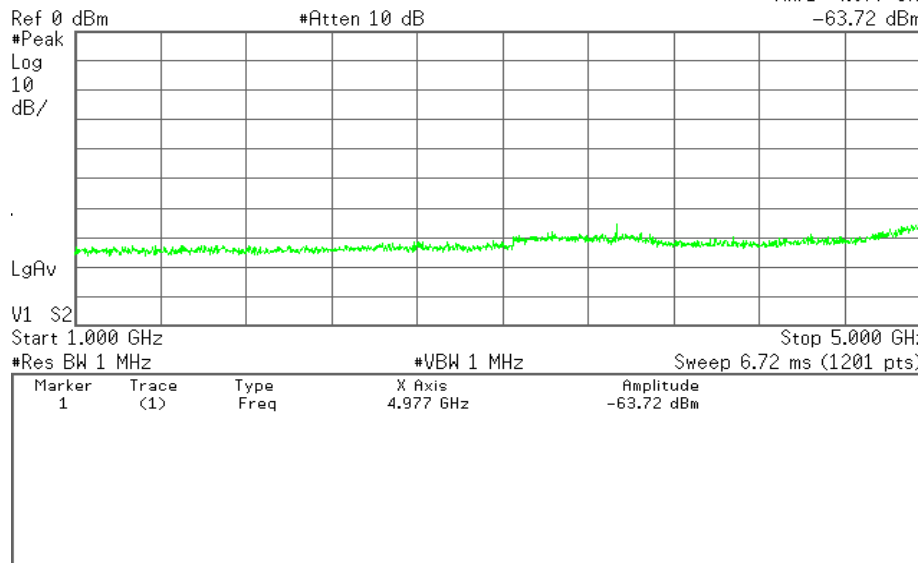


Tx2_SpuriousG1_Nom

Agilent 13:35:23 Aug 10, 2015

R L

Mkr1 4.977 GHz
-63.72 dBm

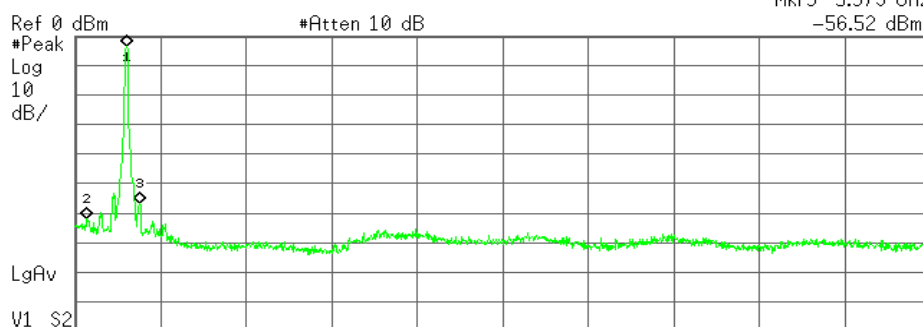


Tx2_SpuriousG2_Nom

Agilent 13:35:34 Aug 10, 2015

R L

Mkr3 5.379 GHz
-56.52 dBm



Start 5.000 GHz Stop 10.000 GHz
#Res BW 1 MHz #VBW 1 MHz Sweep 8.4 ms (1201 pts)

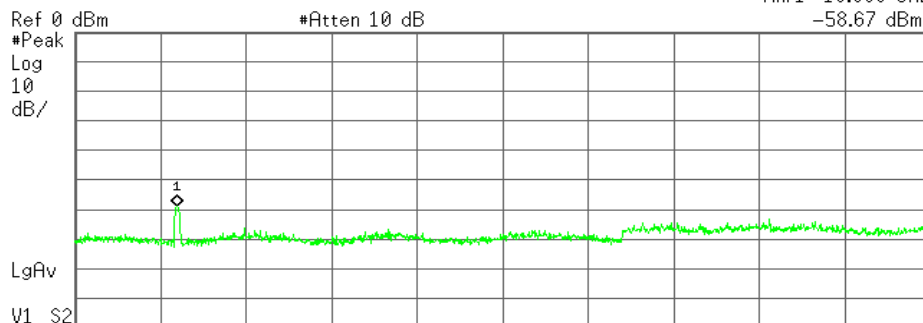
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	5.300 GHz	-3.45 dBm
2	(1)	Freq	5.071 GHz	-61.99 dBm
3	(1)	Freq	5.379 GHz	-56.52 dBm

Tx2_SpuriousG3_Nom

Agilent 13:35:46 Aug 10, 2015

R L

Mkr1 10.600 GHz
-58.67 dBm



Start 10.000 GHz Stop 15.000 GHz
#Res BW 1 MHz #VBW 1 MHz Sweep 16.72 ms (1201 pts)

Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	10.600 GHz	-58.67 dBm

Tx2_SpuriousG4_Nom

Agilent 13:35:57 Aug 10, 2015

R L

Mkr1 15.904 GHz
-57.35 dBm

Ref 0 dBm #Atten 10 dB

#Peak
Log
10
dB/

LgAv

V1 S2

Start 15.000 GHz

Stop 20.000 GHz

#Res BW 1 MHz

#VBW 1 MHz

Sweep 25.04 ms (1201 pts)

Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	15.904 GHz	-57.35 dBm

Tx2_SpuriousG5_Nom

Agilent 13:36:08 Aug 10, 2015

R L

Mkr1 24.860 GHz
-61.60 dBm

Ref 0 dBm

#Atten 10 dB

#Peak
Log
10
dB/

LgAv

V1 S2

Start 20.000 GHz

Stop 26.000 GHz

#Res BW 1 MHz

#VBW 1 MHz

Sweep 30 ms (1201 pts)

Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	24.860 GHz	-61.60 dBm

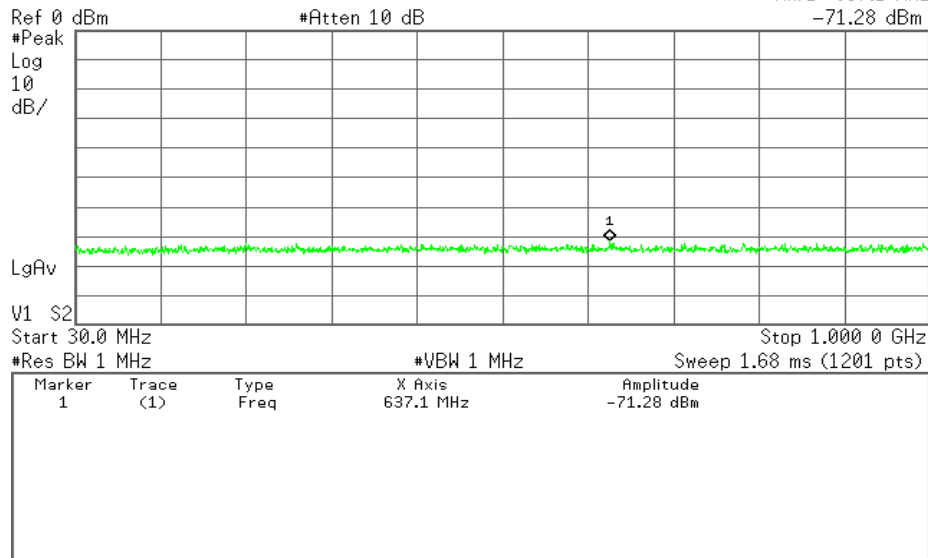
Tx3_SpuriousM_Nom

Agilent 13:42:10 Aug 10, 2015

R L

Mkr1 637.1 MHz

-71.28 dBm



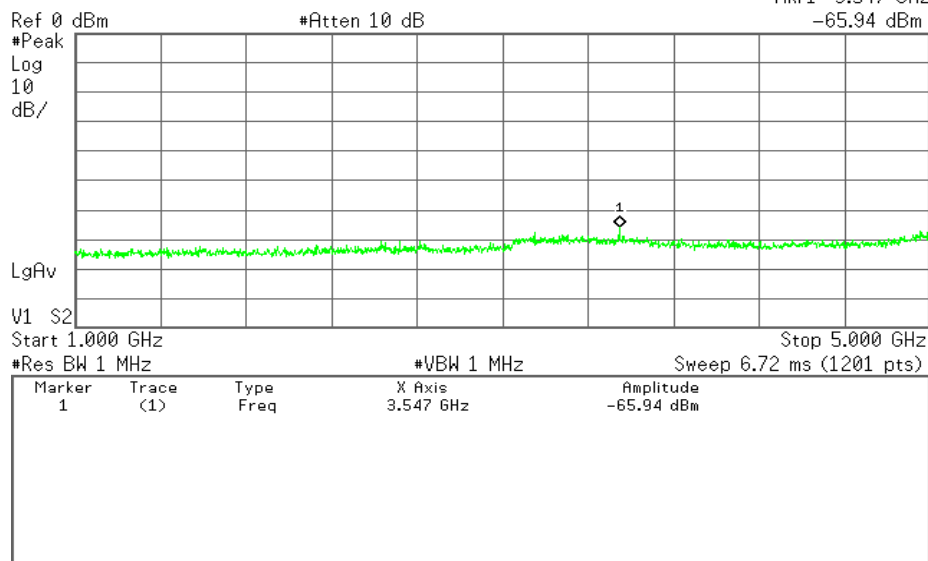
Tx3_SpuriousG1_Nom

Agilent 13:41:12 Aug 10, 2015

R L

Mkr1 3.547 GHz

-65.94 dBm



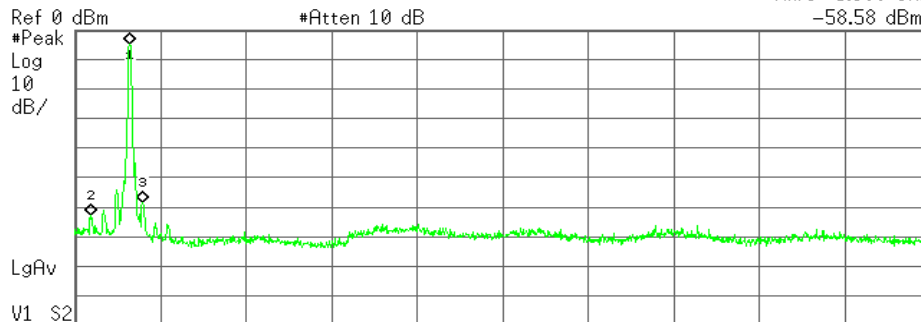
Tx3_SpuriousG2_Nom

Agilent 13:41:23 Aug 10, 2015

R L

Mkr3 5.396 GHz

-58.58 dBm



Start 5.000 GHz Stop 10.000 GHz
#Res BW 1 MHz #VBW 1 MHz Sweep 8.4 ms (1201 pts)

Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	5.320 GHz	-4.86 dBm
2	(1)	Freq	5.092 GHz	-62.83 dBm
3	(1)	Freq	5.396 GHz	-58.58 dBm

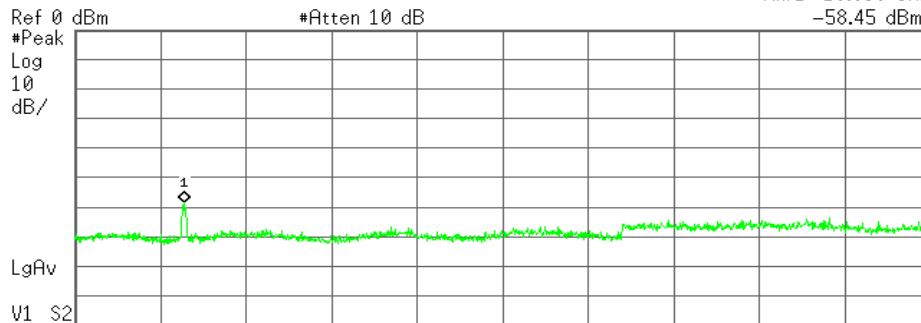
Tx3_SpuriousG3_Nom

Agilent 13:41:35 Aug 10, 2015

R L

Mkr1 10.638 GHz

-58.45 dBm



Start 10.000 GHz Stop 15.000 GHz
#Res BW 1 MHz #VBW 1 MHz Sweep 16.72 ms (1201 pts)

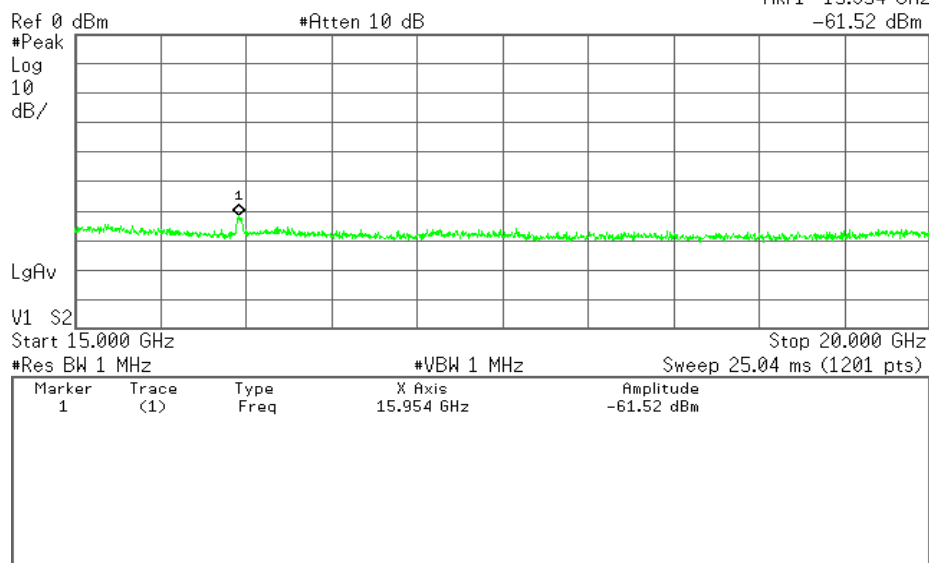
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	10.638 GHz	-58.45 dBm

Tx3_SpuriousG4_Nom

Agilent 13:41:46 Aug 10, 2015

R L

Mkr1 15.954 GHz
-61.52 dBm

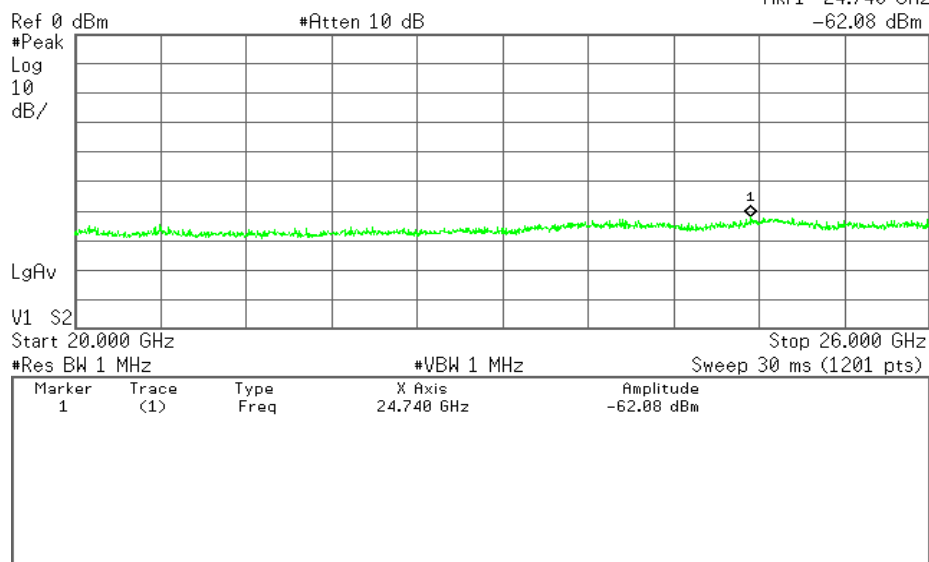


Tx3_SpuriousG5_Nom

Agilent 13:41:58 Aug 10, 2015

R L

Mkr1 24.740 GHz
-62.08 dBm



2.4. Output Power/ E.I.R.P

Job No. 12197499-E41V2

Remark1

Remark2

[DATA]

Voltage	Port No.	Freq.	Reading	Cable Loss	Atten. Loss	Burst Rate	Output Power (A) [W/MHz]	Antenna Gain [dBi]	E.I.R.P. (A) [W/MHz]
		[MHz]	[dBm]	[dB]	[dB]				
DC5V	0	5260	-9.53	1.00	10.00	1.00	0.001408	4.00	0.003537
		5300	-8.78	1.00	10.00	1.00	0.001672	4.00	0.004200
		5320	-9.90	1.00	10.00	1.00	0.001293	4.00	0.003248
DC5V	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-
DC5V	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-
DC5V	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-

Sample Calculation :

Output Power (A) = {Reading + Cable Loss + Atten. Loss} * Burst Rate

E.I.R.P. (A) = Output Power (A) * 10^(Antenna Gain[dBi]/10)

[Total Power / Result and Limit]

Voltage	Freq. [MHz]	Output Power				E.I.R.P.	
		Result (B)	Tolerance Result	Limit	Tolerance Limit	Result (B)	Limit
		[W/MHz]	[%]	[W/MHz]	[%]	[W/MHz]	[W/MHz]
DC5V	5260	0.001408	-28.9	0.010000	+20 ~ -80	0.003537	0.005000
	5300	0.001672	-15.6	0.010000	+20 ~ -80	0.004200	0.005000
	5320	0.001293	-34.7	0.010000	+20 ~ -80	0.003248	0.005000

Sample Calculation :

Tolerance = Output Power Result (B) / Declared Output Power * 100 - 100.

Output Power Result (B) : Sum of all "Output Power (A)" at same Freq.

E.I.R.P. Result (B): Sum of all "E.I.R.P. (A)" at same Freq.

[Declared Output Power]

Average of Output Power Result (B)	0.001458	W/MHz	Average of E.I.R.P. Result(B)	0.003662	W/MHz
Declared Output Power	0.001981	W/MHz	E.I.R.P. for Declared Output Power	0.004977	W/MHz
+20	0.002377	W/MHz			
Middle (Declared Output Power -30%)	0.001387	W/MHz			
-80	0.000396	W/MHz			

Sample Calculation :

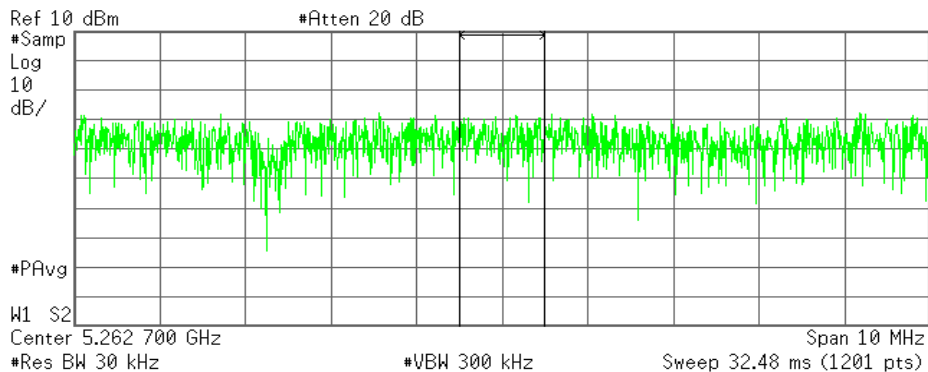
E.I.R.P. for Declared Output Power

= Average of E.I.R.P. Result (B) * (Declared Output Power / Average of Output Power Result (B))

Tx1_Power_Chain0_Nom

Agilent 12:56:06 May 10, 2018

R L



Channel Power

-9.53 dBm /1.0000 MHz

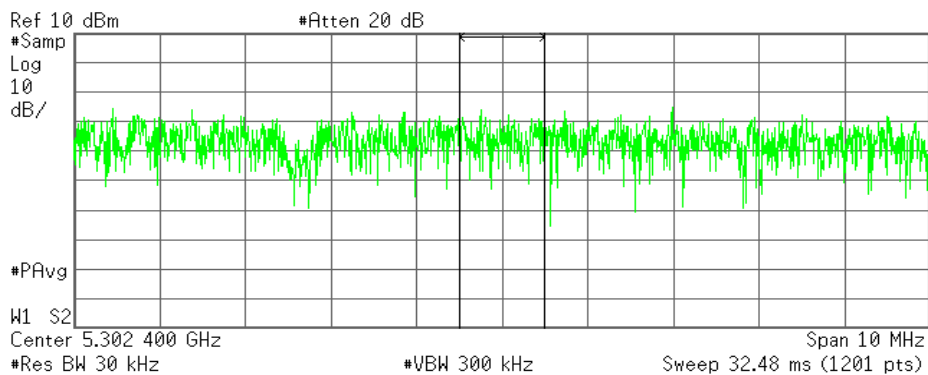
Power Spectral Density

-69.53 dBm/Hz

Tx2_Power_Chain0_Nom

Agilent 13:08:31 May 10, 2018

R L



Channel Power

-8.78 dBm /1.0000 MHz

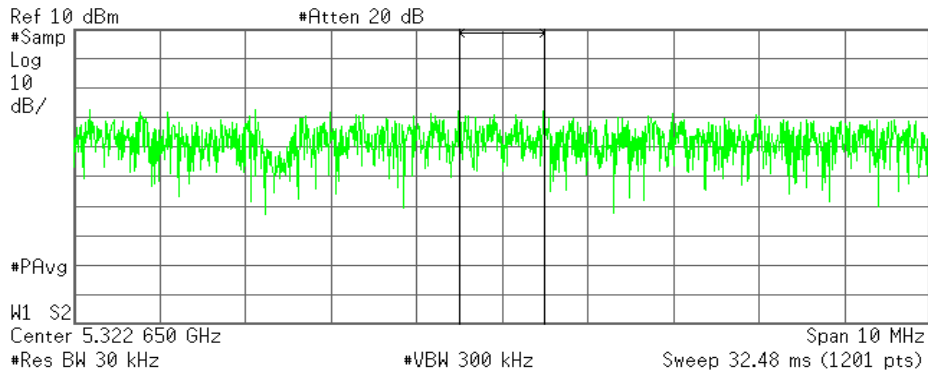
Power Spectral Density

-68.78 dBm/Hz

Tx3_Power_Chain0_Nom

Agilent 13:10:27 May 10, 2018

R L



Channel Power

-9.90 dBm /1.0000 MHz

Power Spectral Density

-69.90 dBm/Hz

2.5.Secondary Radiated Emission Strength(Normal Voltage)

Job No. 12197499-E41 V2

Remark1

Remark2

[DATA]

Voltage	Freq.	Freq.	S/A Reading	Cable Loss	Atten. Loss	Result	Result	Limit	Remark
[V]	[MHz]	[MHz]	[dBm]	[dB]	[dB]	[dBm]	[nW]	[nW]	
DCSV	5300	74.5	-80.57	4.10	10.00	-66.47	0.225	4.000	♦8
		3547.0	-71.71	4.10	10.00	-57.61	1.733	20.000	♦9
		6829.0	-75.50	4.10	10.00	-61.40	0.725	20.000	♦9
		13962.0	-73.80	4.10	10.00	-59.70	1.071	20.000	♦9
		15096.0	-74.37	4.10	10.00	-60.27	0.940	20.000	♦9
		24905.0	-72.05	4.10	10.00	-57.95	1.604	20.000	♦9

Sample Calculation :

Result = Reading + Cable Loss

♦8:Freq Range8 (< 1GHz)

♦9:Freq Range9 (≥ 1GHz)

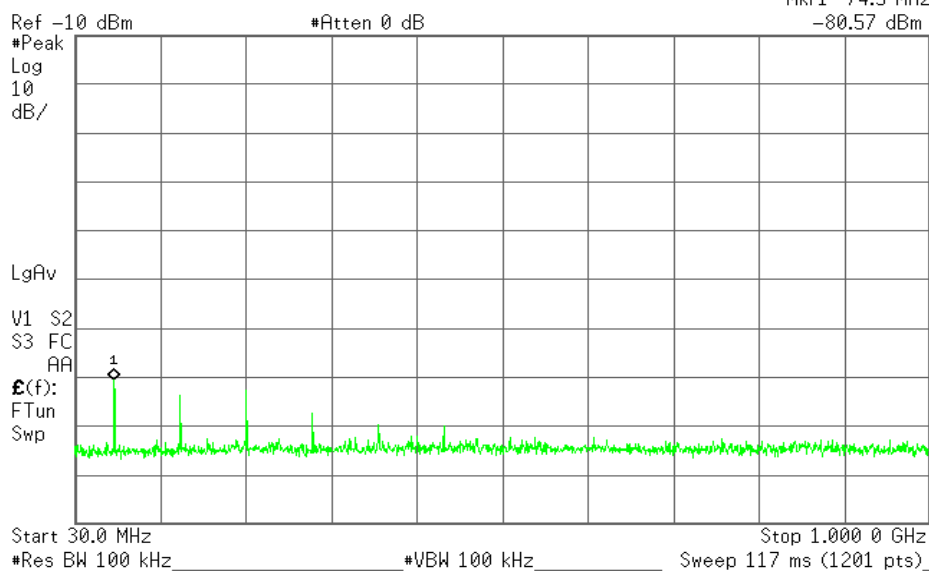
Rx1_SpuriousM_Nom

Agilent 13:45:59 Aug 10, 2015

R L

Mkr1 74.5 MHz

-80.57 dBm



Rx1_SpuriousG1_Nom

Agilent 13:45:01 Aug 10, 2015

R L

Mkr1 3.547 GHz

-71.71 dBm

Ref -10 dBm

#Atten 0 dB

#Peak
Log
10
dB/

LgAv

V1 S2
S3 FC
AA

E(f):
FTun
Swp

Start 1.000 GHz

#Res BW 1 MHz

#VBW 1 MHz

Stop 5.000 GHz
Sweep 6.72 ms (1201 pts)

Rx1_SpuriousG2_Nom

Agilent 13:45:12 Aug 10, 2015

R L

Mkr1 6.829 GHz

-75.50 dBm

Ref -10 dBm

#Atten 0 dB

#Peak
Log
10
dB/

LgAv

V1 S2
S3 FC
AA

E(f):
FTun
Swp

Start 5.000 GHz

#Res BW 1 MHz

#VBW 1 MHz

Stop 10.000 GHz

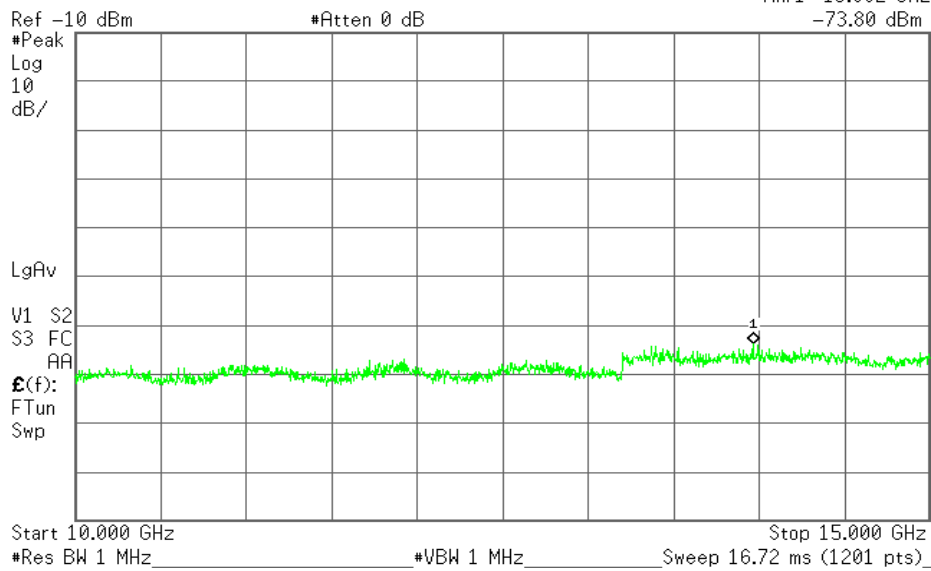
Sweep 8.4 ms (1201 pts)

Rx1_SpuriousG3_Nom

Agilent 13:45:23 Aug 10, 2015

R L

Mkr1 13.962 GHz
-73.80 dBm

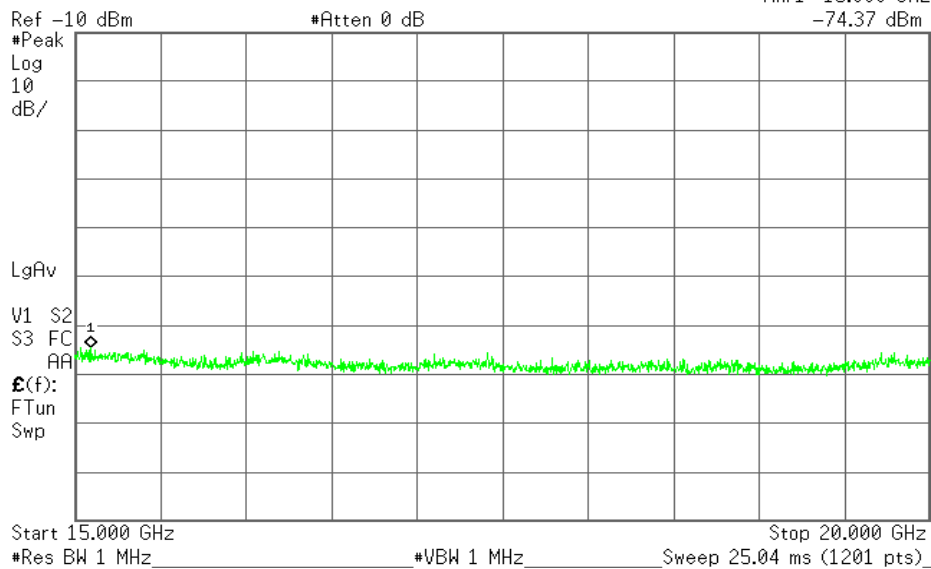


Rx1_SpuriousG4_Nom

Agilent 13:45:35 Aug 10, 2015

R L

Mkr1 15.096 GHz
-74.37 dBm



Rx1_SpuriousG5_Nom

Agilent 13:45:46 Aug 10, 2015

R L

Mkr1 24.905 GHz
-72.05 dBm

Ref -10 dBm

#Atten 0 dB

#Peak
Log
10
dB/

LgAv

V1 S2
S3 FC
RA

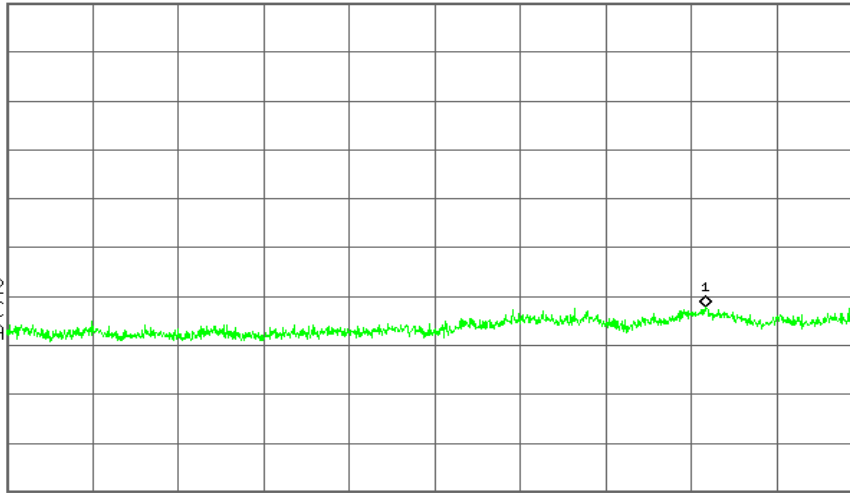
$\mathcal{E}(f)$:
FTun
Swp

Start 20.000 GHz

#Res BW 1 MHz

#VBW 1 MHz

Stop 26.000 GHz
Sweep 30 ms (1201 pts)



2.6. Burst Length / Duty

Job No. 12197499-E41V2

Remark1

Remark2

[DATA]

Voltage	Freq.	On Time	Period	Result (Duty)	Result (Burst Rate)	Limit
[V]	[MHz]	[msec]	[msec]	[%]		[msec]
DC5V	5300	3.112	3.121	99.7	1.003	4

Sample Calculation :

Result(Duty) = On Time / Period * 100

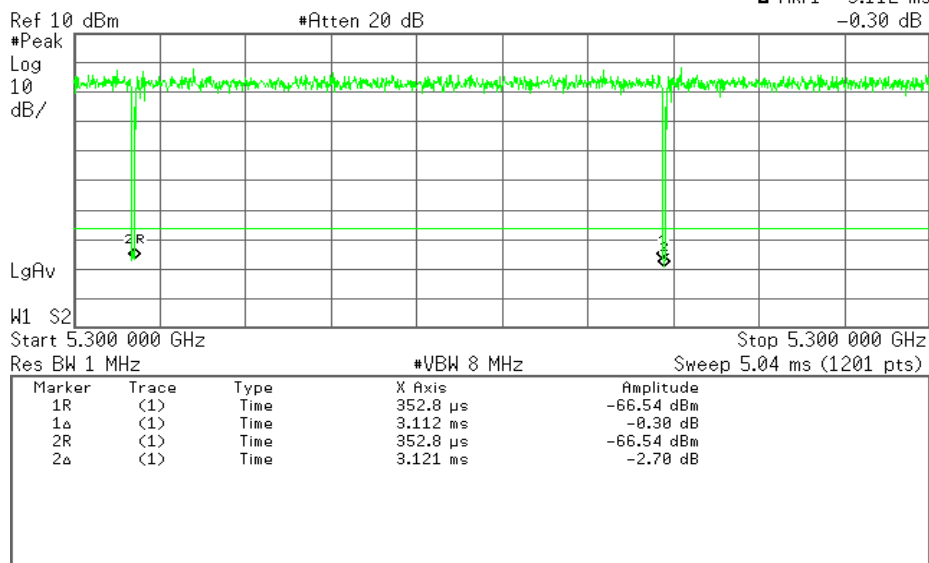
Result(Burst Rate) = Period / On Time

Tx2_Duty_Nom

Agilent 11:41:22 Jun 29, 2018

R L

▲ Mkr1 3.112 ms
-0.30 dB



2.7. Adjacent Channel Power

Job No. 12197499-E41 V2

Remark1 Chain 0

Remark2

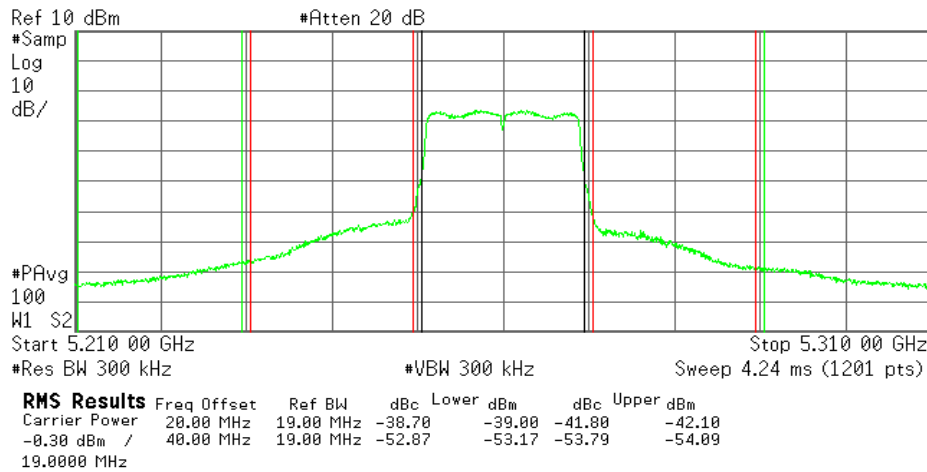
[DATA]

Voltage	Freq.	Separation	Lower Side Result	Upper Side Result	Limit	Remark
[V]	[MHz]	[MHz]	[dBc]	[dBc]	[dBc]	
DC5V	5260	20	-38.70	-41.80	-25.00	
		40	-52.87	-53.79	-40.00	
	5300	20	-35.70	-35.56	-25.00	
		40	-49.68	-49.37	-40.00	
	5320	20	-39.86	-38.81	-25.00	
		40	-53.43	-53.51	-40.00	

Tx1_ACP_Chain0_Nom

Agilent 13:53:06 Aug 10, 2015

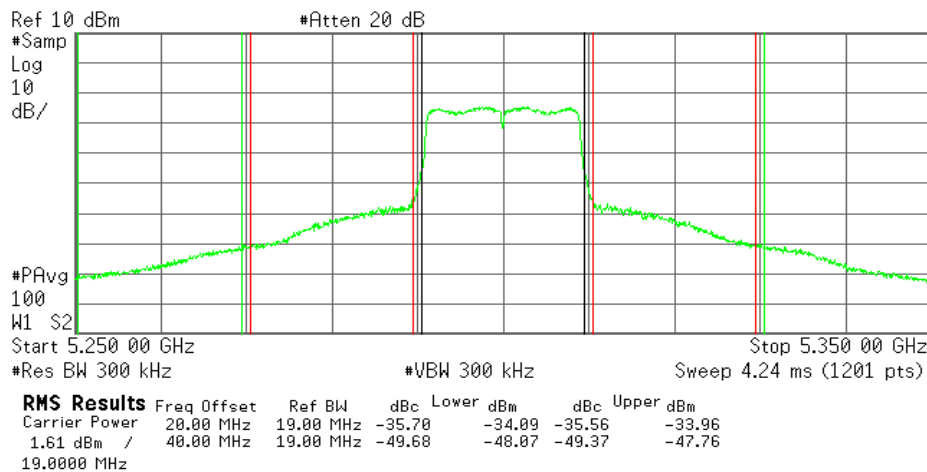
R L



Tx2_ACP_Chain0_Nom

Agilent 13:37:10 Aug 10, 2015

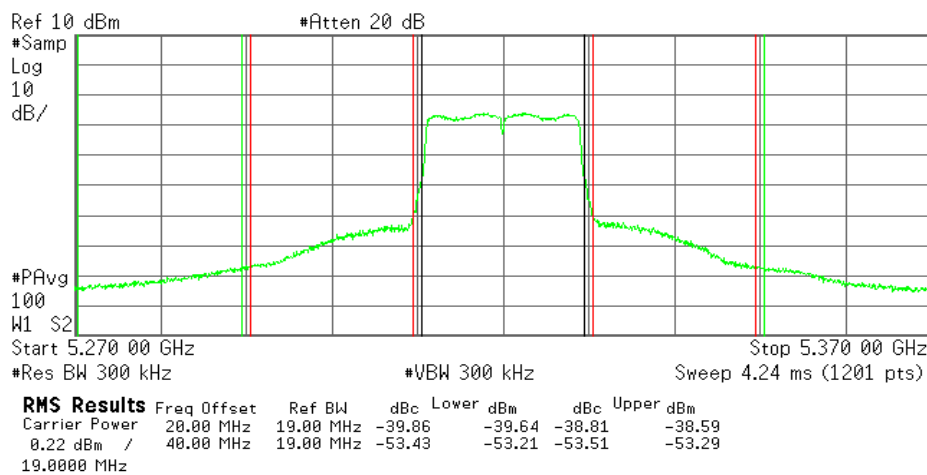
R L



Tx3_ACP_Chain0_Nom

Agilent 13:42:57 Aug 10, 2015

R L



2.8. Outband Leakage Power Strength (Normal Voltage)

Job No. 12197499-E41V2

Remark1

Remark2

[DATA]

[illegible]

Sample Calculation :

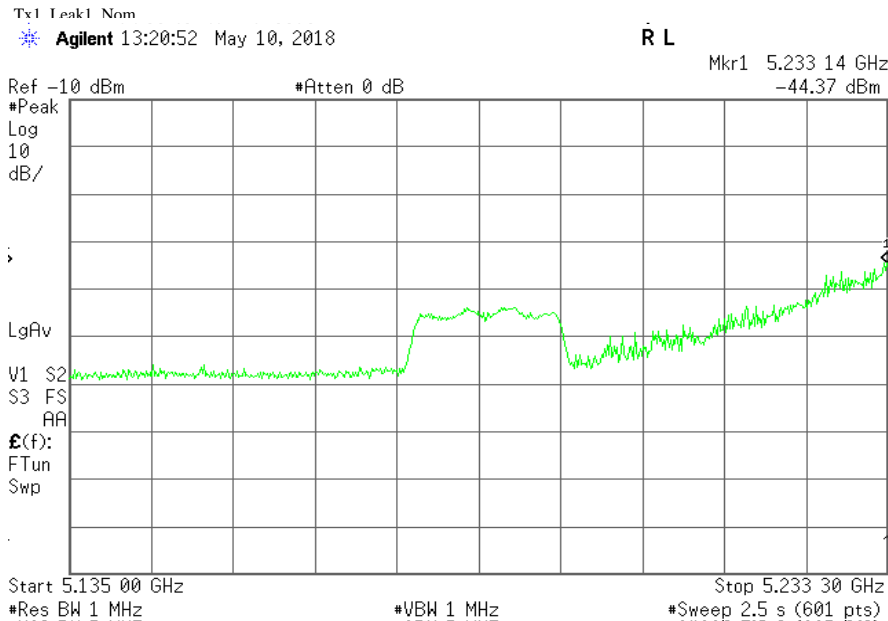
$$\text{Result} = \text{Reading} + \text{Cable Loss} + \text{Attenuator} + \text{Antenna Gain}$$

♦3:Freq Range3 ($\geq 5,135\text{MHz}$, $\leq 5,233.3\text{MHz}$)

◆4:Freq Range4 ($> 5,233.3\text{MHz}$, $\leq 5,240\text{MHz}$)

◆5:Freq Range5 (> 5.240MHz, < 5.249MHz)

◆6:Freq Range6 (> 5.249MHz, < 5.250MHz)



Tx1_Leak2_Nom

Agilent 13:21:02 May 10, 2018

R L

Mkr1 5.239 955 GHz

Ref -10 dBm

#Atten 0 dB

-35.51 dBm

#Peak
Log
10
dB/

LgAv

V1 S2

S3 FS

AA

E(f):

FTun

Swp

Start 5.233 300 GHz

#Res BW 1 MHz

#VBW 1 MHz

Stop 5.240 000 GHz

#Sweep 2.5 s (601 pts)

Tx1_Leak3_Nom

Agilent 13:21:11 May 10, 2018

R L

Mkr1 5.248 880 GHz
-27.10 dBm

Ref -10 dBm

*Atten 0 dB

*Peak
Log
10
dB/

LgAv

V1 S2
S3 FS
RA

E(f):
FTun
Swp

Start 5.240 000 GHz

*Res BW 1 MHz

*VBW 1 MHz

Stop 5.249 000 GHz

*Sweep 2.5 s (601 pts)

Tx1_Leak4_Nom

Agilent 13:21:21 May 10, 2018

R L

Mkr1 5.249 998 3 GHz
-20.05 dBm

Ref -10 dBm

*Atten 0 dB

*Peak
Log
10
dB/

LgAv

V1 S2
S3 FS
RA

E(f):
FTun
Swp

Start 5.249 000 0 GHz

*Res BW 1 MHz

*VBW 1 MHz

Stop 5.250 000 0 GHz

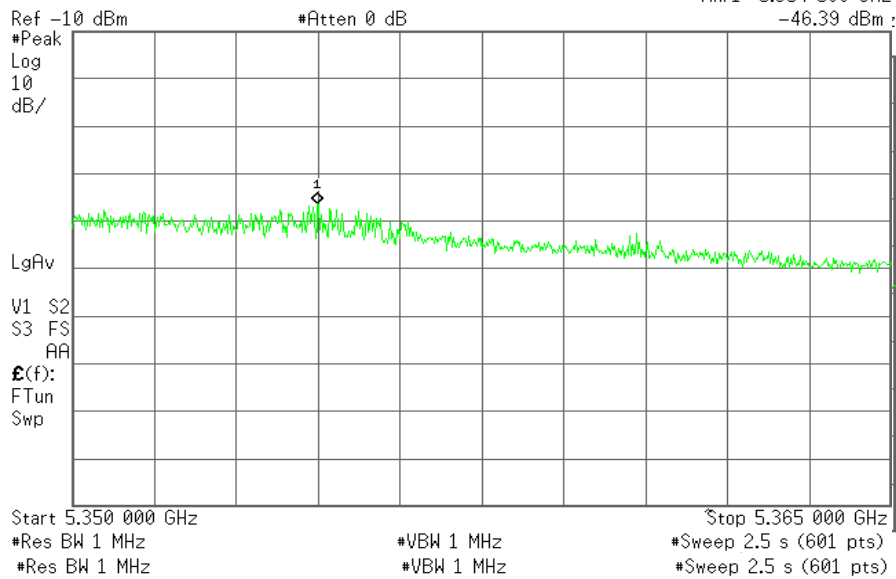
*Sweep 2.5 s (601 pts)

Tx3_Leak5_Nom

Agilent 13:23:36 May 10, 2018

R L

Mkr1 5.354 500 GHz
-46.39 dBm :



Average Power

Job No. 12197499-E41V2

Remark1

Remark2

[DATA]

Voltage	Port No.	Freq.	Reading	Cable Loss	Atten. Loss	Burst Rate	Output Power Result
		[MHz]	[dBm]	[dB]	[dB]		[dBm]
DC5V	0	5260	2.01	1.00	10.00	1.00	13.02
		5300	2.81	1.00	10.00	1.00	13.82
		5320	1.94	1.00	10.00	1.00	12.95
DC5V	-	-	-	-	-	-	-
		-	-	-	-	-	-
		-	-	-	-	-	-
DC5V	-	-	-	-	-	-	-
		-	-	-	-	-	-
		-	-	-	-	-	-
DC5V	-	-	-	-	-	-	-
		-	-	-	-	-	-
		-	-	-	-	-	-

Total Output Power

Voltage	Freq.	Power
	[MHz]	[mW]
DC5V	5260	20.06
	5300	24.11
	5320	19.74

3. Measurement Equipment

Use	Int. No.	Kind of Equipment	Model No.	Manufacturer	Serial No.	Calibration Authority	Calibration Date
X	T146	Spectrum Analyzer	E4446A	Agilent	MY53322020	Keysight	2/3/2018
X	T1268	Power Meter	N1911A	Keysight	MY55196017	Keysight	6/15/2017
X	T1226	Power Sensor	N1921A	Keysight	MY55200004	Keysight	8/30/2017
X	T1829	Hygro-Thermometer	14-650-118	Control Company	170024385	Control Company	1/11/2018

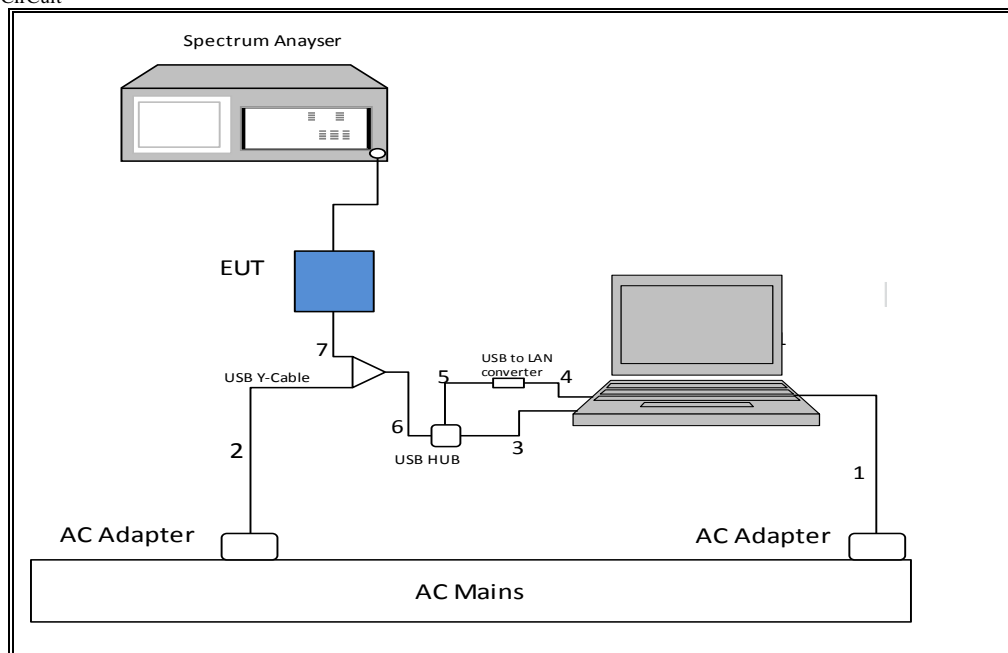
Note : 1. The calibration of measurement equipment is valid for a one year period.
 2. "X" used equipment.
 3. Calibrated per ISO/IEC 17025

4. Test Condition

Test Item	Date	Temp	Hum	Engineer	Test Room
Frequency Tolerance	8/10/2015	21.9	50	C. Susa	Temp Room B
Occupied Bandwidth	8/10/2015	21.9	50	C. Susa	Temp Room B
Unwanted Emission Strength	8/10/2015	21.9	50	C. Susa	Temp Room B
Output Power/ E.I.R.P	5/4/2018	22.6	50	Steven Tran	Temp Room A
Secondary Radiated Emission Strength	8/10/2015	21.9	50	C. Susa	Temp Room B
Burst Length / Duty	6/29/2018	21.9	47	Steven Tran	Temp Room A
Adjacent Channel Power	8/10/2015	21.9	50	C. Susa	Temp Room B
Outband Leakage Power Strength	5/4/2018	22.6	50	Steven Tran	Temp Room A
Average Power	5/4/2018	22.6	50	Steven Tran	Temp Room A

5. TEST CONFIGURATION

TEST CirCuit



PHOTO

