

Parallel Wireless Inc.

CWS-3050-07

FCC 27:2017

Cellular Radio

Report # KMWC0080





NVLAP Lab Code: 200676-0

CERTIFICATE OF TEST



Last Date of Test: June 19, 2017
Parallel Wireless Inc.
Model: CWS-3050-07

Radio Equipment Testing

Standards

Specification	Method
FCC 27:2017	ANSI/TIA/EIA-603-D-2010

Results

Method Clause	Test Description	Applied	Results	Comments
2.2.1	Conducted Output Power	Yes	Pass	
2.2.1	Peak To Average Ratio	Yes	Pass	
2.2.2	Frequency Stability	Yes	Pass	
2.2.3	Occupied Bandwidth Emission Mask	Yes	Pass	
2.2.12	Out of Band Emissions - LTE Band 7	Yes	Pass	
2.2.13	Spurious Emissions at the Antenna Terminals	Yes	Pass	
2.2.13	Band Edge Compliance	Yes	Pass	
2.2.13	Intermodulation	Yes	Pass	
2.2.17.2	ERP of Fundamental - LTE Band 7	No	N/A	Not required for base station equipment.

Deviations From Test Standards

None

Approved By:

Victor Ratinoff, Operations Manager

Product compliance is the responsibility of the client; therefore, the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. The results of this test pertain only to the sample(s) tested. The specific description is noted in each of the individual sections of the test report supporting this certificate of test. This report reflects only those tests from the referenced standards shown in the certificate of test. It does not include inspection or verification of labels, identification, marking or user information.

REVISION HISTORY



Revision Number	Description	Date	Page Number
00	None		

Report No. KMWC0080 3/203

ACCREDITATIONS AND AUTHORIZATIONS



United States

FCC - Designated by the FCC as a Telecommunications Certification Body (TCB). Certification chambers, Open Area Test Sites, and conducted measurement facilities are listed with the FCC.

A2LA - Accredited by A2LA to ISO / IEC 17065 as a product certifier. This allows Element to certify transmitters to FCC and IC specifications.

NVLAP - Each laboratory is accredited by NVLAP to ISO 17025

Canada

ISED - Recognized by Innovation, Science and Economic Development Canada as a Certification Body (CB). Certification chambers and Open Area Test Sites are filed with ISED.

European Union

European Commission - Within Element, we have a EU Notified Body validated for the EMCD and RED Directives.

Australia/New Zealand

ACMA - Recognized by ACMA as a CAB for the acceptance of test data.

Korea

MSIP / RRA - Recognized by KCC's RRA as a CAB for the acceptance of test data.

Japan

VCCI - Associate Member of the VCCI. Conducted and radiated measurement facilities are registered.

Taiwan

BSMI – Recognized by BSMI as a CAB for the acceptance of test data.

NCC - Recognized by NCC as a CAB for the acceptance of test data.

Singapore

IDA – Recognized by IDA as a CAB for the acceptance of test data.

Israel

MOC – Recognized by MOC as a CAB for the acceptance of test data.

Hong Kong

OFCA – Recognized by OFCA as a CAB for the acceptance of test data.

Vietnam

MIC – Recognized by MIC as a CAB for the acceptance of test data.

SCOPE

For details on the Scopes of our Accreditations, please visit:

http://portlandcustomer.element.com/ts/scope/scope.htm http://gsi.nist.gov/global/docs/cabs/designations.html

Report No. KMWC0080 4/203

MEASUREMENT UNCERTAINTY



Measurement Uncertainty

When a measurement is made, the result will be different from the true or theoretically correct value. The difference is the result of tolerances in the measurement system that cannot be completely eliminated. To the extent that technology allows us, it has been our aim to minimize this error. Measurement uncertainty is a statistical expression of measurement error qualified by a probability distribution.

A measurement uncertainty estimation has been performed for each test per our internal quality document QM205.4.6. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty (K=2) can be found included as part of the applicable test description page. Our measurement data meets or exceeds the measurement uncertainty requirements of the applicable specification; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for estimating measurement uncertainty are based upon ETSI TR 100 028 (or CISPR 16-4-2 as applicable), and are available upon request.

The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

Test	+ MU	<u>- MU</u>
Frequency Accuracy (Hz)	0.0007%	-0.0007%
Amplitude Accuracy (dB)	1.2 dB	-1.2 dB
Conducted Power (dB)	0.3 dB	-0.3 dB
Radiated Power via Substitution (dB)	0.7 dB	-0.7 dB
Temperature (degrees C)	0.7°C	-0.7°C
Humidity (% RH)	2.5% RH	-2.5% RH
Voltage (AC)	1.0%	-1.0%
Voltage (DC)	0.7%	-0.7%
Field Strength (dB)	5.2 dB	-5.2 dB
AC Powerline Conducted Emissions (dB)	2.4 dB	-2.4 dB

Report No. KMWC0080 5/203

FACILITIES







California
Labs OC01-13
41 Tesla
Irvine, CA 92618
(949) 861-8918

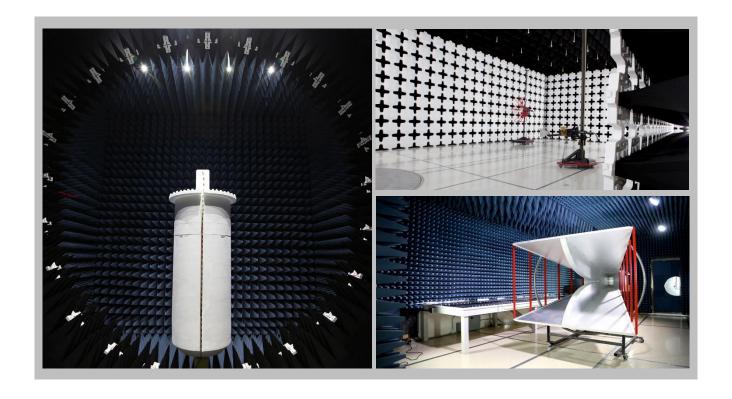
Minnesota Labs MN01-08, MN10 9349 W Broadway Ave. Brooklyn Park, MN 55445 (612)-638-5136

New York Labs NY01-04 4939 Jordan Rd. Elbridge, NY 13060 (315) 554-8214 Oregon
Labs EV01-12
22975 NW Evergreen Pkwy
Hillsboro, OR 97124
(503) 844-4066

TexasLabs TX01-09
3801 E Plano Pkwy
Plano, TX 75074
(469) 304-5255

WashingtonLabs NC01-05
19201 120th Ave NE
Bothell, WA 98011
(425)984-6600

Irvine, CA 92618 (949) 861-8918	Brooklyn Park, MN 55445 (612)-638-5136	Elbridge, NY 13060 (315) 554-8214	Hillsboro, OR 97124 (503) 844-4066	Plano, TX 75074 (469) 304-5255	Bothell, WA 98011 (425)984-6600			
	NVLAP							
NVLAP Lab Code: 200676-0	NVLAP Lab Code: 200881-0	NVLAP Lab Code: 200761-0	NVLAP Lab Code: 200630-0	NVLAP Lab Code:201049-0	NVLAP Lab Code: 200629-0			
	Innov	ation, Science and Eco	nomic Development Can	ada				
2834B-1, 2834B-3	2834E-1	N/A	2834D-1, 2834D-2	2834G-1	2834F-1			
		BS	MI					
SL2-IN-E-1154R	SL2-IN-E-1152R	N/A	SL2-IN-E-1017	SL2-IN-E-1158R	SL2-IN-E-1153R			
		VC	CI					
A-0029	A-0109	N/A	A-0108	A-0201	A-0110			
Recognized Phase I CAB for ACMA, BSMI, IDA, KCC/RRA, MIC, MOC, NCC, OFCA								
US0158	US0175	N/A	US0017	US0191	US0157			

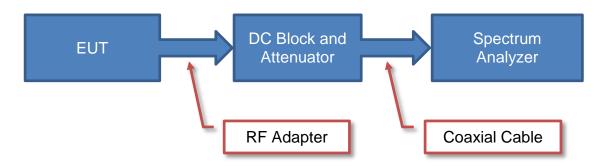


Report No. KMWC0080 6/203

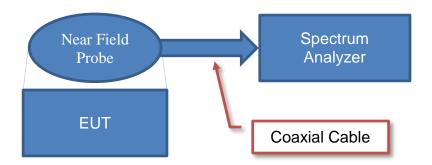
Test Setup Block Diagrams



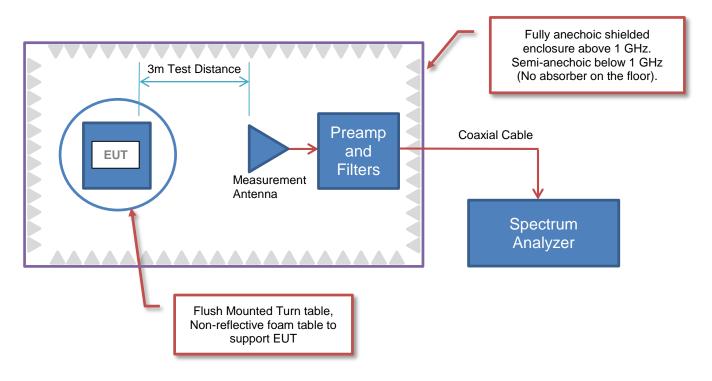
Antenna Port Conducted Measurements



Near Field Test Fixture Measurements



Spurious Radiated Emissions



Report No. KMWC0080 7/203

PRODUCT DESCRIPTION



Client and Equipment Under Test (EUT) Information

Company Name:	Parallel Wireless Inc.
Address:	100 Innovative Way, Suite #3410
City, State, Zip:	Nashua, NH 03062, USA
Test Requested By:	Daniel Kim
Model:	CWS-3050-07
First Date of Test:	June 14, 2017
Last Date of Test:	June 19, 2017
Receipt Date of Samples:	June 14, 2017
Equipment Design Stage:	Production
Equipment Condition:	No Damage
Purchase Authorization:	Verified

Information Provided by the Party Requesting the Test

Functional Description of the EUT:

Tower based Converged Wireless System Base Station operating in the LTE Band 7 with 2x2, multiple channel capability, and with 5 MHz, 10 MHz, and 20 MHz channel bandwidths

Testing Objective:

To demonstrate compliance of the Cellular radio to FCC 27 requirements.

Report No. KMWC0080 8/203

CONFIGURATIONS



Configuration KMWC0080-1

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Converged Wireless System Base Station	Parallel Wireless Inc.	CWS-3050-07	K162300004

Peripherals in test setup boundary							
Description Manufacturer Model/Part Number Serial Number							
High Power Terminator	Telcon	KTMO400800060	1111-0004				
High Power Terminator	Telcon	KTMO400800060	1111-0064				
Laptop Power Supply	Delta Electronics, Inc.	SADP-90FH D	CNBA4400215ABZ040C18685				
Laptop	Samsung	NP300V5A	HGHS93-JBA00674K				

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Cable	No	1.5m	No	AC Mains	Laptop Power Supply
DC Power Cable	No	5.0m	No	CWS-3050-07 Tower	DC Mains
Ground Braid	No	2.0m	No	CWS-3050-07 Tower	Ground
RF Output Cable x2	Yes	5.0m	No	CWS-3050-07 Tower	High Power Terminator
USB Cable	No	3.0m	No	CWS-3050-07 Tower	Laptop
Ethernet Cable	No	2.5m	No	CWS-3050-07 Tower	Laptop
DC Cable	No	2.0m	Yes	Laptop Power Supply	Laptop

Report No. KMWC0080 9/203

MODIFICATIONS



Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	6/14/2017	Conducted Output Power	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
2	6/14/2017	Peak to Average Ratio	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
3	6/14/2017	Frequency Stability	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
4	6/14/2017	Occupied Bandwidth Emission Mask	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
5	6/14/2017	Spurious Emissions at the Antenna Terminals	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
6	6/14/2017	Band Edge Compliance	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
7	6/14/2017	Intermodulation	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
8	6/19/2017	Out of Band Emissions – LTE Band 7	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

Report No. KMWC0080 10/203



XMit 2017.02.08

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Thermometer	Omega Engineering, Inc.	HH311	DUC	10/3/2014	10/3/2017
Chamber - Temperature/Humidity	Cincinnati Sub Zero (CSZ)	ZPHS-32-3.5-SCT/AC	TBE	NCR	NCR
Power Supply - DC	Hewlett Packard	6574A	TPX	NCR	NCR
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	2/5/2018
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Block - DC	Fairview Microwave	SD3379	AMV	1/11/2017	1/11/2018
Meter - Power	ETS Lindgren	7002-006	SRB	12/6/2016	12/6/2017
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	11/2/2016	11/2/2017

CLIENT PROVIDED EQUIPMENT

Description	Manufacturer	Model	Last Cal.	Cal. Due
High Power Attenuator - 30dB	Aeroflex/Weinschel	53-30-43	NCR	NCR
Attenuator - 20dB	N/A	N/A	NCR	NCR
Power Divider	Fairview Microwave	MP8748-2	NCR	NCR
500hm Terminator	Aeroflex/Weinschel	1455-4	NCR	NCR
High Power Terminator	Telcon	KTMO400800060	NCR	NCR

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The RF output power was measured with the EUT set to the modes called out in the datasheet. The power measurement was made using a direct connection between the RF output of the EUT and an RF Power Sensor which only measures across the high time of the burst of the carrier.

The observed duty cycle was noted but not needed to calculate the EiRP.

EIRP = Max Measured Power + Antenna gain (dBi)

The measurements from Port 0 and Port 1 were summed to determine the total average power in EIRP.

Report No. KMWC0080 11/203

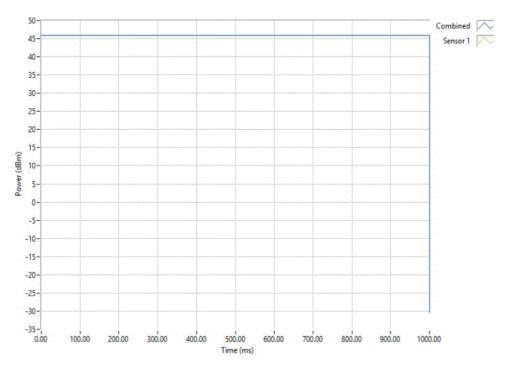


	LOWIS SOFE ST							14/	TbtTx 2017.04.18	XMit 201
	: CWS-3050-07							Work Order:		
Serial Number	: See Configuration : Parallel Wireless Inc.							Date: Temperature:	06/14/17	
	: Daniel Kim :: None							Humidity: Barometric Pres.:		
	: Salvador Solorzano and Jo	hnny Candalas		Power:	40VDC			Job Site:		
ST SPECIFICAT		illily Calidelas		rowei.	Test Method	I		Job Site.	0013	
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36 27.2017					ANSI/TIA/EIA-003-D	-2010				
OMMENTS										
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		Signature	0							
		<u> </u>			Avg Cond	Duty	Antenna	EIRP	Limit	
					Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results
ntenna Port 1					(, ,	.,		<u> </u>	, ,	
	Low Channel LTE5, 2622.5 M	ЛНz			45.97	100	0	46.0	60	Pass
	Mid Channel LTE5, 2655 MH.				46.00	100	0	46.0	60	Pass
	High Channel LTE5, 2687.5 M				45.94	100	0	45.9	60	Pass
	Low Channel LTE10, 2625 M				45.97	100	0	46.0	60	Pass
	Mid Channel LTE10, 2655 Mi				45.98	100	Ö	46.0	60	Pass
	High Channel LTE10, 2685 M				45.99	100	0	46.0	60	Pass
	Low Channel LTE20, 2630 M				45.98	100	0	46.0	60	Pass
	Mid Channel LTE20, 2655 MI				45.93	100	0	45.9	60	Pass
	High Channel LTE20, 2680 M				45.94	100	0	45.9	60	Pass
tenna Port 2	<u> </u>									
	Low Channel LTE5, 2622.5 M	ИНz			45.95	100	0	46.0	60	Pass
	Mid Channel LTE5, 2655 MH	z			45.98	100	0	46.0	60	Pass
	High Channel LTE5, 2687.5 M	ИHz			45.94	100	0	45.9	60	Pass
	Low Channel LTE10, 2625 M	Hz			45.98	100	0	46.0	60	Pass
	Mid Channel LTE10, 2655 MI	Hz			45.98	100	0	46.0	60	Pass
	High Channel LTE10, 2685 N				45.98	100	0	46.0	60	Pass
	Low Channel LTE20, 2630 M	Hz			45.98	100	0	46.0	60	Pass
	Mid Channel LTE20, 2655 MI	Hz			45.94	100	0	45.9	60	Pass
	High Channel LTE20, 2680 N	lHz			46.00	100	0	46.0	60	Pass
ntenna Port 1 MIM										
	Low Channel LTE5, 2622.5 M				46.00	100	0	46.0	60	Pass
	Mid Channel LTE5, 2655 MH				45.98	100	0	46.0	60	Pass
	High Channel LTE5, 2687.5 N				45.93	100	0	45.9	60	Pass
	Low Channel LTE10, 2625 M				45.99	100	0	46.0	60	Pass
	Mid Channel LTE10, 2655 Mi				45.98	100	0	46.0	60	Pass
	High Channel LTE10, 2685 M				45.96	100	0	46.0	60	Pass
	Low Channel LTE20, 2630 M				45.96	100	0	46.0	60	Pass
	Mid Channel LTE20, 2655 Mi				45.93	100	0	45.9	60	Pass
tanna Dart 2 * 41*	High Channel LTE20, 2680 M	IHZ			45.98	100	0	46.0	60	Pass
ntenna Port 2 MIM		Al In			45.00	100	0	46.0	60	Dor-
	Low Channel LTE5, 2622.5 M				45.99	100	0	46.0	60	Pass
	Mid Channel LTE5, 2655 MH.				45.90 45.96	100 100	0 0	45.9 46.0	60 60	Pass Pass
	High Channel LTE5, 2687.5 M						0		60	
	Low Channel LTE10, 2625 M				45.99 45.99	100 100	0	46.0 46.0	60	Pass Pass
	Mid Channel LTE10, 2655 Mi High Channel LTE10, 2685 M				45.99 45.93	100	0	46.0 45.9	60	Pass
	Low Channel LTE20, 2630 M				45.95 45.95	100	0	45.9 46.0	60	Pass
	Mid Channel LTE20, 2655 Mi				45.99	100	0	46.0	60	Pass
	High Channel LTE20, 2680 M				45.91	100	0	45.9	60	Pass
ear Sum of the F		11 12			40.01	100	U	40.0		1 055
.cai cani di the r	55/	Port	1 (mW)	Port 2 (mW)	Sum (mW)	Sum (dBm)				
	Low Channel LTE5, 2112.5 M		9810.7	39719.2	79529.9	49.01	0	49.0	60	Pass
	Mid Channel LTE5, 2132.5 M		9627.8	38904.5	78532.3	48.95	0	49.0 49.0	60	Pass
	High Channel LTE5, 2152.5 M		9174.2	39445.7	78619.9	48.96	0	49.0	60	Pass
	Low Channel LTE10, 2115 M		7174.2	39719.2	79438.3	49.00	0	49.0	60	Pass
			9627.8	39719.2	79347.0	49.00	0	49.0	60	Pass
	Mid Channel I TF10 2132 5 F	MH2 30								
	Mid Channel LTE10, 2132.5 N									
	High Channel LTE10, 2150 M	MHz 39	9445.7	39174.2	78619.9	48.96	0	49.0	60	Pass
		MHz 39 HHz 39								

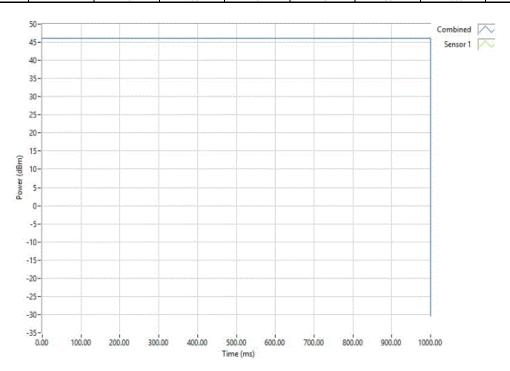
Report No. KMWC0080 12/203



	Antenna Port 1,	Low Channel LT	E5, 2622.5 MHz		
Avg Cond	Duty	Antenna	EIRP	Limit	
 Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results
45.97	100	0	46	60	Pass



		Antenna Port 1	, Mid Channel LT	E5, 2655 MHz		
	Avg Cond	Duty	Antenna	EIRP	Limit	
	Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results
	46	100	0	46	60	Pass

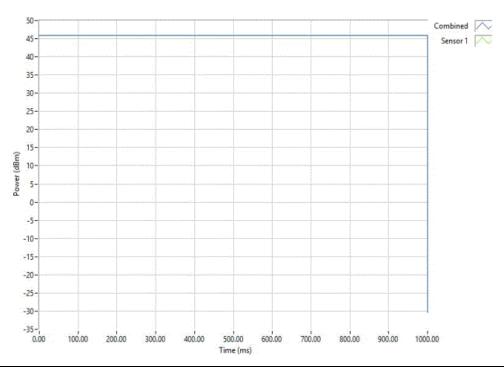


Report No. KMWC0080 13/203

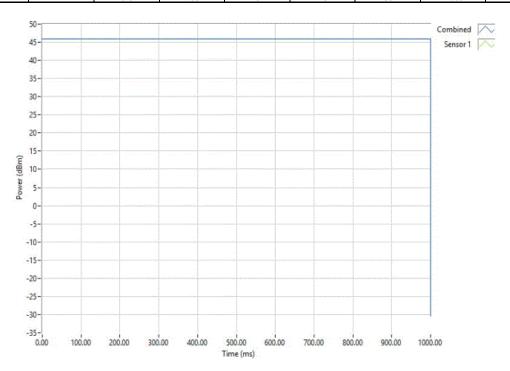


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		Antenna Port 1,	High Channel LT	E5, 2687.5 MHz		
	Avg Cond	Duty	Antenna	EIRP	Limit	
	Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results
	45.94	100	0	45.9	60	Pass



		Antenna Port 1,	Low Channel LT	E10, 2625 MHz		
	Avg Cond	Duty	Antenna	EIRP	Limit	
	Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results
	45.97	100	0	46	60	Pass

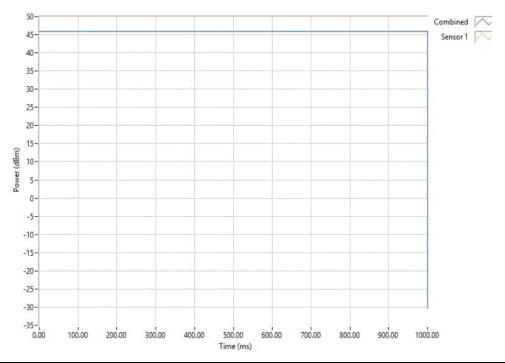


Report No. KMWC0080 14/203

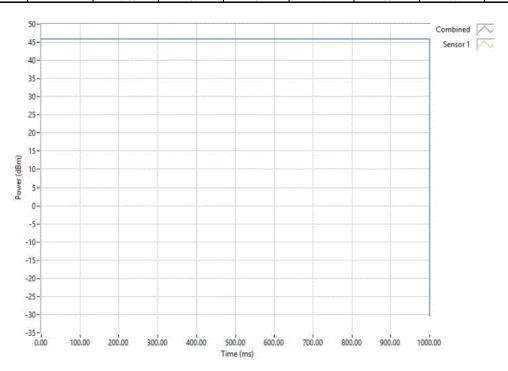


TbtTx 2017.04.18	XMit 2017.02.0

		Antenna Port 1	, Mid Channel LT	E10, 2655 MHz		
	Avg Cond	Duty	Antenna	EIRP	Limit	
	Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results
	45.98	100	0	46	60	Pass



		Ant	enna Port 1,	High Channel LT	E10, 2685 MHz		
	Avg Co	ond	Duty	Antenna	EIRP	Limit	
ı	Pwr (di	3m) C	ycle (%)	Gain (dBi)	(dBm)	(dBm)	Results
	45.9	9	100	0	46	60	Pass

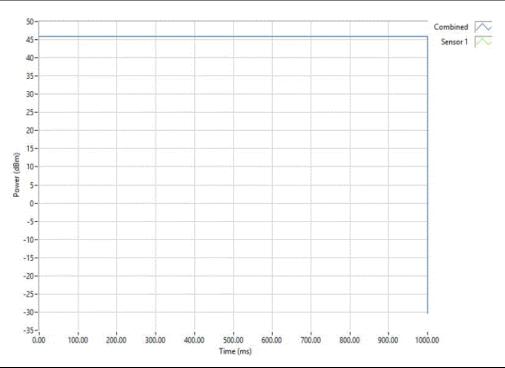


Report No. KMWC0080 15/203

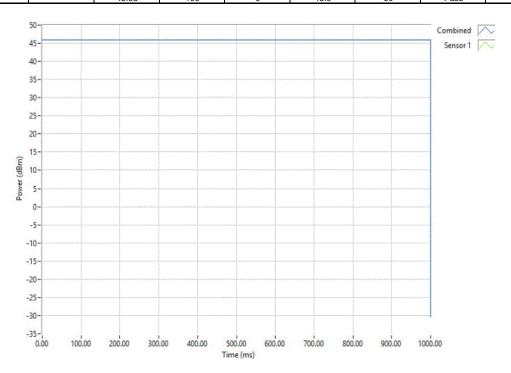


Automa Port A. Levy Channel I. TEOO. 2020 Mills		
	TbtTx 2017.04.18	XMit 2017.02.08

		Antenna Port 1,	Low Channel LT	E20, 2630 MHz		
	Avg Cond	Duty	Antenna	EIRP	Limit	
	Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results
	45.98	100	0	46	60	Pass



	Antenna Port 1	, Mid Channel LT	E20, 2655 MHz		
Avg Cond	Duty	Antenna	EIRP	Limit	
 Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results
45.93	100	0	45.9	60	Pass

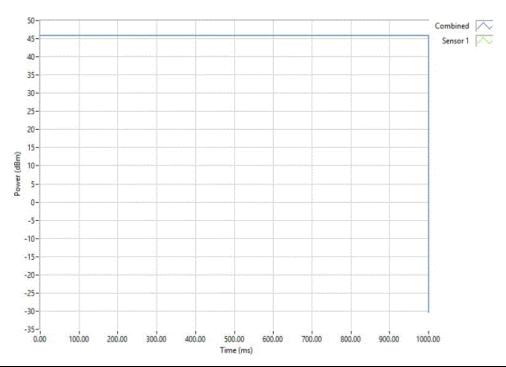


Report No. KMWC0080 16/203

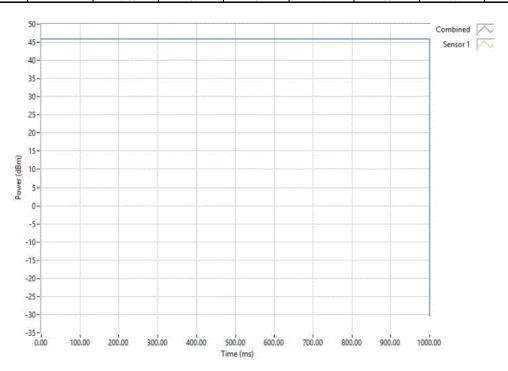


TbtTx 2017.04.18 XMit 2017.02.0

		Antenna Port 1,	High Channel LT	ΓΕ20, 2680 MHz		
	Avg Cond	Duty	Antenna	EIRP	Limit	
	Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results
	45.94	100	0	45.9	60	Pass



		Antenna Port 2,	Low Channel LT	E5, 2622.5 MHz		
	Avg Cond	Duty	Antenna	EIRP	Limit	
	Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results
	45.95	100	0	46	60	Pass

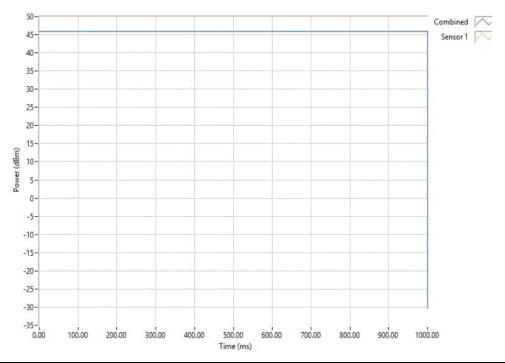


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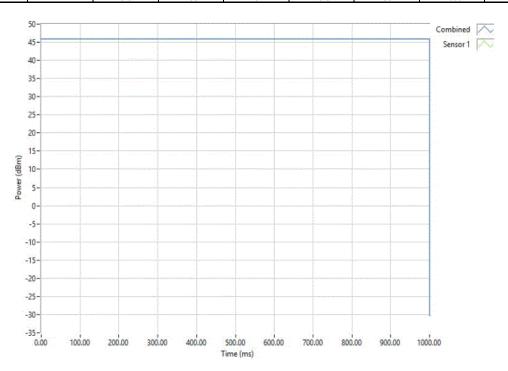


TbtTx 2017.04.18	XMit 2017.02.08

	Antenna Port 2	2, Mid Channel L	ΓΕ5, 2655 MHz			
Avg Cond	Duty	Antenna	EIRP	Limit		
Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results	
45.98	100	0	46	60	Pass	



		Antenna Port 2,	High Channel LT	E5, 2687.5 MHz		
	Avg Cond	Duty	Antenna	EIRP	Limit	
	Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results
	45.94	100	0	45.9	60	Pass

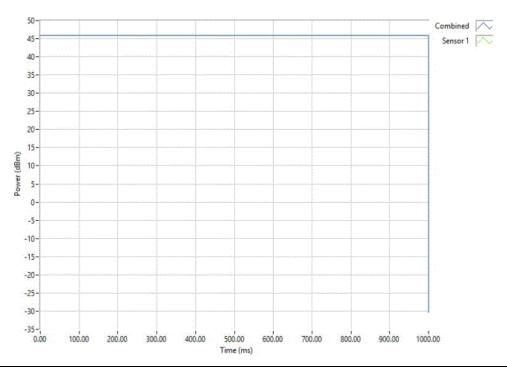


Report No. KMWC0080 18/203

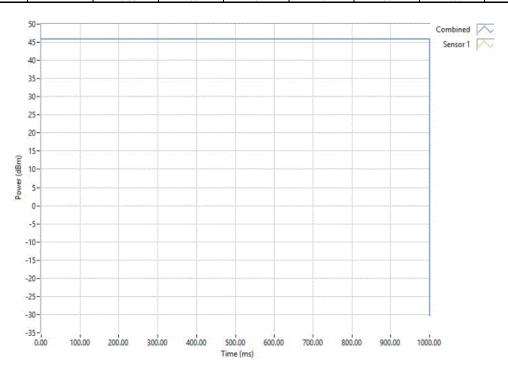


TbtTx 2017.04.18 XMit 2017.02.0

		Antenna Port 2	Low Channel LT	E10, 2625 MHz		
	Avg Cond	Duty	Antenna	EIRP	Limit	
	Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results
	45.98	100	0	46	60	Pass



		Antenna Port	2, Mid Channel L1	TE10, 2655 MHz		
ı	Avg Con	d Duty	Antenna	EIRP	Limit	
ı	Pwr (dBr	n) Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results
	45.98	100	0	46	60	Pass

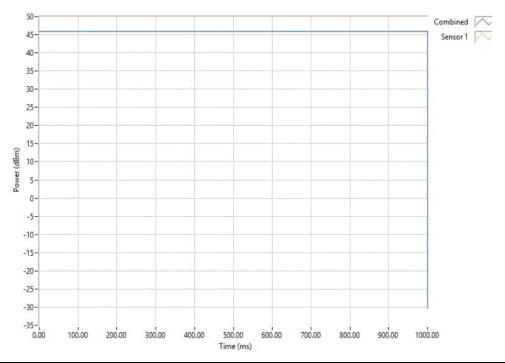


Report No. KMWC0080 19/203

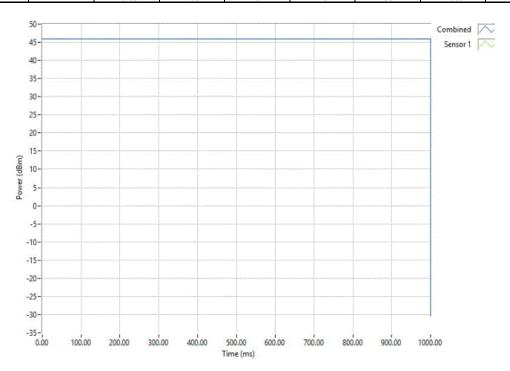


TbtTx 2017.04.18	XMit 2017.02.0

		Antenna Port 2,	High Channel LT	E10, 2685 MHz		
	Avg Cond	Duty	Antenna	EIRP	Limit	
	Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results
	45.98	100	0	46	60	Pass



		Antenna Port 2,	Low Channel LT	E20, 2630 MHz		
Avg (Cond	Duty	Antenna	EIRP	Limit	
Pwr (e	dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results
45.	98	100	0	46	60	Pass

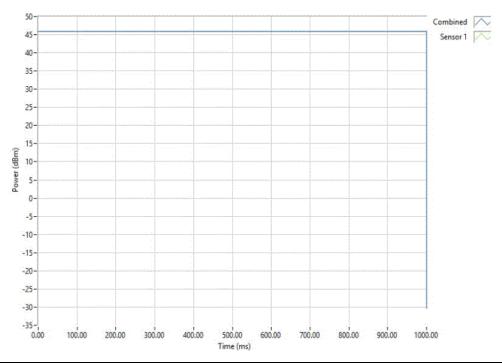


Report No. KMWC0080 20/203

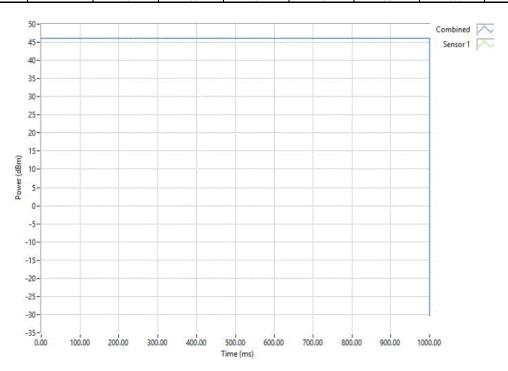


TbtTx 2017.04.18 XMit 2017.02.0

		Antenna Port 2	, Mid Channel LT	E20, 2655 MHz		
	Avg Cond	Duty	Antenna	EIRP	Limit	
	Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results
	45.94	100	0	45.9	60	Pass



Antenna Port 2, High Channel LTE20, 2680 MHz									
Д	Avg Cond	Duty	Antenna	EIRP	Limit				
P	wr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results			
	46	100	0	46	60	Pass			

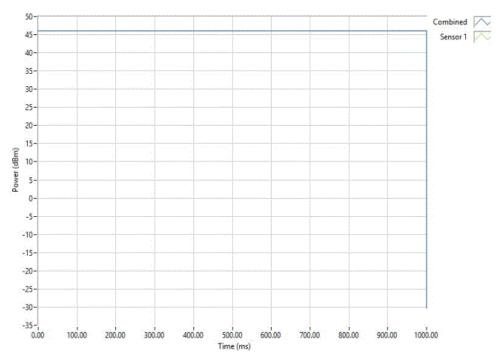


Report No. KMWC0080 21/203

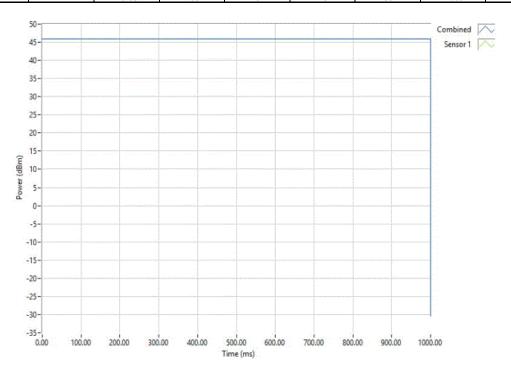


TbtTx 2017.04.18

Antenna Port 1 MIMO, Low Channel LTE5, 2622.5 MHz									
		Avg Cond	Duty	Antenna	EIRP	Limit			
		Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results		
		46	100	0	46	60	Pass		



Antenna Port 1 MIMO, Mid Channel LTE5, 2655 MHz								
	Avg Cond	Duty	Antenna	EIRP	Limit			
	Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results		
	45.98	100	0	46	60	Pass		

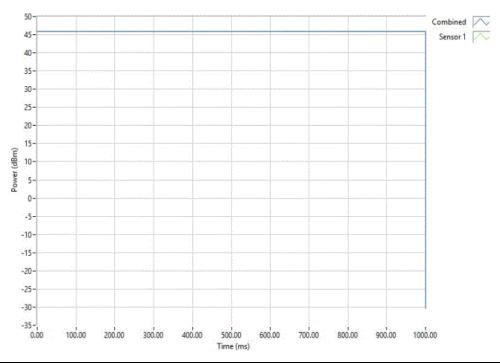


Report No. KMWC0080 22/203

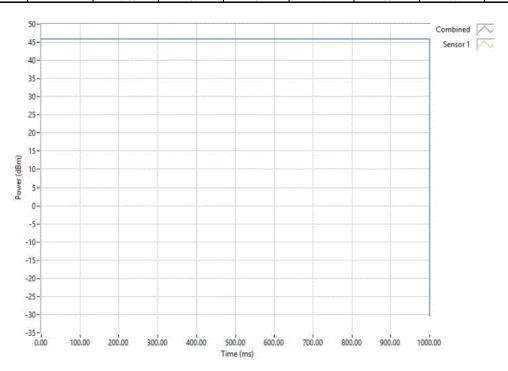


TbtTx 2017.04.18 XMit 2017.02.

	An	tenna Port 1 MIN	IO, High Channe	I LTE5, 2687.5 M	Нz		
	Avg Cond	Duty	Antenna	EIRP	Limit		
	Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results	_
	45.93	100	0	45.9	60	Pass	



Antenna Port 1 MIMO, Low Channel LTE10, 2625 MHz									
	Avg Cond	Duty	Antenna	EIRP	Limit				
	Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results			
	45.99	100	0	46	60	Pass			

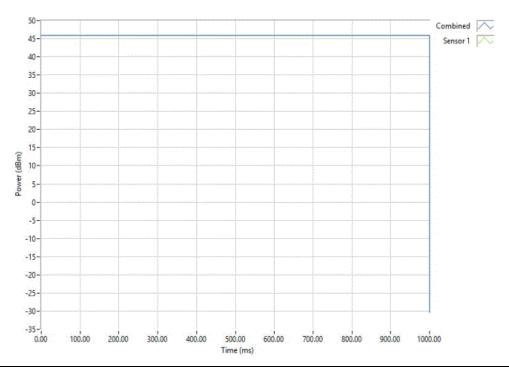


Report No. KMWC0080 23/203

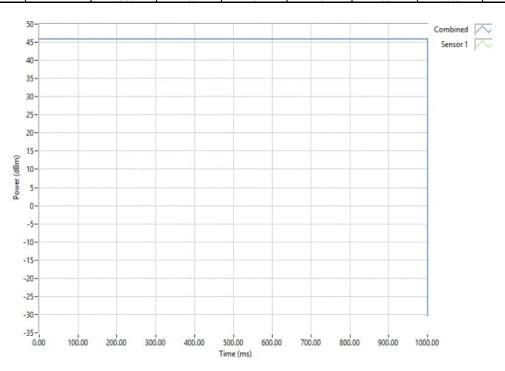


TbtTx 2017.04.18	XMit 2017.02.08

	A	ntenna Port 1 MII	MO, Mid Channel	LTE10, 2655 MF	lz		
	Avg Cond	Duty	Antenna	EIRP	Limit		
	Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results	_
	45.98	100	0	46	60	Pass	



Antenna Port 1 MIMO, High Channel LTE10, 2685 MHz									
	Avg Cond	Duty	Antenna	EIRP	Limit				
	Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results			
	45.96	100	0	46	60	Pass			

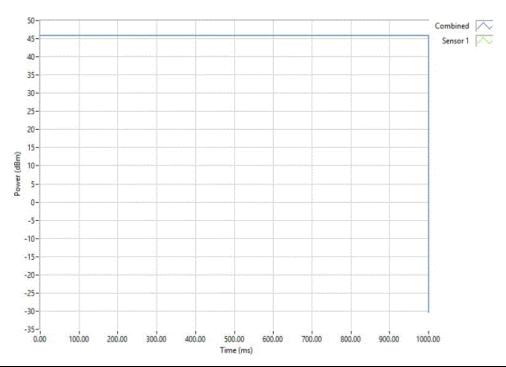


Report No. KMWC0080 24/203

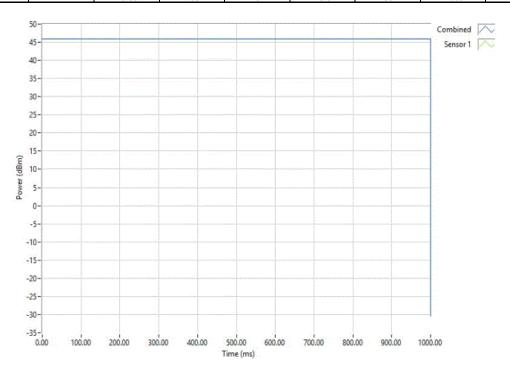


TbtTx 2017.04.18

Antenna Port 1 MIMO, Low Channel LTE20, 2630 MHz								
		Avg Cond	Duty	Antenna	EIRP	Limit		
		Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results	
		45.96	100	0	46	60	Pass	



Antenna Port 1 MIMO, Mid Channel LTE20, 2655 MHz									
	Avg Cond	Duty	Antenna	EIRP	Limit				
	Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results			
	45.93	100	0	45.9	60	Pass			

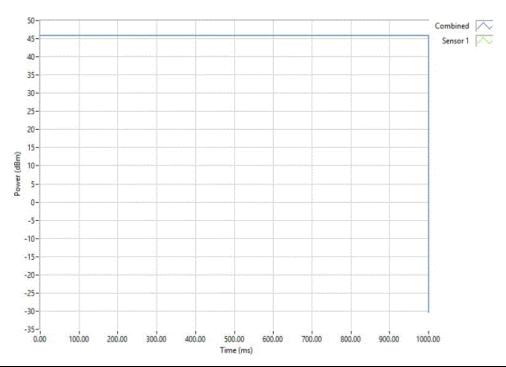


Report No. KMWC0080 25/203

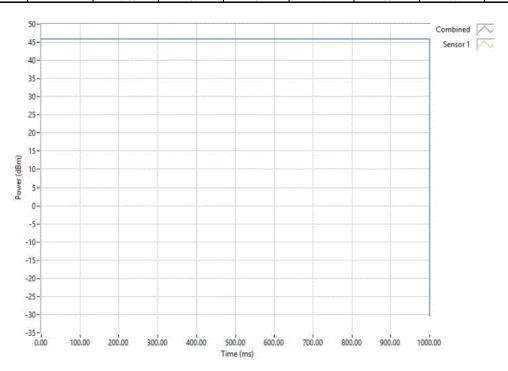


TbtTx 2017.04.18 XMit 2017.02.

Antenna Port 1 MIMO, High Channel LTE20, 2680 MHz						
Avg Cond	Duty	Antenna	EIRP	Limit		
 Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results	_
45.98	100	0	46	60	Pass	



Antenna Port 2 MIMO, Low Channel LTE5, 2622.5 MHz									
	Avg Cond	Duty	Antenna	EIRP	Limit				
	Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results			
	45.99	100	0	46	60	Pass			

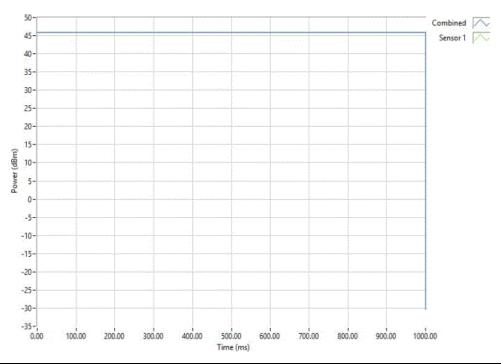


Report No. KMWC0080 26/203

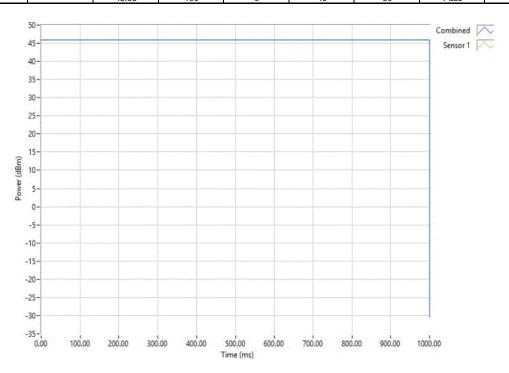


TbtTx 2017.04.18 XMit 2017.02.

Antenna Port 2 MIMO, Mid Channel LTE5, 2655 MHz									
		Avg Cond	Duty	Antenna	EIRP	Limit			
		Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results		
		45.9	100	0	45.9	60	Pass		



Antenna Port 2 MIMO, High Channel LTE5, 2687.5 MHz									
	Avg Cond	Duty	Antenna	EIRP	Limit				
<u></u>	Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results			
	45.96	100	0	46	60	Pass			

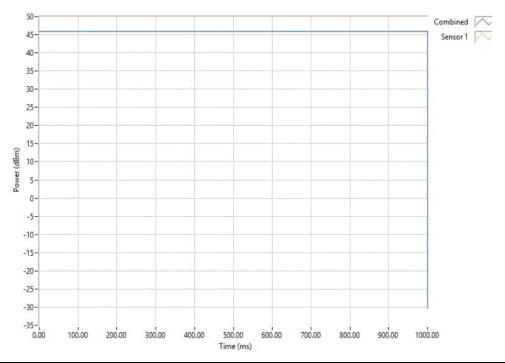


Report No. KMWC0080 27/203

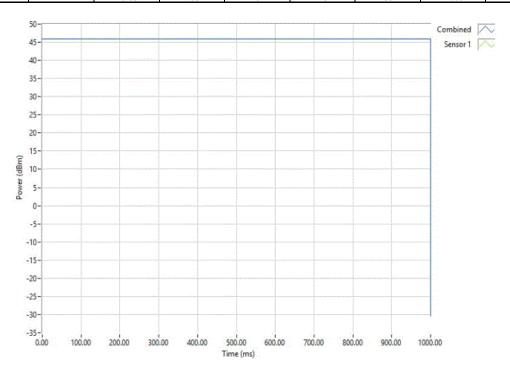


TbtTx 2017.04.18	XMit 2017.02.0

Antenna Port 2 MIMO, Low Channel LTE10, 2625 MHz									
		Avg Cond	Duty	Antenna	EIRP	Limit			
		Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results		
		45.99	100	0	46	60	Pass		



Antenna Port 2 MIMO, Mid Channel LTE10, 2655 MHz									
Av	g Cond	Duty	Antenna	EIRP	Limit				
Pw	r (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results			
4	45.99	100	0	46	60	Pass			

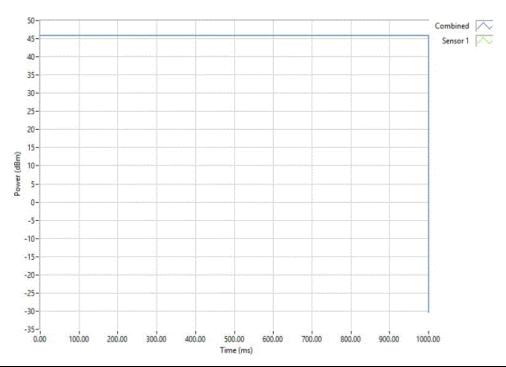


Report No. KMWC0080 28/203

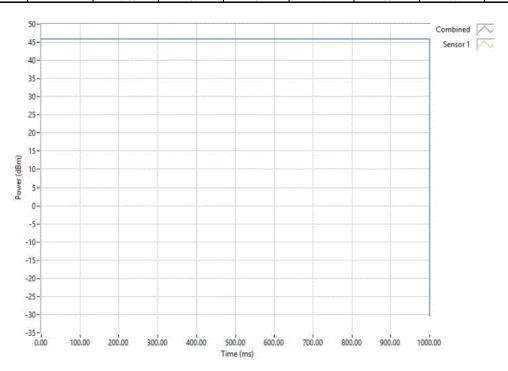


TbtTx 2017.04.18 XMit 2017.02.0

Antenna Port 2 MIMO, High Channel LTE10, 2685 MHz									
		Avg Cond	Duty	Antenna	EIRP	Limit			
		Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results		
		45.93	100	0	45.9	60	Pass		



Antenna Port 2 MIMO, Low Channel LTE20, 2630 MHz									
	Avg Cond	Duty	Antenna	EIRP	Limit				
	Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results			
	45.95	100	0	46	60	Pass			

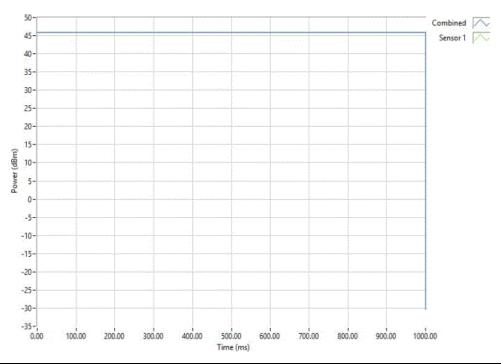


Report No. KMWC0080 29/203

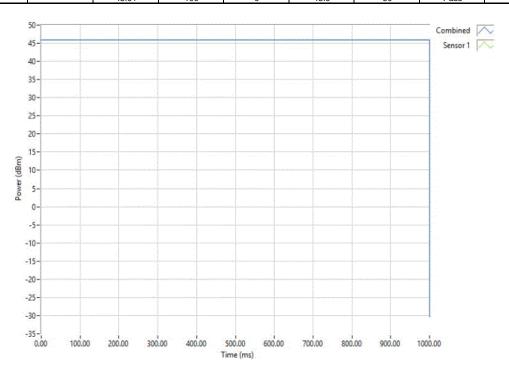


TbtTx 2017.04.18 XMit 2017.02.0

Antenna Port 2 MIMO, Mid Channel LTE20, 2655 MHz									
		Avg Cond	Duty	Antenna	EIRP	Limit			
		Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results		
		45.99	100	0	46	60	Pass		



Antenna Port 2 MIMO, High Channel LTE20, 2680 MHz									
	Avg Cond	Duty	Antenna	EIRP	Limit				
	Pwr (dBm)	Cycle (%)	Gain (dBi)	(dBm)	(dBm)	Results			
	45.91	100	0	45.9	60	Pass			



Report No. KMWC0080 30/203



XMit 2017.02.08

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

I EOI EQUII MENT						
Description	Manufacturer	Model	ID	Last Cal.	Cal. Due	
Power Supply - DC	Hewlett Packard	6574A	TPX	NCR	NCR	
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	2/5/2018	
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR	
Block - DC	Fairview Microwave	SD3379	AMV	1/11/2017	1/11/2018	
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	11/2/2016	11/2/2017	

CLIENT PROVIDED EQUIPMENT

Description	Manufacturer	Model	Last Cal.	Cal. Due
High Power Attenuator - 30dB	Aeroflex/Weinschel	53-30-43	NCR	NCR
Attenuator - 20dB	N/A	N/A	NCR	NCR
Power Divider	Fairview Microwave	MP8748-2	NCR	NCR
500hm Terminator	Aeroflex/Weinschel	1455-4	NCR	NCR
High Power Terminator	Telcon	KTMO400800060	NCR	NCR

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

Because the conducted Output Power was measured using a RMS Average detector, the Peak to Average Ratio was measured to show that the maximum peak-max-hold spectrum to the maximum of the average spectrum does not exceed 13 dB.

The spectrum analyzer settings were as follows:

Span set to encompass the entire emission bandwidth, centered on the transmit channel.

The largest difference between the following two traces was calculated:

➤1st Trace: Peak detector and trace max-hold.

>2nd Trace: The same procedure and settings as was used for conducted Output Power.

Report No. KMWC0080



EUT:				TbtTx 2017.04.18	XMit 2017
	: CWS-3050-07		Work Order:		
	See Configuration			06/14/17	
	Parallel Wireless Inc.		Temperature:		
	Daniel Kim		Humidity:		
Project:			Barometric Pres.:		
	Salvador Solorzano and Johnny Candelas	Power: 48VDC	Job Site:	OC13	
EST SPECIFICAT	TONS	Test Method			
CC 27:2017		ANSI/TIA/EIA-603-D-2010			
OMMENTS					
wer Level Settin	ng 40W. Reference Level Offset: DC Block + 30dB Attenua	ator + 20dB Attenuator + Power Divider + Cable Los	ss = 57.1dB total.		
EVIATIONS FROM	M TEST STANDARD				
one	III TEGT GTANDARD				
		0 1100			
onfiguration #	1	for dille			
	Signature	O			
			Value	Limit	
			(dB)	< (dB)	Results
ntenna Port 1					
	Low Channel LTE5, 2622.5 MHz		7.39	13	Pass
	Mid Channel LTE5, 2655 MHz		7.06	13	Pass
	Mid Channel LTE5, 2655 MHz High Channel LTE5, 2687.5 MHz Low Channel LTE10, 2625 MHz		7.06 7.29 9.83	13	Pass
	Mid Channel LTE5, 2655 MHz High Channel LTE5, 2687.5 MHz Low Channel LTE10, 2625 MHz Mid Channel LTE10, 2655 MHz		7.06 7.29 9.83 9.69	13 13 13 13	Pass Pass Pass Pass
	Mid Channel LTE5, 2655 MHz High Channel LTE5, 2687.5 MHz Low Channel LTE10, 2625 MHz		7.06 7.29 9.83	13 13 13	Pass Pass Pass
	Mid Channel LTE5, 2655 MHz High Channel LTE5, 2687.5 MHz Low Channel LTE10, 2625 MHz Mid Channel LTE10, 2655 MHz High Channel LTE10, 2685 MHz Low Channel LTE20, 2630 MHz		7.06 7.29 9.83 9.69 9.72 11.31	13 13 13 13 13 13	Pass Pass Pass Pass
	Mid Channel LTE5, 2655 MHz High Channel LTE5, 2687.5 MHz Low Channel LTE10, 2625 MHz Mid Channel LTE10, 2655 MHz High Channel LTE10, 2685 MHz		7.06 7.29 9.83 9.69 9.72	13 13 13 13 13	Pass Pass Pass Pass Pass
	Mid Channel LTE5, 2655 MHz High Channel LTE5, 2687.5 MHz Low Channel LTE10, 2625 MHz Mid Channel LTE10, 2655 MHz High Channel LTE10, 2685 MHz Low Channel LTE20, 2630 MHz		7.06 7.29 9.83 9.69 9.72 11.31	13 13 13 13 13 13	Pass Pass Pass Pass Pass Pass
tenna Port 2	Mid Channel LTE5, 2655 MHz High Channel LTE5, 2687.5 MHz Low Channel LTE10, 2625 MHz Mid Channel LTE10, 2655 MHz High Channel LTE10, 2685 MHz Low Channel LTE10, 2683 MHz Low Channel LTE20, 2630 MHz Mid Channel LTE20, 2665 MHz High Channel LTE20, 2665 MHz High Channel LTE20, 2680 MHz		7.06 7.29 9.83 9.69 9.72 11.31 11.19	13 13 13 13 13 13 13 13	Pass Pass Pass Pass Pass Pass Pass Pass
tenna Port 2	Mid Channel LTE5, 2655 MHz High Channel LTE5, 2687.5 MHz Low Channel LTE10, 2625 MHz Mid Channel LTE10, 2655 MHz High Channel LTE10, 2685 MHz Low Channel LTE20, 2680 MHz Low Channel LTE20, 2655 MHz Mid Channel LTE20, 2680 MHz Low Channel LTE20, 2680 MHz Low Channel LTE20, 2680 MHz		7.06 7.29 9.83 9.69 9.72 11.31 11.19 11.11	13 13 13 13 13 13 13 13	Pass Pass Pass Pass Pass Pass Pass Pass
tenna Port 2	Mid Channel LTE5, 2655 MHz High Channel LTE5, 2687.5 MHz Low Channel LTE10, 2625 MHz Mid Channel LTE10, 2655 MHz High Channel LTE10, 2685 MHz Low Channel LTE20, 2680 MHz Low Channel LTE20, 2685 MHz High Channel LTE20, 2685 MHz High Channel LTE20, 2685 MHz Low Channel LTE50, 2680 MHz Low Channel LTE5, 2625.5 MHz Mid Channel LTE5, 2655 MHz		7.06 7.29 9.83 9.69 9.72 11.31 11.19 11.11	13 13 13 13 13 13 13 13 13 13	Pass Pass Pass Pass Pass Pass Pass Pass
tenna Port 2	Mid Channel LTE5, 2655 MHz High Channel LTE5, 2687.5 MHz Low Channel LTE10, 2625 MHz Mid Channel LTE10, 2625 MHz Mid Channel LTE10, 2655 MHz High Channel LTE10, 2683 MHz Low Channel LTE20, 2630 MHz Mid Channel LTE20, 2630 MHz High Channel LTE20, 2685 MHz High Channel LTE5, 2622.5 MHz Mid Channel LTE5, 2622.5 MHz Mid Channel LTE5, 2657.5 MHz High Channel LTE5, 2687.5 MHz		7.06 7.29 9.83 9.69 9.72 11.31 11.19 11.11 7.36 7.03	13 13 13 13 13 13 13 13	Pass Pass Pass Pass Pass Pass Pass Pass
tenna Port 2	Mid Channel LTE5, 2655 MHz High Channel LTE5, 2687.5 MHz Low Channel LTE10, 2625 MHz Mid Channel LTE10, 2655 MHz High Channel LTE10, 2685 MHz Low Channel LTE20, 2630 MHz Low Channel LTE20, 2655 MHz Mid Channel LTE20, 2656 MHz High Channel LTE20, 2680 MHz Low Channel LTE5, 2625 MHz Mid Channel LTE5, 2655 MHz Mid Channel LTE5, 2655 MHz High Channel LTE5, 2687.5 MHz Low Channel LTE10, 2625 MHz Low Channel LTE10, 2625 MHz		7.06 7.29 9.83 9.69 9.72 11.31 11.19 11.11 7.36 7.03 7.24 9.75	13 13 13 13 13 13 13 13 13 13	Pass Pass Pass Pass Pass Pass Pass Pass
tenna Port 2	Mid Channel LTE5, 2655 MHz High Channel LTE10, 2687.5 MHz Low Channel LTE10, 2625 MHz Mid Channel LTE10, 2655 MHz High Channel LTE10, 2685 MHz Low Channel LTE20, 2630 MHz Mid Channel LTE20, 2630 MHz Mid Channel LTE20, 2685 MHz High Channel LTE20, 2685 MHz High Channel LTE5, 2622.5 MHz Mid Channel LTE5, 2655 MHz High Channel LTE5, 2687.5 MHz Low Channel LTE5, 2687.5 MHz Mid Channel LTE10, 2625 MHz Mid Channel LTE10, 2625 MHz Mid Channel LTE10, 2655 MHz		7.06 7.29 9.83 9.69 9.72 11.31 11.19 11.11 7.36 7.03	13 13 13 13 13 13 13 13 13 13	Pass Pass Pass Pass Pass Pass Pass Pass
tenna Port 2	Mid Channel LTE5, 2655 MHz High Channel LTE5, 2687.5 MHz Low Channel LTE10, 2625 MHz Mid Channel LTE10, 2655 MHz High Channel LTE10, 2685 MHz Low Channel LTE20, 2630 MHz Low Channel LTE20, 2655 MHz Mid Channel LTE20, 2656 MHz High Channel LTE20, 2680 MHz Low Channel LTE5, 2625 MHz Mid Channel LTE5, 2655 MHz Mid Channel LTE5, 2655 MHz High Channel LTE5, 2687.5 MHz Low Channel LTE10, 2625 MHz Low Channel LTE10, 2625 MHz		7.06 7.29 9.83 9.69 9.72 11.31 11.19 11.11 7.36 7.03 7.24 9.75	13 13 13 13 13 13 13 13 13 13 13 13 13	Pass Pass Pass Pass Pass Pass Pass Pass
tenna Port 2	Mid Channel LTE5, 2655 MHz High Channel LTE10, 2687.5 MHz Low Channel LTE10, 2625 MHz Mid Channel LTE10, 2655 MHz High Channel LTE10, 2685 MHz Low Channel LTE20, 2630 MHz Mid Channel LTE20, 2630 MHz Mid Channel LTE20, 2685 MHz High Channel LTE20, 2685 MHz High Channel LTE5, 2622.5 MHz Mid Channel LTE5, 2655 MHz High Channel LTE5, 2687.5 MHz Low Channel LTE5, 2687.5 MHz Mid Channel LTE10, 2625 MHz Mid Channel LTE10, 2625 MHz Mid Channel LTE10, 2655 MHz		7.06 7.29 9.83 9.69 9.72 11.31 11.19 11.11 7.36 7.03 7.24 9.75 9.88	13 13 13 13 13 13 13 13 13 13 13 13 13 1	Pass Pass Pass Pass Pass Pass Pass Pass
tenna Port 2	Mid Channel LTE5, 2655 MHz High Channel LTE5, 2687.5 MHz Low Channel LTE10, 2625 MHz Mid Channel LTE10, 2655 MHz Mid Channel LTE10, 2655 MHz High Channel LTE10, 2630 MHz Mid Channel LTE20, 2630 MHz Mid Channel LTE20, 2630 MHz High Channel LTE20, 2685 MHz High Channel LTE5, 2622.5 MHz Mid Channel LTE5, 2655 MHz High Channel LTE5, 2655 MHz Mid Channel LTE5, 2655 MHz Mid Channel LTE5, 2655 MHz Mid Channel LTE10, 2655 MHz Mid Channel LTE10, 2655 MHz High Channel LTE10, 2655 MHz High Channel LTE10, 2655 MHz High Channel LTE10, 2655 MHz		7.06 7.29 9.83 9.69 9.72 11.31 11.19 11.11 7.36 7.03 7.24 9.75 9.88	13 13 13 13 13 13 13 13 13 13 13 13 13 1	Pass Pass Pass Pass Pass Pass Pass Pass

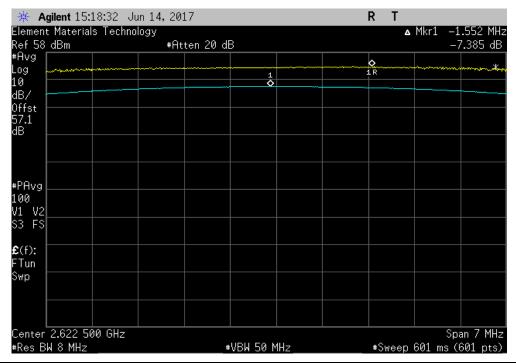
Report No. KMWC0080 32/203



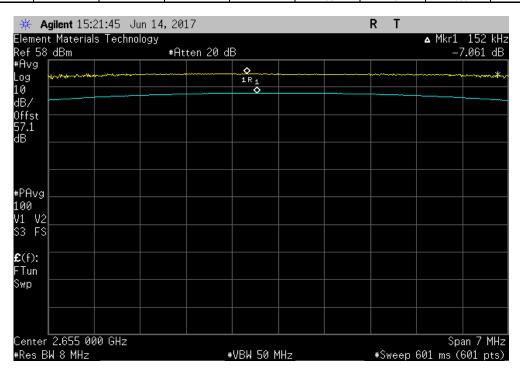
Antenna Port 1, Low Channel LTE5, 2622.5 MHz

Value Limit
(dB) < (dB) Results

7.385 13 Pass



	Antenna Port	1, Mid Channel LT	ΓΕ5, 2655 MHz		
			Value	Limit	
			(dB)	< (dB)	Results
			7.061	13	Pass



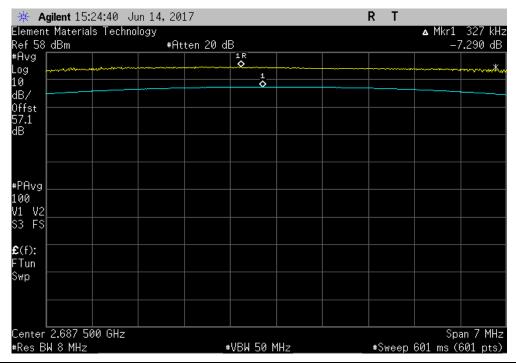
Report No. KMWC0080 33/203



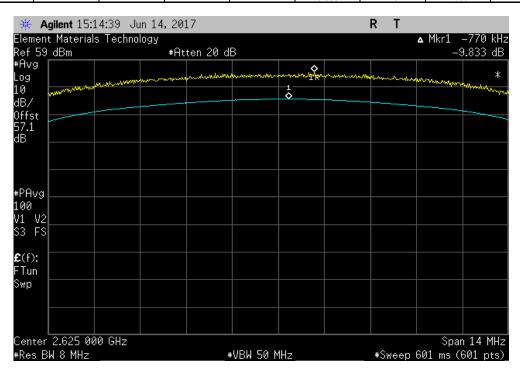
Antenna Port 1, High Channel LTE5, 2687.5 MHz

Value Limit
(dB) < (dB) Results

7.29 13 Pass



	Antenna Port 1,	, Low Channel LT	E10, 2625 MHz		
			Value	Limit	
			(dB)	< (dB)	Results
			9.833	13	Pass



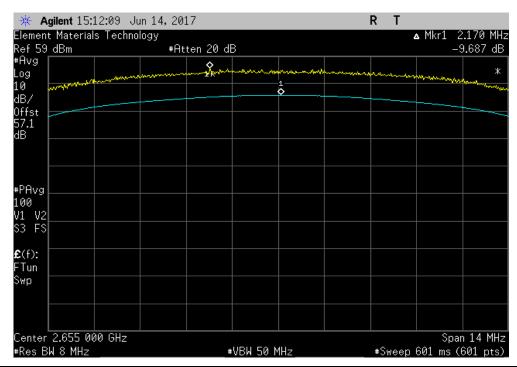
Report No. KMWC0080 34/203



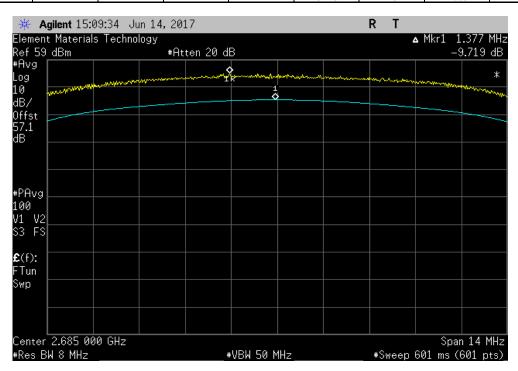
Antenna Port 1, Mid Channel LTE10, 2655 MHz

Value Limit
(dB) < (dB) Results

9.687 13 Pass



		Antenna Port 1,	High Channel LT	E10, 2685 MHz			
				Value	Limit		
				(dB)	< (dB)	Results	
				9.719	13	Pass	i



Report No. KMWC0080 35/203

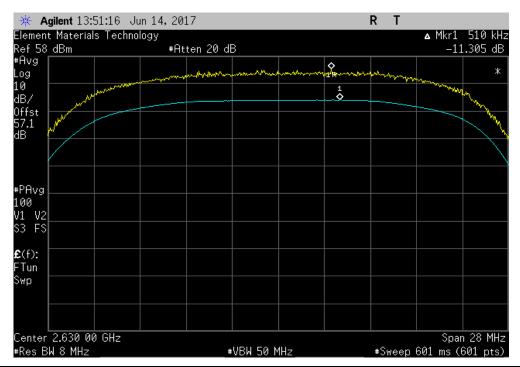


Antenna Port 1, Low Channel LTE20, 2630 MHz

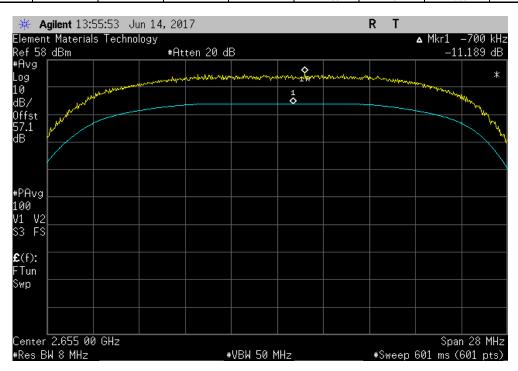
Value

(dB) < (dB) Results

11.305 13 Pass



	Antenna Port 1, Mid Channel LTE20, 2655 MHz							
					Value	Limit		
					(dB)	< (dB)	Results	
					11.189	13	Pass	



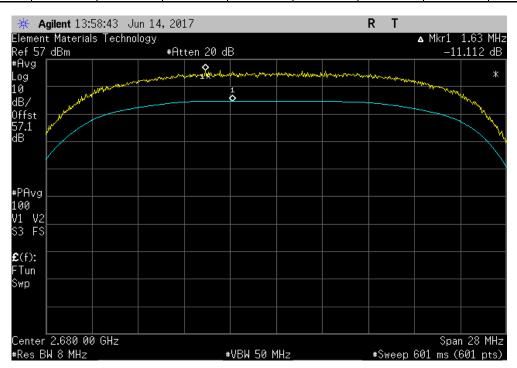
Report No. KMWC0080 36/203



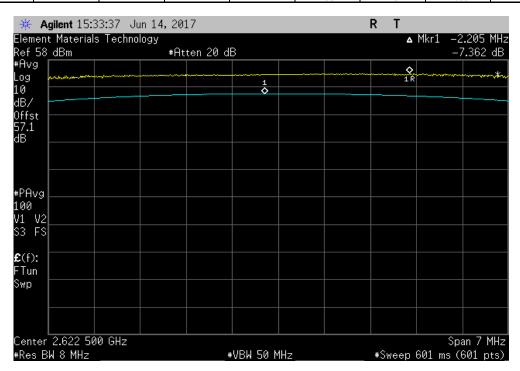
Antenna Port 1, High Channel LTE20, 2680 MHz

Value Limit
(dB) < (dB) Results

11.112 13 Pass



	Antenna Port 2,	Low Channel LT	E5, 2622.5 MHz		
			Value	Limit	
			(dB)	< (dB)	Results
			7.362	13	Pass



Report No. KMWC0080 37/203

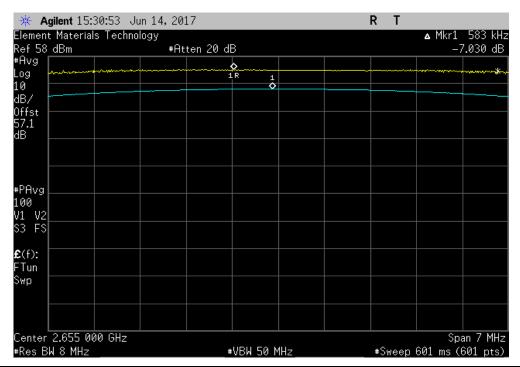


Antenna Port 2, Mid Channel LTE5, 2655 MHz

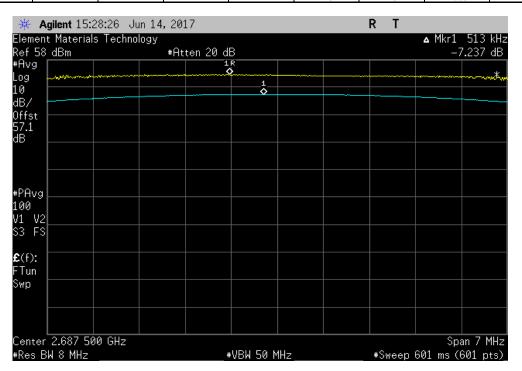
Value

(dB) < (dB) Results

7.03 13 Pass



	Antenna Port 2,	High Channel LT	E5, 2687.5 MHz		
			Value	Limit	
			(dB)	< (dB)	Results
			7.237	13	Pass



Report No. KMWC0080 38/203

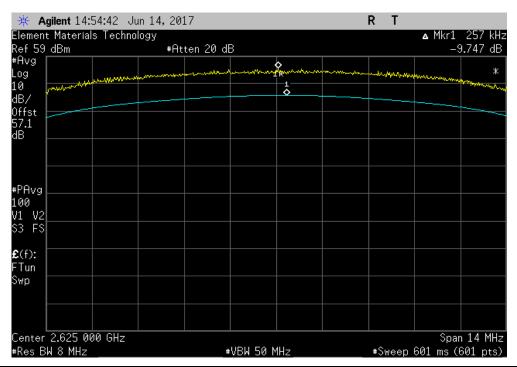


Antenna Port 2, Low Channel LTE10, 2625 MHz

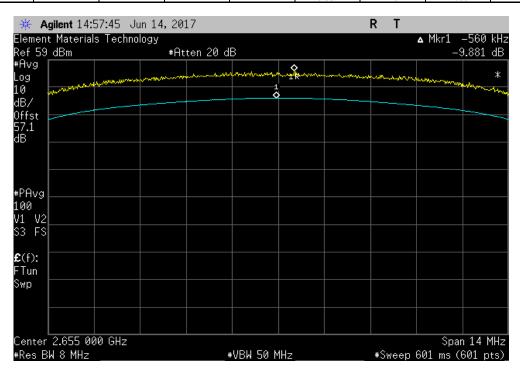
Value

(dB) < (dB) Results

9.747 13 Pass



	Antenna Port 2	, Mid Channel LT	E10, 2655 MHz		
			Value	Limit	
			(dB)	< (dB)	Results
			9.881	13	Pass



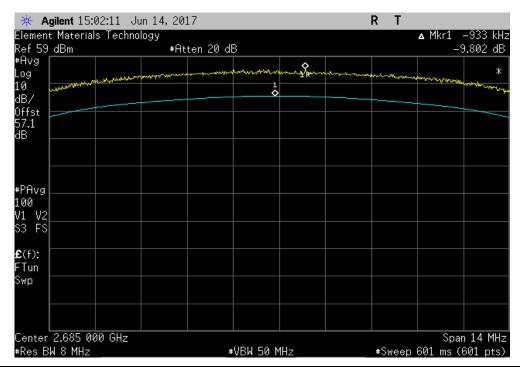
Report No. KMWC0080 39/203



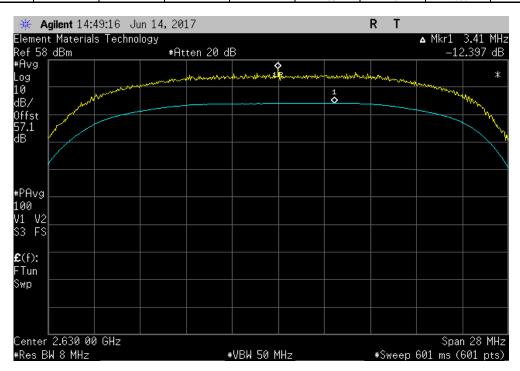
Antenna Port 2, High Channel LTE10, 2685 MHz

Value Limit
(dB) < (dB) Results

9.802 13 Pass



	Antenna Port 2, Low Channel LTE20, 2630 MHz								
					Value	Limit			
					(dB)	< (dB)	Results		
					12.397	13	Pass	Ī	



Report No. KMWC0080 40/203

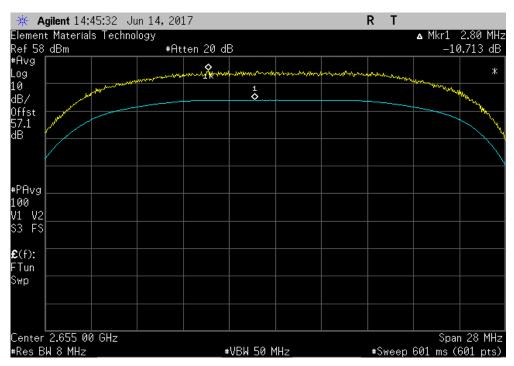


Antenna Port 2, Mid Channel LTE20, 2655 MHz

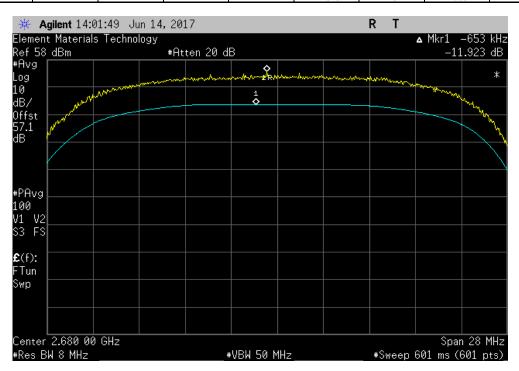
Value

(dB) < (dB) Results

10.713 13 Pass



		Antenna Port 2,	High Channel LT	E20, 2680 MHz		
				Value	Limit	
				(dB)	< (dB)	Results
				11.923	13	Pass



Report No. KMWC0080 41/203



XMit 2017.02.08

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Thermometer	Omega Engineering, Inc.	HH311	DUC	10/3/2014	10/3/2017
Chamber - Temperature/Humidity	Cincinnati Sub Zero (CSZ)	ZPHS-32-3.5-SCT/AC	TBE	NCR	NCR
Power Supply - DC	Hewlett Packard	6574A	TPX	NCR	NCR
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	2/5/2018
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Block - DC	Fairview Microwave	SD3379	AMV	1/11/2017	1/11/2018
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	11/2/2016	11/2/2017

CLIENT PROVIDED EQUIPMENT

Description	Manufacturer	Model	Last Cal.	Cal. Due
High Power Attenuator - 30dB	Aeroflex/Weinschel	53-30-43	NCR	NCR
Attenuator - 20dB	N/A	N/A	NCR	NCR
Power Divider	Fairview Microwave	MP8748-2	NCR	NCR
50Ohm Terminator	Aeroflex/Weinschel	1455-4	NCR	NCR
High Power Terminator	Telcon	KTMO400800060	NCR	NCR

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer

Measurements were made at the edges of the main transmit bands as called out on the data sheets. Testing was done with an absence of modulation in a CW mode of operation.

The primary supply voltage was varied from 85 % to 115% of the nominal voltage Using a temperature chamber, the transmit frequency was recorded at the extremes of the specified temperature range (-30 ° to +50° C) and at 10°C intervals.

Per the requirements of FCC Part 27.54:

"The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation."

No specific limits are provided in either FCC 27.54, the product specific rule part, or FCC 2.1055, the equipment authorization procedure for testing frequency stability. While there are no limits called out, any results less than 1ppm will still allow the radio to be operating within the band.

Report No. KMWC0080



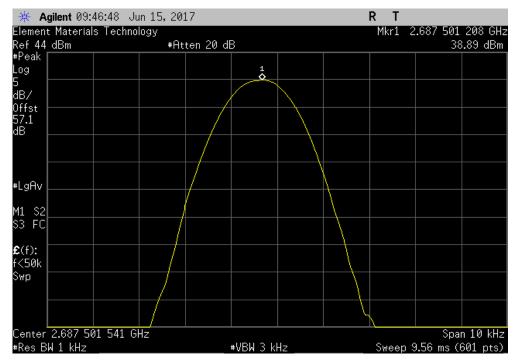
	CWS-3050-07			Work Order	KMWC0080	
Serial Number:	See Configuration			Date	06/14/17	
	Parallel Wireless Inc. Daniel Kim			Temperature	22.9 °C 46.4% RH	
Project:	None			Barometric Pres.		
Tested by:	Salvador Solorzano and Johnny Candelas	Power: 48VDC		Job Site	OC13	
27:2017	IONS	Test Method ANSI/TIA/EIA-603-D-2010				
2.1.2011		THOM THE ENT GOOD DOOR				
MMENTS						
ver Level Settin	ig 40W. Reference Level Offset: DC Block + 30dB	ttenuator + 20dB Attenuator + Power Divider + Cable Loss = 57.1dB	total.			
(IATIONS EDGI	M TEGT OT AND ADD					
<u>VIATIONS FROI</u> ne	M TEST STANDARD					
		for d. lather				
nfiguration #	1 Signature	The said was				
	Signature	Measured	Assigned	Error	Limit	
. 4		Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results
1	Normal Temperature and Voltage					
	High Channel , 2687.5 MHz	2687.501208	2687.5	0.5	1	Pass
	Mid Channel, 2655 MHz Low Channel, 2622.5 MHz	2655.00027 2622.500256	2655 2622.5	0.1 0.1	1 1	Pass Pass
	Extreme Voltage, 55.2 VDC	2022:300230	2022.5	0.1		FdSS
	High Channel , 2687.5 MHz	2687.500257	2687.5	0.1	1	Pass
	Mid Channel, 2655 MHz Low Channel, 2622.5 MHz	2655.001174 2622.500272	2655 2622.5	0.4 0.1	1 1	Pass
	Extreme Voltage, 40.8 VAC	2022.500272	2022.5	U. I	'	Pass
	High Channel , 2687.5 MHz	2687.501241	2687.5	0.5	1	Pass
	Mid Channel, 2655 MHz	2655.000257 2623.604.67	2655	0.1 0.4	1	Pass
	Low Channel, 2622.5 MHz Extreme Temperature, -30°C	2622.501157	2622.5	0.4	1	Pass
	High Channel , 2687.5 MHz	2687.500037	2687.5	0	1	Pass
	Mid Channel, 2655 MHz	2655.000003	2655	0	1	Pass
	Low Channel, 2622.5 MHz Extreme Temperature, -20°C	2622.499986	2622.5	0	1	Pass
	High Channel , 2687.5 MHz	2687.500257	2687.5	0.1	1	Pass
	Mid Channel, 2655 MHz	2655.00024	2655	0.1	1	Pass
	Low Channel, 2622.5 MHz Extreme Temperature, -10°C	2622.500239	2622.5	0.1	1	Pass
	High Channel , 2687.5 MHz	2687.500541	2687.5	0.2	1	Pass
	Mid Channel, 2655 MHz	2655.000524	2655	0.2	1	Pass
	Low Channel, 2622.5 MHz	2622.500506	2622.5	0.2	11	Pass
	Extreme Temperature, 0°C High Channel , 2687.5 MHz	2687.500824	2687.5	0.3	1	Pass
	Mid Channel, 2655 MHz	2655.000808	2655	0.3	1	Pass
	Low Channel, 2622.5 MHz	2622.500806	2622.5	0.3	1	Pass
	Extreme Temperature, +10°C High Channel , 2687.5 MHz	2687.501021	2687.5	0.4	1	Pass
	Mid Channel, 2655 MHz	2655.001008	2655	0.4	1	Pass
	Low Channel, 2622.5 MHz	2622.500106	2622.5	0	1	Pass
	Extreme Temperature, +20°C High Channel , 2687.5 MHz	2687.500288	2687.5	0.1	1	Pass
	Mid Channel, 2655 MHz	2655.000257	2655	0.1	i	Pass
	Low Channel, 2622.5 MHz	2622.500036	2622.5	0	1	Pass
	Extreme Temperature, +30°C High Channel , 2687.5 MHz	2687.501124	2687.5	0.4	1	Pass
	Mid Channel, 2655 MHz	2655.000257	2655	0.1	1	Pass
	Low Channel, 2622.5 MHz	2622.500256	2622.5	0.1	1	Pass
	Extreme Temperature, +40°C	2607 500274	2687.5	0.1	1	Poss
	High Channel , 2687.5 MHz Mid Channel, 2655 MHz	2687.500274 2655.000274	2687.5 2655	0.1	1	Pass Pass
	Low Channel, 2622.5 MHz	2622.50027	2622.5	0.1	1	Pass
	Extreme Temperature, +50°C High Channel , 2687.5 MHz	2687.500274	2687.5	0.1	1	Pass
	Mid Channel, 2687.5 MHz	2687.500274 2655.000257	2687.5 2655	0.1	1	Pass
_	Low Channel, 2622.5 MHz	2622.500256	2622.5	0.1	1	Pass
2	Normal Temperature and Voltage					
	High Channel , 2687.5 MHz	2687.500271	2687.5	0.1	1	Pass
	Mid Channel, 2655 MHz	2655.000257	2655	0.1	1	Pass
	Low Channel, 2622.5 MHz	2622.500273	2622.5	0.1	1	Pass
	Extreme Voltage, 55.2 VDC High Channel , 2687.5 MHz	2687.500257	2687.5	0.1	1	Pass
	Mid Channel, 2655 MHz	2655.000257 2655.000257	2655	0.1	1	Pass
	Low Channel, 2622.5 MHz	2622.500289	2622.5	0.1	1	Pass
	Extreme Voltage, 40.8 VAC High Channel , 2687.5 MHz	2687.500274	2687.5	0.1	1	Pass
	Mid Channel, 2655 MHz	2655.000274	2655	0.1	1	Pass
	Low Channel, 2622.5 MHz	2622.499922	2622.5	0	1	Pass
	Extreme Temperature, -30°C High Channel , 2687.5 MHz	2687.499954	2687.5	0	1	Pass
	Mid Channel, 2655 MHz	2654.999953	2655	0	1	Pass
	Low Channel, 2622.5 MHz	2622.499953	2622.5	0	1	Pass
	Extreme Temperature, -20°C	70007 70007	2007.5	0.1		-
	High Channel , 2687.5 MHz Mid Channel , 2655 MHz	2687.500307 2655.000257	2687.5 2655	0.1 0.1	1 1	Pass Pass
	Low Channel, 2622.5 MHz	2622.500256	2622.5	0.1	1	Pass
	Extreme Temperature, -10°C					
	High Channel , 2687.5 MHz	2687.500507 2655.000491	2687.5 2655	0.2	1	Pass Pass
	Mid Channel, 2655 MHz Low Channel, 2622.5 MHz	2655.000491 2622.500473	2655 2622.5	0.2 0.2	1 1	Pass
		.==				
	Extreme Temperature, 0°C High Channel , 2687.5 MHz	2687.500807	2687.5			

Report No. KMWC0080 43/203

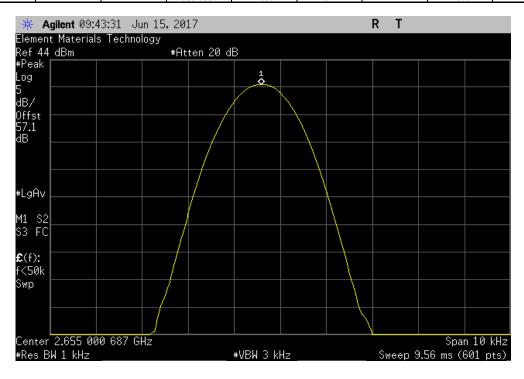
	Measured	Assigned	Error	Limit	
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results
Low Channel, 2622.5 MHz	2622.500789	2622.5	0.3	1	Pass
Extreme Temperature, +10°C					
High Channel , 2687.5 MHz	2687.501024	2687.5	0.4	1	Pass
Mid Channel, 2655 MHz	2655.001008	2655	0.4	1	Pass
Low Channel, 2622.5 MHz	2622.501004	2622.5	0.4	1	Pass
Extreme Temperature, +20°C					
High Channel , 2687.5 MHz	2687.501091	2687.5	0.4	1	Pass
Mid Channel, 2655 MHz	2655.001074	2655	0.4	1	Pass
Low Channel, 2622.5 MHz	2622.500273	2622.5	0.1	1	Pass
Extreme Temperature, +30°C					
High Channel , 2687.5 MHz	2687.500257	2687.5	0.1	1	Pass
Mid Channel, 2655 MHz	2655.00027	2655	0.1	1	Pass
Low Channel, 2622.5 MHz	2622.500173	2622.5	0.1	1	Pass
Extreme Temperature, +40°C					
High Channel , 2687.5 MHz	2687.500257	2687.5	0.1	1	Pass
Mid Channel, 2655 MHz	2655.000274	2655	0.1	1	Pass
Low Channel, 2622.5 MHz	2622.500254	2622.5	0.1	1	Pass
Extreme Temperature, +50°C					
High Channel , 2687.5 MHz	2687.500274	2687.5	0.1	1	Pass
Mid Channel, 2655 MHz	2655.000274	2655	0.1	1	Pass
Low Channel, 2622.5 MHz	2622.500287	2622.5	0.1	1	Pass



							TbtTx 2017.04.18	XMit 2017.02.08
	Port 1, N	ormal Temperatu	ire and Voltage, H	ligh Channel, 26	87.5 MHz			
		Measured	Assigned	Error	Limit			
		Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results		
		2687.501208	2687.5	0.5	1	Pass		ļ



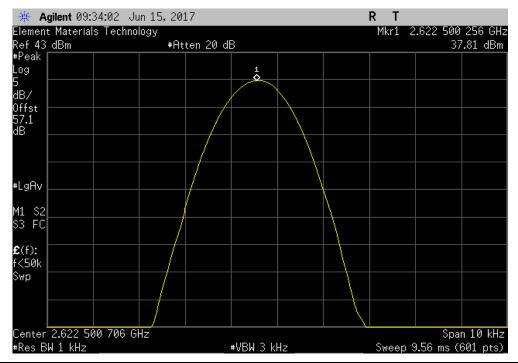
	Port 1, Normal	Tempera	ture and Voltage,	Mid Channel, 26	55 MHz	
	Mea	sured	Assigned	Error	Limit	
	Value	e (MHz)	Value (MHz)	(ppm)	(ppm)	Results
ı	2655	.00027	2655	0.1	1	Pass



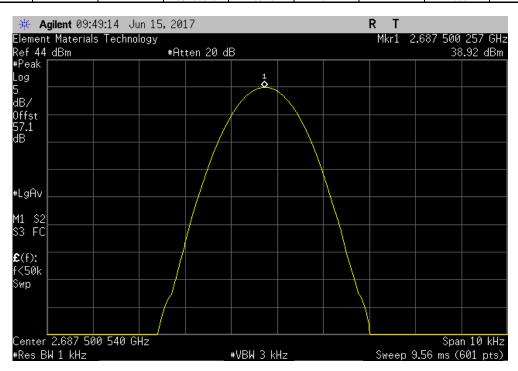
Report No. KMWC0080 45/203



							TbtTx 2017.04.18	XMit 2017.02.08
	Port 1, N	Iormal Temperatu	ure and Voltage, L	ow Channel, 262	22.5 MHz			
		Measured	Assigned	Error	Limit			
		Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results		
		2622.500256	2622.5	0.1	1	Pass	ı	



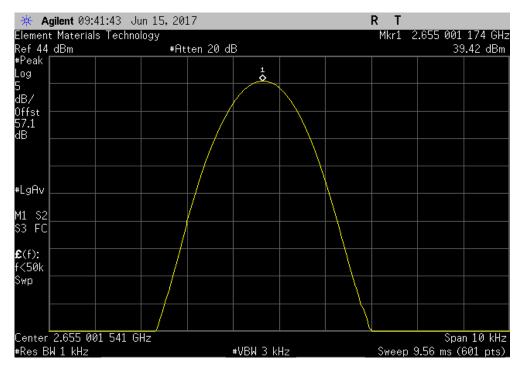
	Port 1, Extreme Voltage	e, 55.2 VDC, High	h Channel, 2687.	5 MHz	
	Measured	Assigned	Error	Limit	
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results
	2687.500257	2687.5	0.1	1	Pass



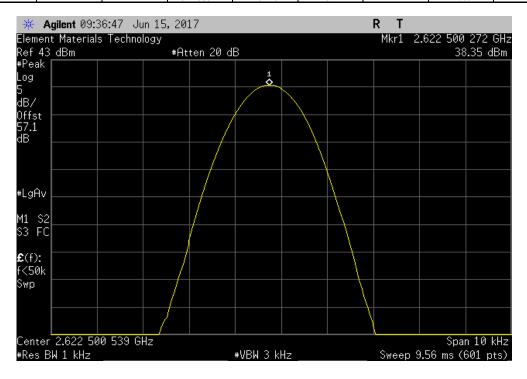
Report No. KMWC0080 46/203



							TbtTx 2017.04.18	XMit 2017.02.08
	Port 1, I	Extreme Voltage	ge, 55.2 VDC, Mi	d Channel, 2655	MHz			
		Measured	Assigned	Error	Limit			
	١	/alue (MHz)	Value (MHz)	(ppm)	(ppm)	Results		
	2	2655.001174	2655	0.4	1	Pass	ı	



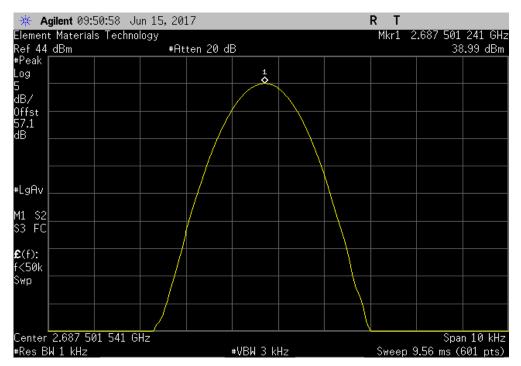
	Port 1, Extreme Vo	oltage, 55.2 VDC, Lo	w Channel, 2622	.5 MHz	
	Measure	d Assigned	Error	Limit	
_	Value (MH	lz) Value (MHz)	(ppm)	(ppm)	Results
ſ	2622.5002	72 2622.5	0.1	1	Pass



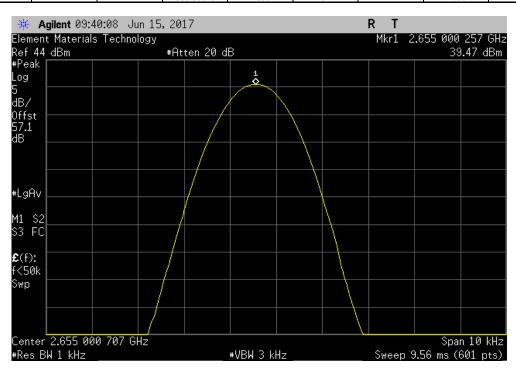
Report No. KMWC0080 47/203



							TbtTx 2017.04.18	XMit 2017.02.08
	Port 1,	Extreme Voltage	e, 40.8 VAC, High	n Channel , 2687.	5 MHz			
		Measured	Assigned	Error	Limit			
		Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results		
		2687.501241	2687.5	0.5	1	Pass		



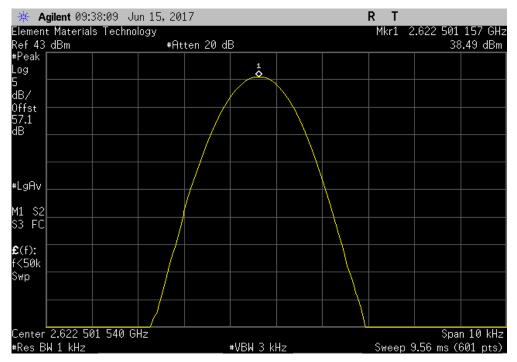
	Port '	1, Extreme Volta	ge, 40.8 VAC, Mi	d Channel, 2655	MHz	
		Measured	Assigned	Error	Limit	
		Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results
		2655.000257	2655	0.1	1	Pass



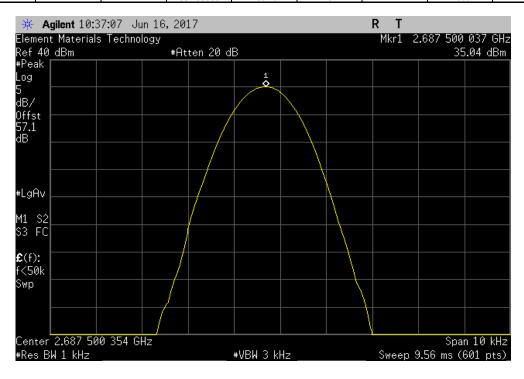
Report No. KMWC0080 48/203



							TbtTx 2017.04.18	XMit 2017.02.08
	Port 1	, Extreme Voltag	e, 40.8 VAC, Low	/ Channel, 2622.5	5 MHz			
		Measured	Assigned	Error	Limit			
		Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results		
		2622.501157	2622.5	0.4	1	Pass		l.



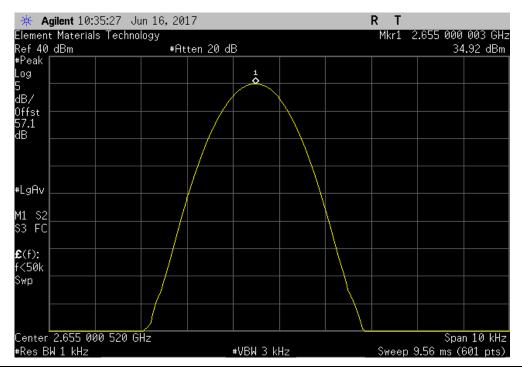
	Port 1, Extreme T	Temperature, -30°C,	High Channel, 2	687.5 MHz	
	Measu	red Assigned	Error	Limit	
	Value (I	MHz) Value (MHz	z) (ppm)	(ppm)	Results
	2687.50	0037 2687.5	0	1	Pass



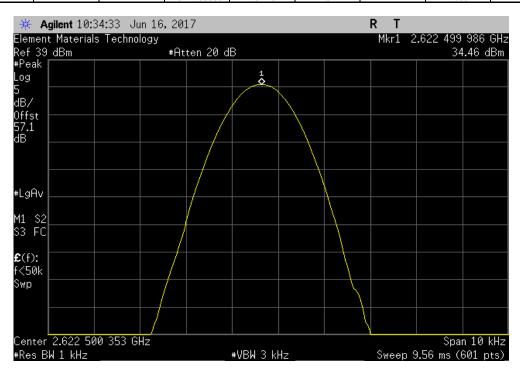
Report No. KMWC0080 49/203



						TbtTx 2017.04.18	XMit 2017.02.08
	Port 1, Extreme Temp	erature30°C. M	lid Channel, 2655	MHz			
	7		,				
	Measured	Assigned	Error	Limit			
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results		
	2655.000003	2655	0	1	Pass	Ī	l.



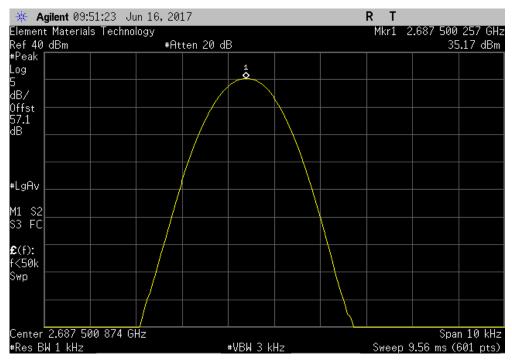
Г	Port 1, Extreme Tempe	Port 1, Extreme Temperature, -30°C, Low Channel, 2622.5 MHz								
I	Measured	Assigned	Error	Limit						
ı	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results					
1	2622.499986	2622.5	0	1	Pass					



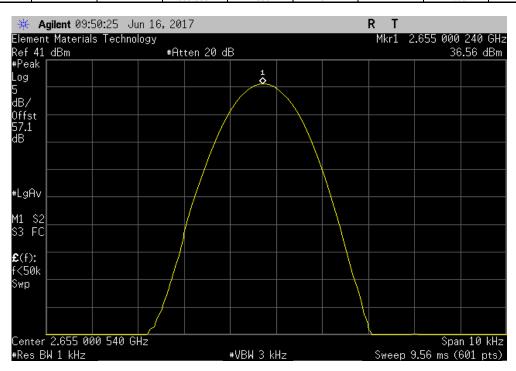
Report No. KMWC0080 50/203



	Port 1, Extreme Temper	rature, -20°C, High	Channel . 2687	.5 MHz		
	Measured		_			
	Weasured	Assigned	Error	Limit		
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results	
	2687 500257	2687.5	0.1	1 1	Pass	



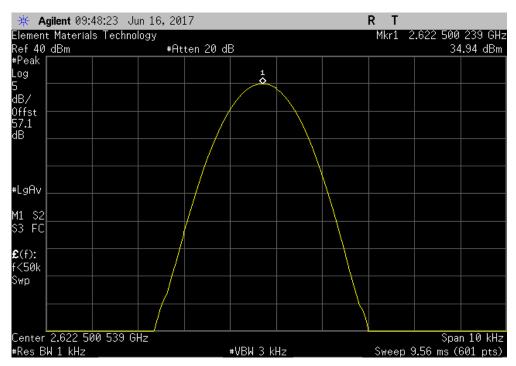
	Port 1	1, Extreme Temp	erature, -20°C, M	lid Channel, 2655	MHz	
		Measured	Assigned	Error	Limit	
		Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results
		2655.00024	2655	0.1	1	Pass



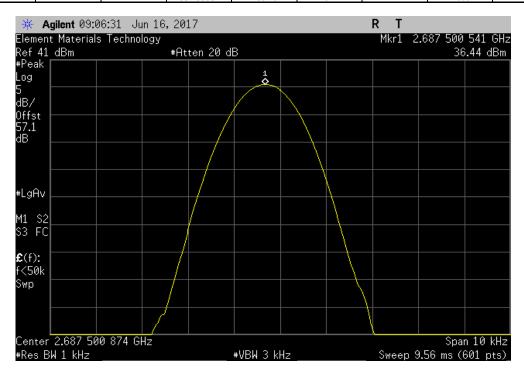
Report No. KMWC0080 51/203



Por	t 1. Extreme Tempe	rature, -20°C, Low	Channel, 2622.	5 MHz		
	Measured		_ ′			
	weasured	Assigned	Error	Limit		
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results	
			(1)	(- /		
	2622 500239	2622.5	() 1	1	Pass	



Port 1, Extreme Temperature, -10°C, High Channel , 2687.5 MHz								
	N	Measured	Assigned	Error	Limit			
	Va	alue (MHz)	Value (MHz)	(ppm)	(ppm)	Results		
	26	87.500541	2687.5	0.2	1	Pass		

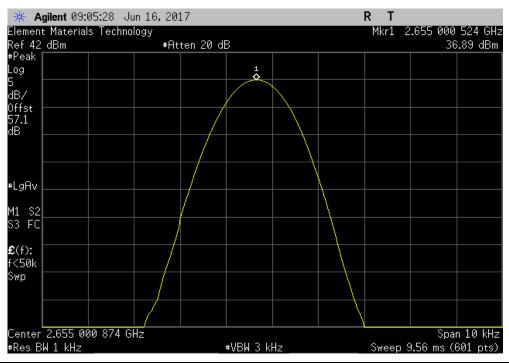


Report No. KMWC0080 52/203

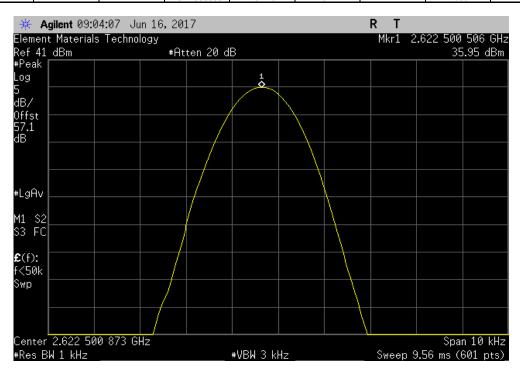


Port 1, Extreme Temperature, -10°C, Mid Channel, 2655 MHz

| Measured Assigned Error Limit | Value (MHz) Value (MHz) (ppm) (ppm) | Results | 2655.000524 | 2655 | 0.2 | 1 | Pass |



Port 1, Extreme Temperature, -10°C, Low Channel, 2622.5 MHz								
Measured	Assigned	Error	Limit					
Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results				
2622.500506	2622.5	0.2	1	Pass				

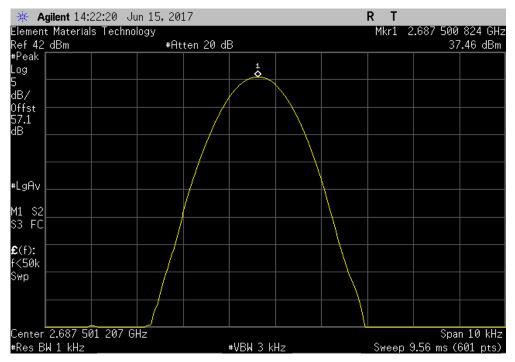


Report No. KMWC0080 53/203

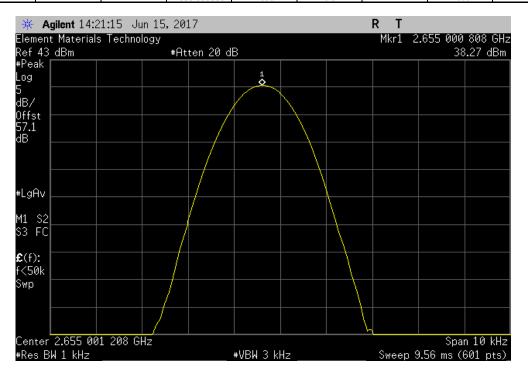


Port 1, Extreme Temperature, 0°C, High Channel , 2687.5 MHz

Measured	Assigned	Error	Limit	
Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results
2687.500824	2687.5	0.3	1	Pass

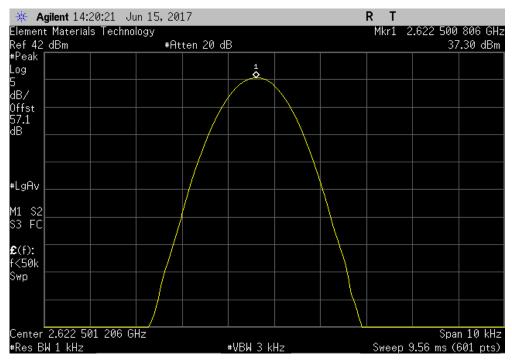


Port 1, Extreme Temperature, 0°C, Mid Channel, 2655 MHz							
		Measured	Assigned	Error	Limit		
		Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results	
		2655.000808	2655	0.3	1	Pass	

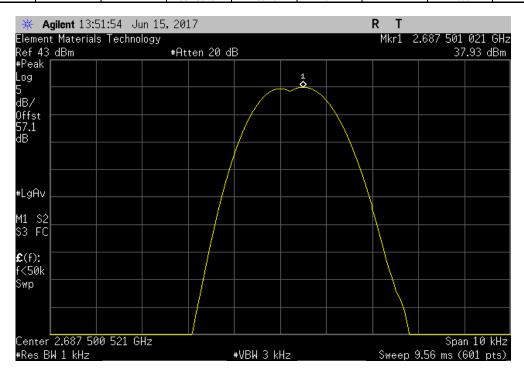


Report No. KMWC0080 54/203





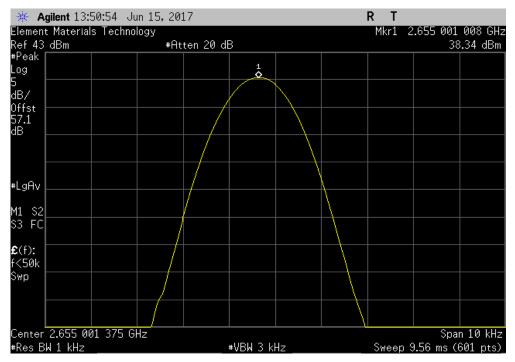
	Port 1, Extreme Temperature, +10°C, High Channel , 2687.5 MHz								
		Measured	Assigned	Error	Limit				
		Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results			
1		2687.501021	2687.5	0.4	1	Pass			



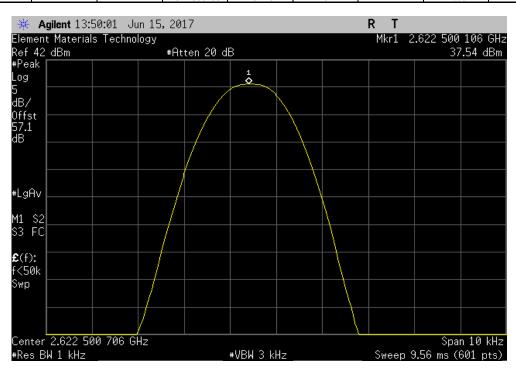
Report No. KMWC0080 55/203



Port	1. Extreme Tempo	erature, +10°C, M	id Channel, 2655	MHz		
1 011		. ''				
	Measured	Assigned	Error	Limit		
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results	
		, , , ,	((1-1-1-)		
	2655 001008	2655	().4	1	Pass	



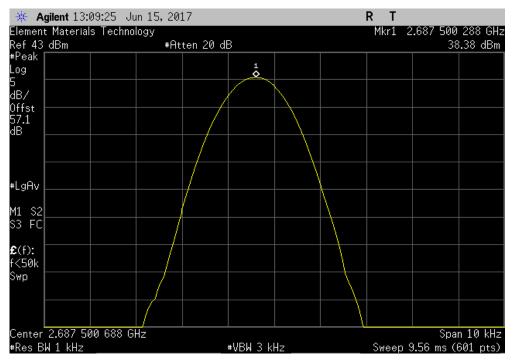
	Port 1, Extreme Temperature, +10°C, Low Channel, 2622.5 MHz								
		Measured	Assigned	Error	Limit				
		Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results			
İ		2622.500106	2622.5	0	1	Pass			



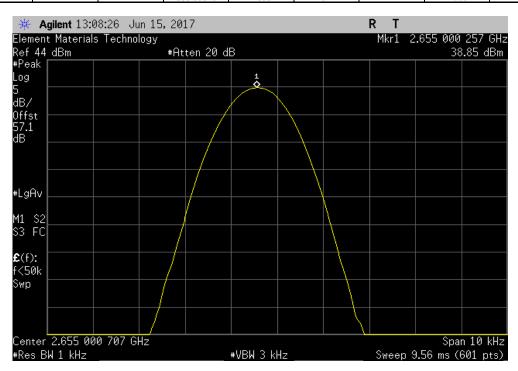
Report No. KMWC0080 56/203



	Port 1, Extreme Temper	ature, +20°C, High	Channel . 2687	.5 MHz		
		, , ,	_ ′			
	Measured	Assigned	Error	Limit		
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results	
	2007 500000	2687.5	0.4	<u> </u>	Dana I	
	2687.500288	/na/ n	0.1	1	Pass	



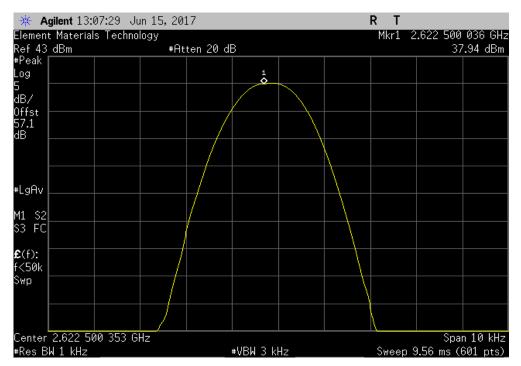
Port 1, Extreme Temperature, +20°C, Mid Channel, 2655 MHz								
	Measu	red Assigne	d Error	Limit				
	Value (I	MHz) Value (MH	łz) (ppm)	(ppm)	Results			
	2655.00	0257 2655	0.1	1	Pass			



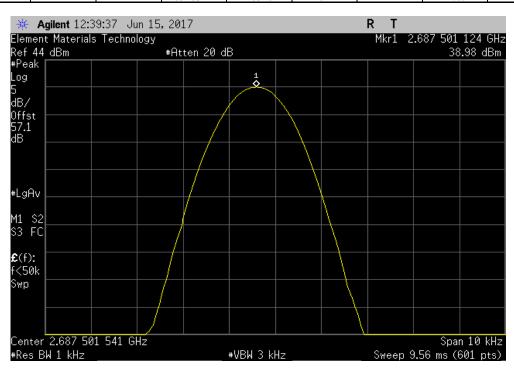
Report No. KMWC0080 57/203



Por	t 1. Extreme Tempe	rature, +20°C, Lov	v Channel, 2622.	5 MHz		·
	,					
	Measured	Assigned	Error	Limit		
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results	
	2622 500036	2622.5		1	Pass	



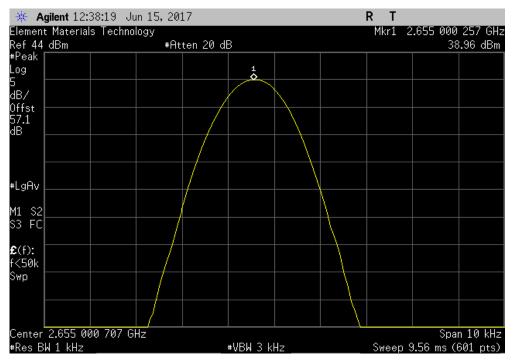
	Port 1, Extreme Temperature, +30°C, High Channel , 2687.5 MHz								
		Measured	Assigned	Error	Limit				
_		Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results			
I		2687.501124	2687.5	0.4	1	Pass			



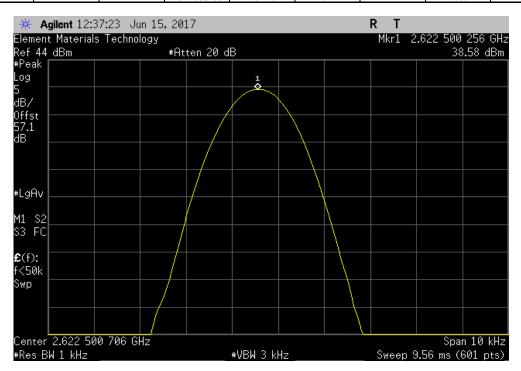
Report No. KMWC0080 58/203



	Port 1. Extreme Temp	erature, +30°C, M	lid Channel 265	5 MHz	
			_		
	Measured	Assigned	Error	Limit	
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results
	2655,000257	2655	0.1	1	Pass



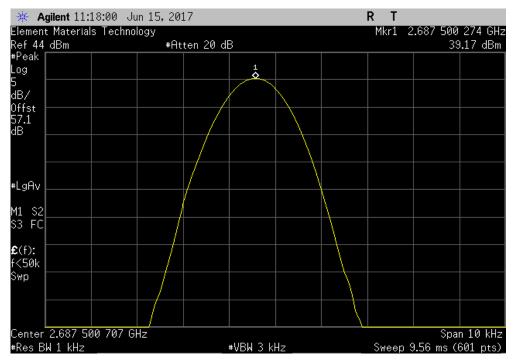
	Port 1, Extreme Temperature, +30°C, Low Channel, 2622.5 MHz								
		Measured	Assigned	Error	Limit				
		Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results			
1		2622.500256	2622.5	0.1	1	Pass			



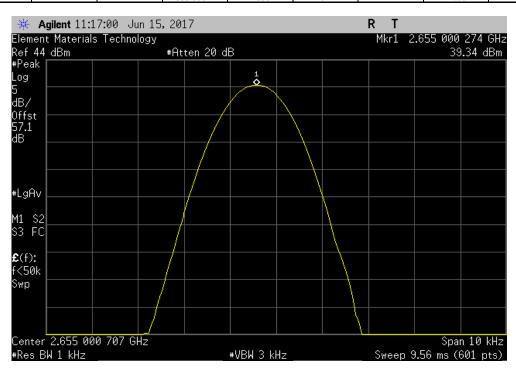
Report No. KMWC0080 59/203



	Port 1, Extreme Temper	rature, +40°C, High	h Channel . 2687	'.5 MHz		
			_			
	Measured	Assigned	Error	Limit		
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results	
			WF7	(- 0)		
	2687.500274	2687.5	0.1	1 1	Pass	



	Port 1,	Extreme Tempe	erature, +40°C, M	lid Channel, 2655	5 MHz	
		Measured	Assigned	Error	Limit	
_		Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results
, [2655.000274	2655	0.1	1	Pass

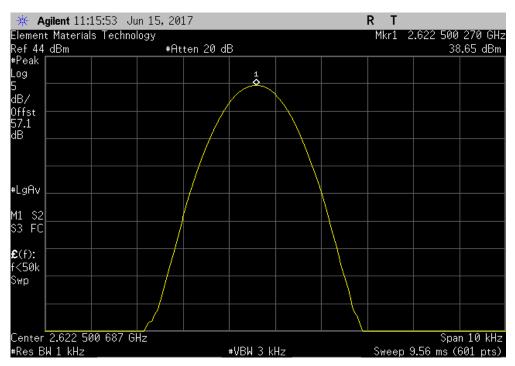


Report No. KMWC0080 60/203

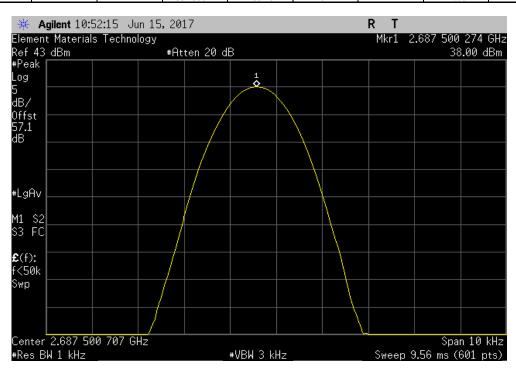


Port 1, Extreme Temperature, +40°C, Low Channel, 2622.5 MHz

| Measured | Assigned | Error | Limit |
| Value (MHz) | Value (MHz) | (ppm) | Results |
| 2622.50027 | 2622.5 | 0.1 | 1 | Pass



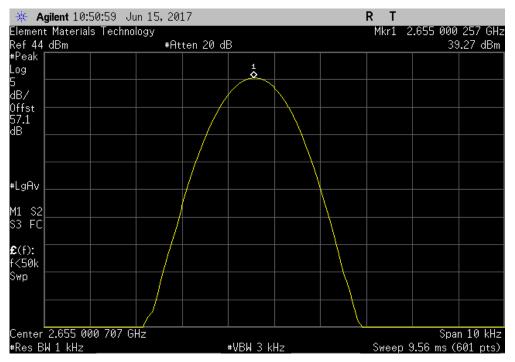
	Port 1, Ext	treme Temper	ature, +50°C, Hig	h Channel , 2687	'.5 MHz	
		Measured	Assigned	Error	Limit	
	V	/alue (MHz)	Value (MHz)	(ppm)	(ppm)	Results
	2	687.500274	2687.5	0.1	1	Pass



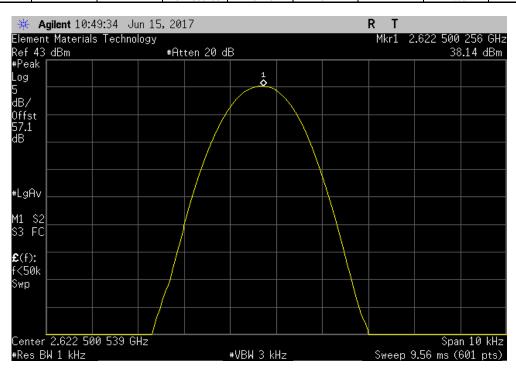
Report No. KMWC0080 61/203



Port 1, Extreme Temperature, +50°C, Mid Channel, 2655 MHz Measured Assigned Error Limit Value (MHz) Value (MHz) (ppm) (ppm) Results							
Measured Assigned Error Limit							
Measured Assigned Error Limit		Port 1. Extreme Temp	erature, +50°C, M	id Channel, 2655	MHz		
		,		_ ′			
Value (MHz) Value (MHz) (ppm) (ppm) Results		Weasured	Assigned	Error	Limit		
		Value (MHz)	Value (MHz)	(maa)	(maa)	Results	
		2655 000257	2655			Pass	



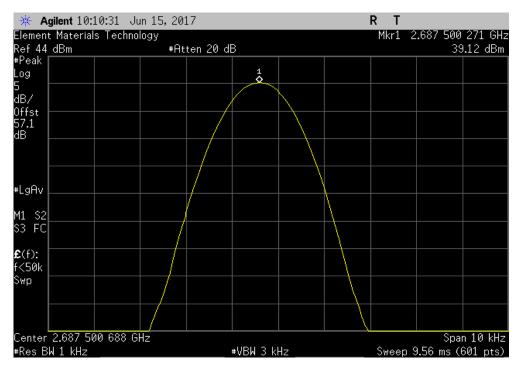
	Port 1, Extreme Tempe	rature, +50°C, Lo	w Channel, 2622	.5 MHz	
	Measured	Assigned	Error	Limit	
_	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results
ſ	2622.500256	2622.5	0.1	1	Pass



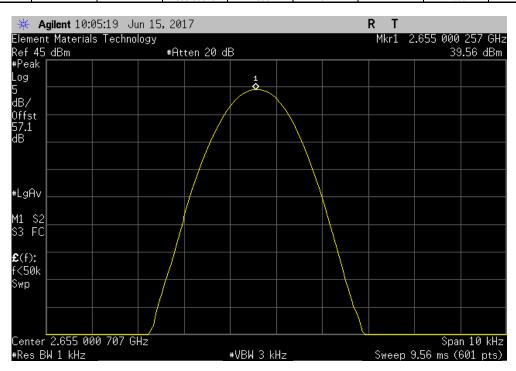
Report No. KMWC0080 62/203



						TbtTx 2017.04.18	
						IBH x 2017.04.18	XMit 2017.02.08
	Port 2, Normal Temperatu	ure and Voltage, H	ligh Channel, 26	87.5 MHz			
	Measured	Assigned	Error	Limit			
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results		
	2687.500271	2687.5	0.1	1	Pass	Í	ļ



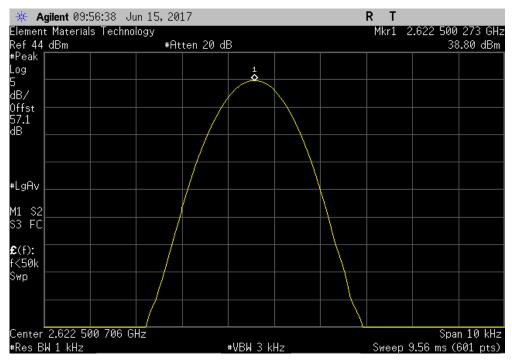
	Port 2, Normal Tempera	ature and Voltage,	, Mid Channel, 26	55 MHz	
	Measured	Assigned	Error	Limit	
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results
	2655.000257	2655	0.1	1	Pass



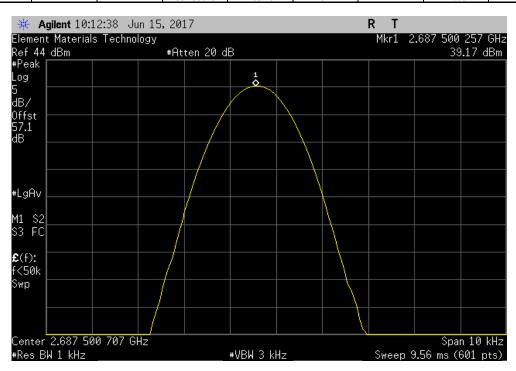
Report No. KMWC0080 63/203



·	Port 2, Normal Temperat	ure and Voltage I	ow Channel 263	22.5 MHz		
	,	,	′			
	Measured	Assigned	Error	Limit		
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results	
	 value (WIT12)	value (WIT12)	(ppiii)	(PPIII)	Results	
	2622.500273	2622.5	0.1	1	Pass	

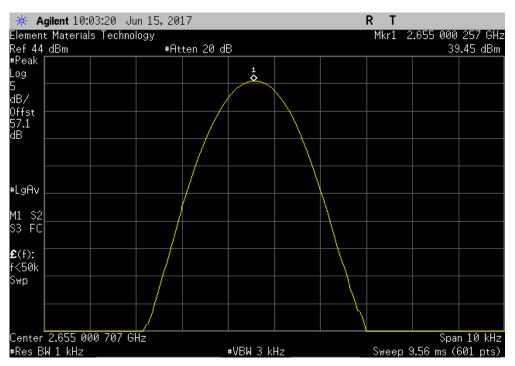


	Port 2, Extreme Voltaç	je, 55.2 VDC, Higl	h Channel , 2687.	5 MHz	
	Measured	Assigned	Error	Limit	
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results
	2687.500257	2687.5	0.1	1	Pass

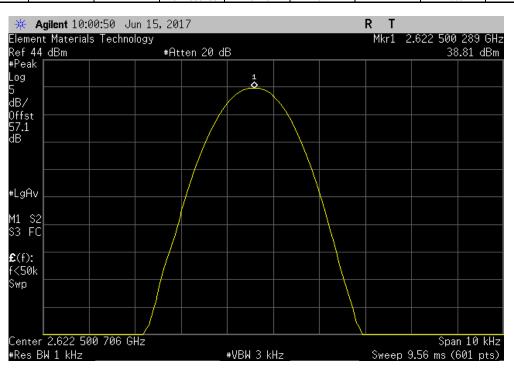


Report No. KMWC0080 64/203





	Port 2, Extreme Vo	oltage, 55.2 VDC, Lo	w Channel, 2622	.5 MHz	
	Measure	d Assigned	Error	Limit	
	Value (MF	lz) Value (MHz)	(ppm)	(ppm)	Results
	2622.5002	89 2622.5	0.1	1	Pass



Report No. KMWC0080 65/203

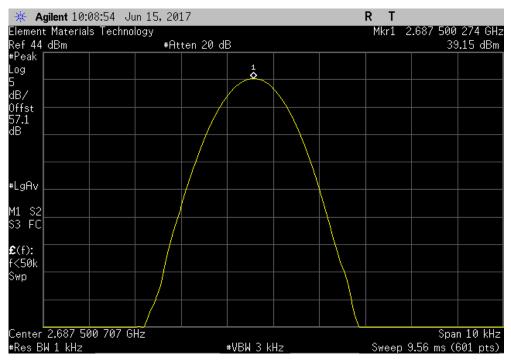


TbtTx 2017.04.18

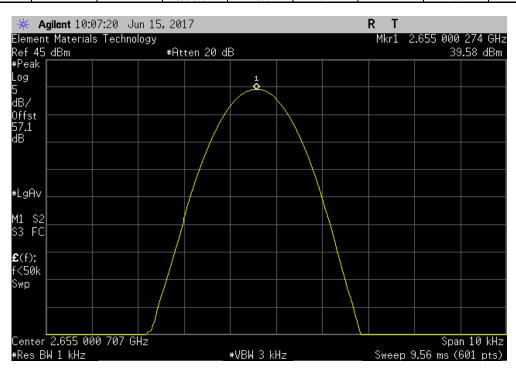
Pass

Port 2, Extreme Voltage, 40.8 VAC, High Channel , 2687.5 MHz Assigned Value (MHz) 2687.5 Measured Error Limit Value (MHz) (ppm) (ppm) Results

2687.500274



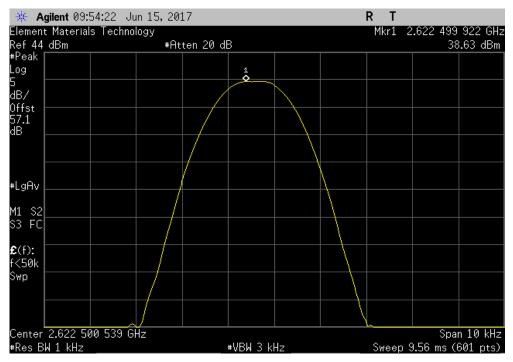
	Port	2, Extreme Volta	ge, 40.8 VAC, Mi	d Channel, 2655	MHz	
		Measured	Assigned	Error	Limit	
		Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results
		2655.000274	2655	0.1	1	Pass



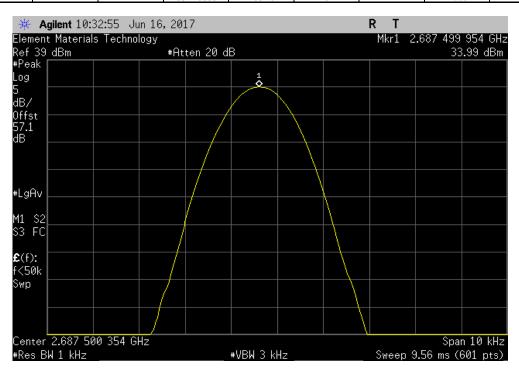
Report No. KMWC0080 66/203



TbtTx 2017.04.18



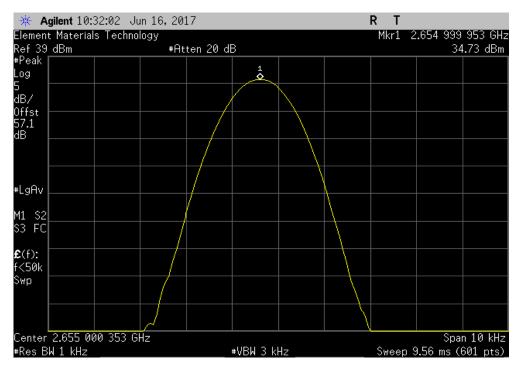
	Port 2, Extreme Temper	rature, -30°C, Hig	h Channel, 2687	'.5 MHz	
	Measured	Assigned	Error	Limit	
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results
	2687.499954	2687.5	0	1	Pass



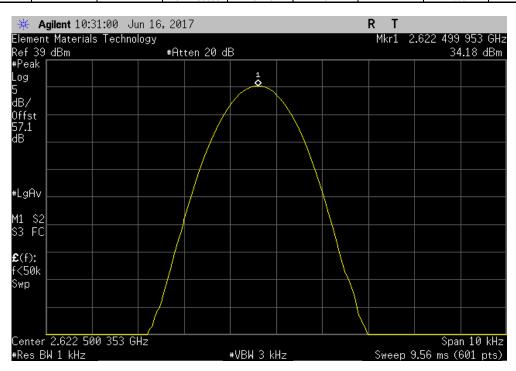
Report No. KMWC0080 67/203



	Port 2, Extreme Temp	erature -30°C M	id Channel 2655	MHz		
	,	. ''	_ ′			
	Measured	Assigned	Error	Limit		
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results	
	value (WIT12)	Value (WIT12)	(РРП)	(ppiii)	results	
	2654.999953	2655	0	1	Pass	



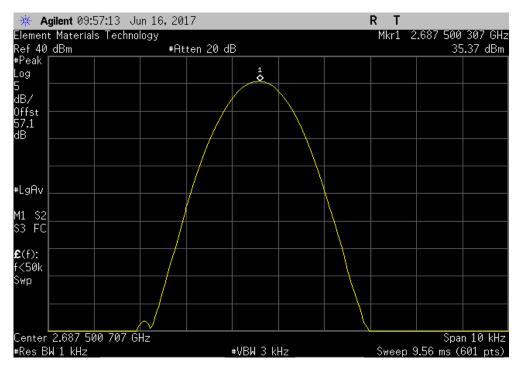
	Port 2, Extreme Temperature, -30°C, Low Channel, 2622.5 MHz							
		Measured	Assigned	Error	Limit			
		Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results		
,		2622.499953	2622.5	0	1	Pass		



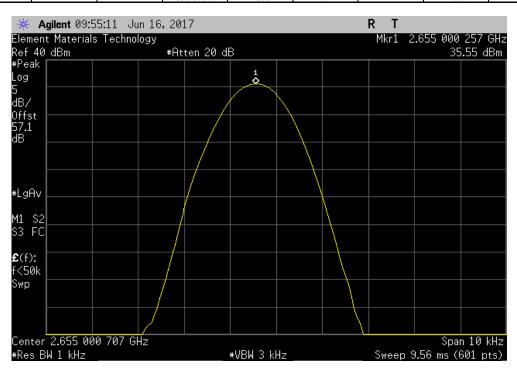
Report No. KMWC0080 68/203



						TbtTx 2017.04.18	XMit 2017.02.08
	Port 2, Extreme Tempe	rature, -20°C, Hig	h Channel, 268	7.5 MHz			
	Measured	Assigned	Error	Limit			
	Wicasurcu	Assigned	LIIOI	LIIIII			
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results		
	, , , , , , , , , , , , , , , , , , , ,	, , , ,	(PP)	(PP)		-	
	2687.500307	2687.5	0.1	1 1	Pass		



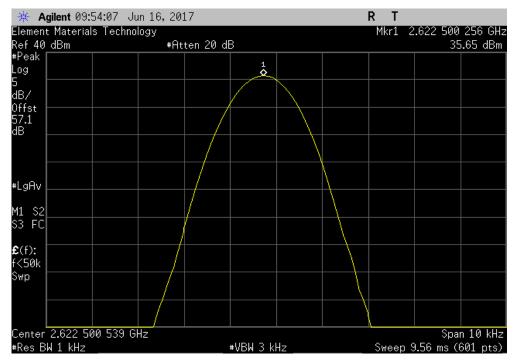
Port 2, Extreme Temperature, -20°C, Mid Channel, 2655 MHz							
	Measured	Assigned	Error	Limit			
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results		
	2655.000257	2655	0.1	1	Pass		



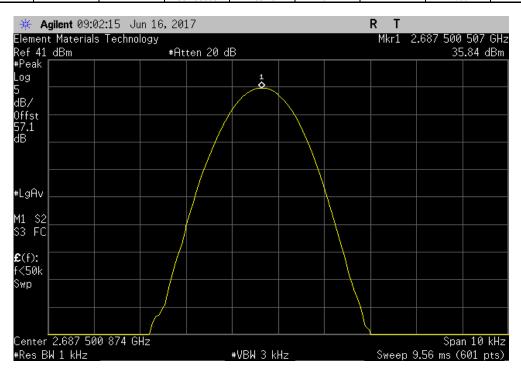
Report No. KMWC0080 69/203



							TbtTx 2017.04.18	XMit 2017.02.08
	Port 2, I	Extreme Tempe	rature, -20°C, Lov	w Channel, 2622.	5 MHz			
		Measured	Assigned	Error	Limit			
		Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results		
		2622.500256	2622.5	0.1	1	Pass		



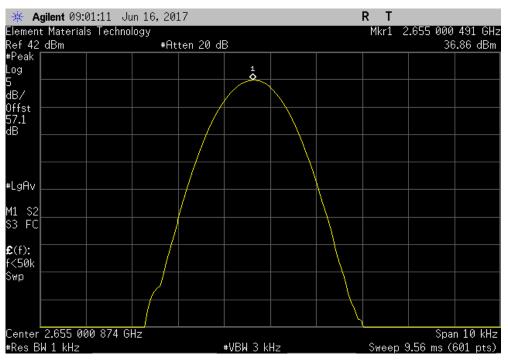
Port 2, Extreme Temperature, -10°C, High Channel , 2687.5 MHz								
	Measured	Assigned	Error	Limit				
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results			
	2687.500507	2687.5	0.2	1	Pass			



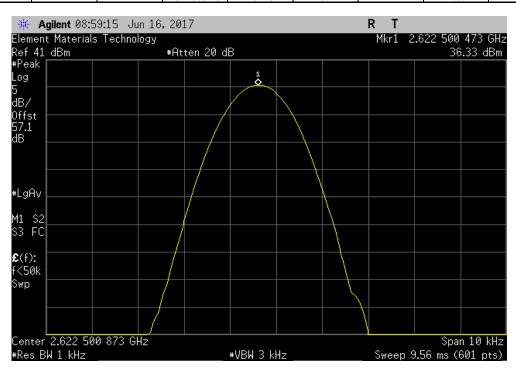
Report No. KMWC0080 70/203



TbtTx 2017.04.18



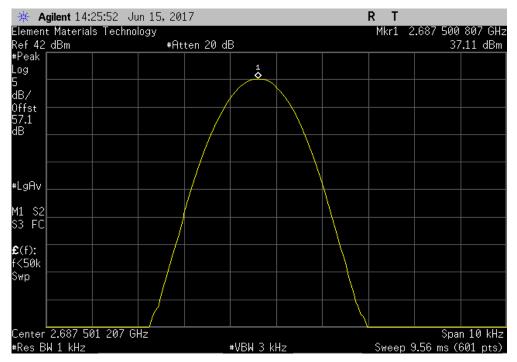
	Port 2, Extreme Temperature, -10°C, Low Channel, 2622.5 MHz								
		Measured	Assigned	Error	Limit				
_		Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results			
		2622.500473	2622.5	0.2	1	Pass			



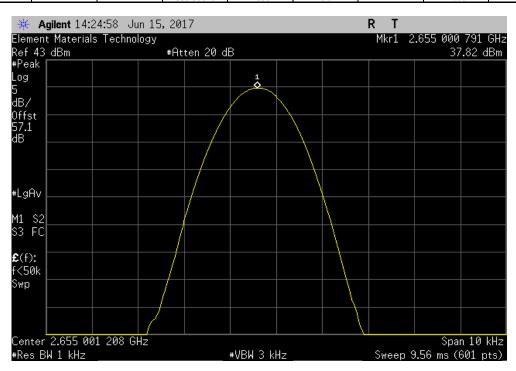
Report No. KMWC0080 71/203



						TbtTx 2017.04.18	XMit 2017.02.08
						IBI1X 2017.04.18	AMIL 2017.02.08
	Port 2, Extreme Tempe	erature, 0°C, High	Channel . 2687.	5 MHz			
	Measured	Assigned	Error	Limit			
		Assigned	EIIOI	Limit			
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results		
	2687.500807	2687.5	0.3	1	Pass	Ī	l



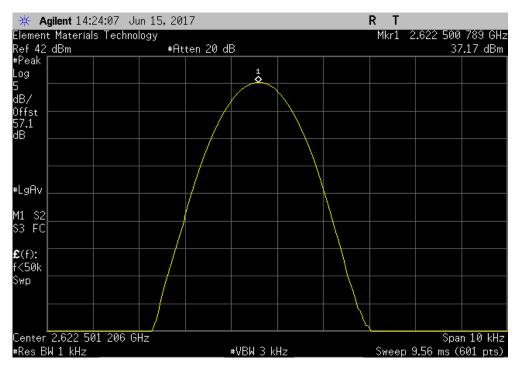
Port 2, Extreme Temperature, 0°C, Mid Channel, 2655 MHz								
		Measured	Assigned	Error	Limit			
		Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results		
•		2655.000791	2655	0.3	1	Pass		



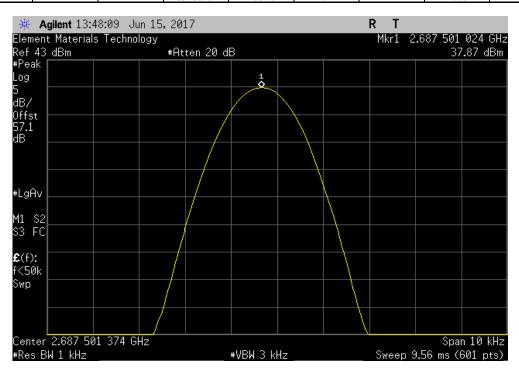
Report No. KMWC0080 72/203



Port 2, Extreme Temperature, 0°C, Low Channel, 2622.5 MHz							
			Measured	Assigned	Error	Limit	
			Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results
i			2622.500789	2622.5	0.3	1	Pass



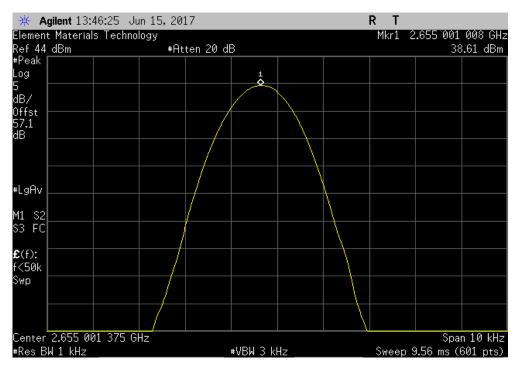
Port 2, Extreme Temperature, +10°C, High Channel , 2687.5 MHz								
	Measured	Assigned	Error	Limit				
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results			
	2687.501024	2687.5	0.4	1	Pass			



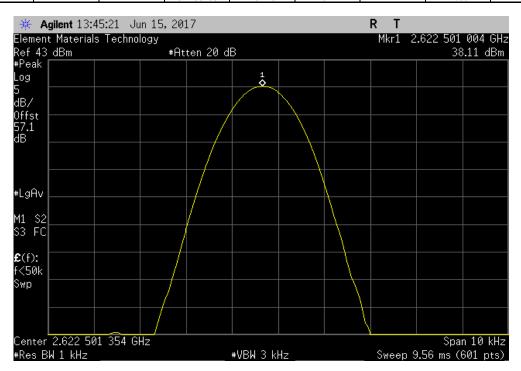
Report No. KMWC0080 73/203



Port	2, Extreme Temp	erature +10°C M	id Channel 2655	MHz		
1 0.0	,	. ''				
	Measured	Assigned	Error	Limit		
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results	
		, , ,	((6,6)		
	2655 001008	2655	0.4	1	Pass	



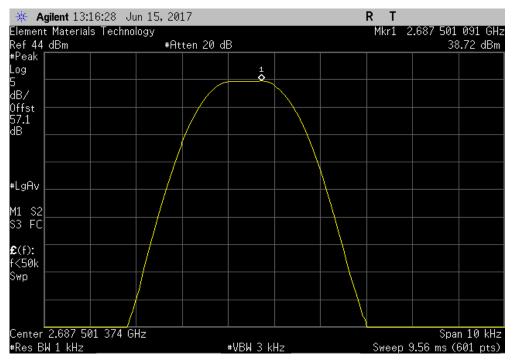
	Port 2, Extreme Temperature, +10°C, Low Channel, 2622.5 MHz								
		Measured	Assigned	Error	Limit				
		Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results			
1		2622.501004	2622.5	0.4	1	Pass			



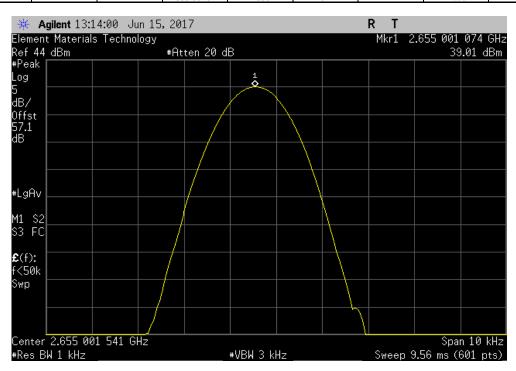
Report No. KMWC0080 74/203



	Port 2, Extreme Temper	atura 120°C High	Channal 260	7 5 MU-	
	,	, , ,	_ ′		
	Measured	Assigned	Error	Limit	
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results
	2687 501091	2687.5	0.4	1	Pass



Port 2, Extreme Temperature, +20°C, Mid Channel, 2655 MHz									
		Measured	Assigned	Error	Limit				
		Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results			
		2655.001074	2655	0.4	1	Pass			

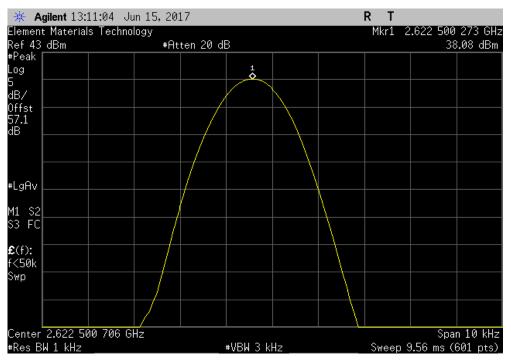


Report No. KMWC0080 75/203

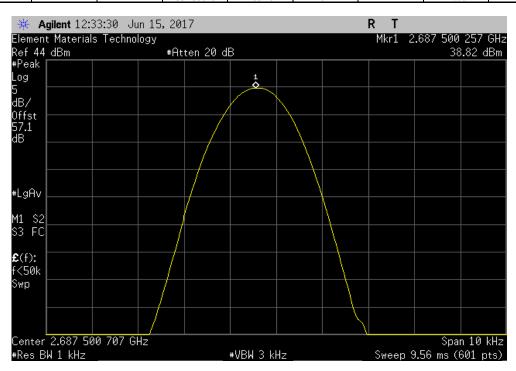


Port 2, Extreme Temperature, +20°C, Low Channel, 2622.5 MHz

| Measured Assigned Error Limit | Value (MHz) Value (MHz) (ppm) | Results | 2622.500273 | 2622.5 | 0.1 | 1 | Pass |



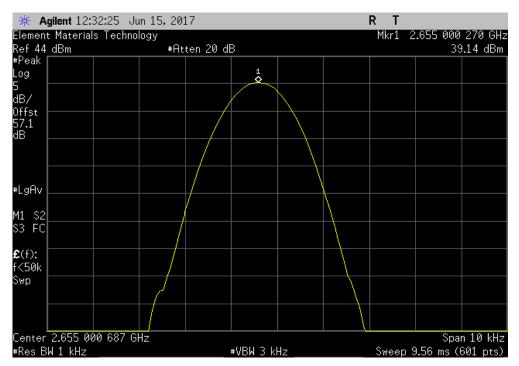
Port 2, Extreme Temperature, +30°C, High Channel , 2687.5 MHz									
	Measured	Assigned	Error	Limit					
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results				
	2687.500257	2687.5	0.1	1	Pass				



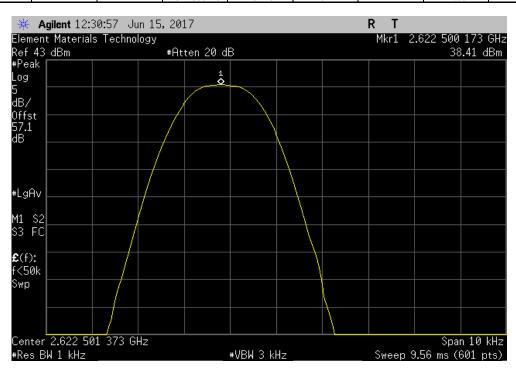
Report No. KMWC0080 76/203



	Port 2, Extreme Temp	erature, +30°C, N	lid Channel, 265	5 MHz	
	Measured	Assigned	Error	Limit	
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results
	2655 00027	2655	0.1	1	Pass



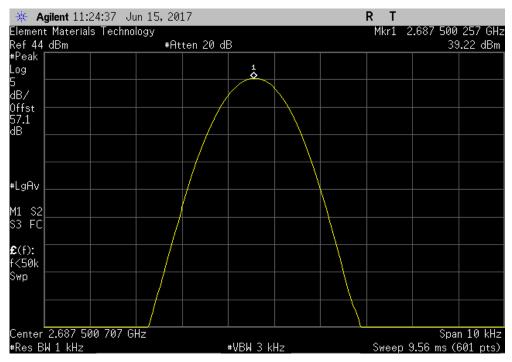
Port 2, Extreme Temperature, +30°C, Low Channel, 2622.5 MHz								
	Measured	Assigned	Error	Limit				
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results			
	2622.500173	2622.5	0.1	1	Pass			



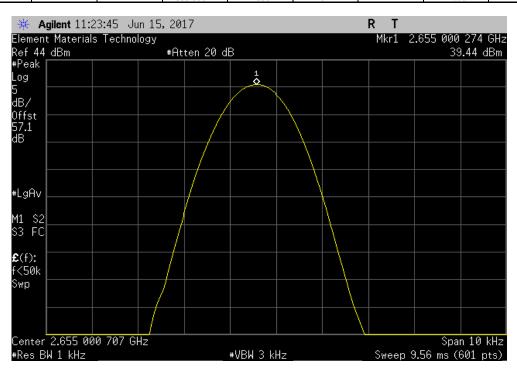
Report No. KMWC0080 77/203



Port 2, Extreme Temperature, +40°C, High Channel , 2687.5 MHz Measured Assigned Error Limit Value (MHz) Value (MHz) (ppm) (ppm) Results							
Measured Assigned Error Limit							
Measured Assigned Error Limit		Port 2. Extreme Temper	ature, +40°C, High	Channel . 2687	.5 MHz		
				_			
Value (MHz) Value (MHz) (ppm) (ppm) Results		Measured	Assigned	Error	Limit		
		Value (MHz)	Value (MHz)	(maa)	(maa)	Results	
		2687 500257	2687.5			Pass	



	Port 2, Extreme Temperature, +40°C, Mid Channel, 2655 MHz								
Г		Measured	Assigned	Error	Limit				
		Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results			
		2655.000274	2655	0.1	1	Pass			

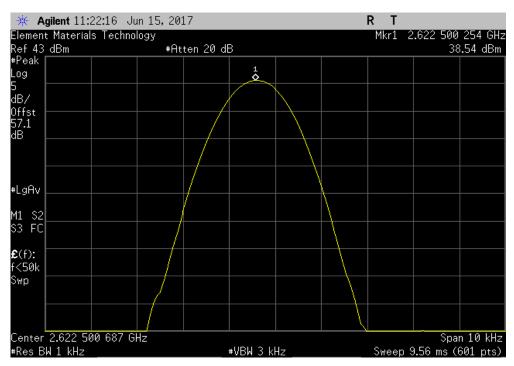


Report No. KMWC0080 78/203

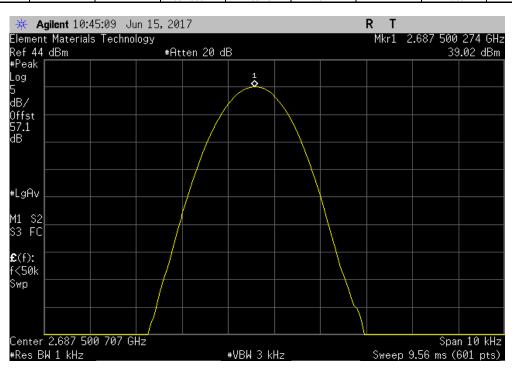


Port 2, Extreme Temperature, +40°C, Low Channel, 2622.5 MHz

| Measured Assigned Error Limit | Value (MHz) Value (MHz) (ppm) (ppm) | Results | 2622.500254 | 2622.5 | 0.1 | 1 | Pass |



	Port 2, Extreme Temperature, +50°C, High Channel , 2687.5 MHz								
			Measured	Assigned	Error	Limit			
			Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results		
l			2687.500274	2687.5	0.1	1	Pass		

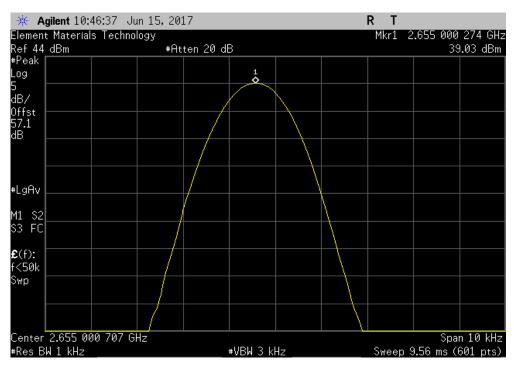


Report No. KMWC0080 79/203

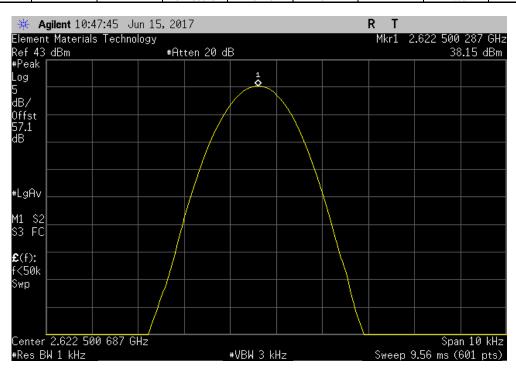


Port 2, Extreme Temperature, +50°C, Mid Channel, 2655 MHz

| Measured Assigned Error Limit | Value (MHz) Value (MHz) (ppm) (ppm) Results |
| 2655.000274 2655 0.1 1 Pass



	Port 2, Extreme Tempe	rature, +50°C, Lo	w Channel, 2622	.5 MHz	
	Measured	Assigned	Error	Limit	
	 Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results
1	2622.500287	2622.5	0.1	1	Pass



Report No. KMWC0080 80/203



XMit 2017.02.08

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Power Supply - DC	Hewlett Packard	6574A	TPX	NCR	NCR
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	2/5/2018
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Block - DC	Fairview Microwave	SD3379	AMV	1/11/2017	1/11/2018
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	11/2/2016	11/2/2017

CLIENT PROVIDED EQUIPMENT

Description	Manufacturer	Model	Last Cal.	Cal. Due
High Power Attenuator - 30dB	Aeroflex/Weinschel	53-30-43	NCR	NCR
Attenuator - 20dB	N/A	N/A	NCR	NCR
Power Divider	Fairview Microwave	MP8748-2	NCR	NCR
50Ohm Terminator	Aeroflex/Weinschel	1455-4	NCR	NCR
High Power Terminator	Telcon	KTMO400800060	NCR	NCR

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The spectrum analyzer settings were as follows:

>RBW = Approx. 1% of the emission bandwidth (B). This was an iterative process to determine the RBW based on the emissions bandwidth (B).

>VBW=>RBW

>A peak detector was used

➤Trace max hold.

The spectrum analyzer occupied bandwidth measurement function was then used to measure the 26 dB emission bandwidth.

There is no required limit to be met in the rule part for this test. The purpose of the test is to both report the results and to utilize the emission bandwidth for setting the channel power integration bandwidth during conducted output power testing.

Report No. KMWC0080



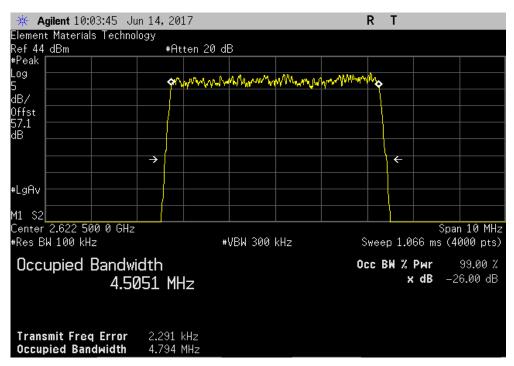
					TbtTx 2017.04.18	XMit 2017.02.08
	CWS-3050-07		<u> </u>	Work Order:		
	See Configuration				06/14/17	
	Parallel Wireless Inc.			Temperature:		
	Daniel Kim				46.4% RH	
Project:				Barometric Pres.:		
	Salvador Solorzano and Johnny Candelas	Power:	48VDC	Job Site:	OC13	
TEST SPECIFICAT	IONS		Test Method			
FCC 27:2017			ANSI/TIA/EIA-603-D-2010			
COMMENTS						
Power Level Settin	g 40W. Reference Level Offset: DC Block + 30dB Attenuator + 20	DdB Attenuator + I	Power Divider + Cable Loss = 57.1dB	total.		
DEVIATIONS FROM	M TEST STANDARD					
None						
	9	0 1	100			
Configuration #	1	e .	Colle			
	Signature	}				
				Value	Limit	Result
				value	LIIIII	Result
Antenna Port 1						
Antenna Port 1	Low Channel LTE5, 2622.5 MHz			4.794 MHz	N/A	N/A
Antenna Port 1	Mid Channel LTE5, 2655 MHz			4.794 MHz 4.787 MHz	N/A N/A	N/A N/A
Antenna Port 1	Mid Channel LTE5, 2655 MHz High Channel LTE5, 2687.5 MHz			4.794 MHz 4.787 MHz 4.797 MHz	N/A N/A N/A	N/A N/A N/A
Antenna Port 1	Mid Channel LTE5, 2655 MHz High Channel LTE5, 2687.5 MHz Low Channel LTE10, 2625 MHz			4.794 MHz 4.787 MHz 4.797 MHz 9.549 MHz	N/A N/A N/A N/A	N/A N/A N/A N/A
Antenna Port 1	Mid Channel LTE5, 2655 MHz High Channel LTE5, 2687.5 MHz			4.794 MHz 4.787 MHz 4.797 MHz	N/A N/A N/A	N/A N/A N/A
Antenna Port 1	Mid Channel LTE5, 2655 MHz High Channel LTE5, 2687.5 MHz Low Channel LTE10, 2625 MHz			4.794 MHz 4.787 MHz 4.797 MHz 9.549 MHz	N/A N/A N/A N/A	N/A N/A N/A N/A
Antenna Port 1	Mid Channel LTE5, 2655 MHz High Channel LTE5, 2687.5 MHz Low Channel LTE10, 2625 MHz Mid Channel LTE10, 2655 MHz			4.794 MHz 4.787 MHz 4.797 MHz 9.549 MHz 9.436 MHz	N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A
Antenna Port 1	Mid Channel LTE5, 2655 MHz High Channel LTE5, 2687.5 MHz Low Channel LTE10, 2625 MHz Mid Channel LTE10, 2655 MHz High Channel LTE10, 2685 MHz			4.794 MHz 4.787 MHz 4.797 MHz 9.549 MHz 9.436 MHz 9.565 MHz	N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A
Antenna Port 1	Mid Channel LTE5, 2655 MHz High Channel LTE16, 2687.5 MHz Low Channel LTE10, 2625 MHz Mid Channel LTE10, 2655 MHz High Channel LTE10, 2685 MHz Low Channel LTE20, 2630 MHz			4.794 MHz 4.787 MHz 4.797 MHz 9.549 MHz 9.436 MHz 9.565 MHz 18.850 MHz	N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A
Antenna Port 1 Antenna Port 2	Mid Channel LTE5, 2655 MHz High Channel LTE5, 2687.5 MHz Low Channel LTE10, 2625 MHz Mid Channel LTE10, 2655 MHz High Channel LTE10, 2685 MHz Low Channel LTE20, 2630 MHz Mid Channel LTE20, 2655 MHz			4.794 MHz 4.787 MHz 4.797 MHz 9.549 MHz 9.436 MHz 9.565 MHz 18.850 MHz 18.723 MHz	N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A
	Mid Channel LTE5, 2655 MHz High Channel LTE5, 2687.5 MHz Low Channel LTE10, 2625 MHz Mid Channel LTE10, 2655 MHz High Channel LTE10, 2685 MHz Low Channel LTE20, 2630 MHz Mid Channel LTE20, 2655 MHz			4.794 MHz 4.787 MHz 4.797 MHz 9.549 MHz 9.436 MHz 9.565 MHz 18.850 MHz 18.723 MHz	N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A
	Mid Channel LTE5, 2655 MHz High Channel LTE10, 2625 MHz Low Channel LTE10, 2625 MHz Mid Channel LTE10, 2655 MHz High Channel LTE10, 2685 MHz Low Channel LTE20, 2630 MHz Mid Channel LTE20, 2655 MHz High Channel LTE20, 266			4.794 MHz 4.787 MHz 4.797 MHz 9.549 MHz 9.436 MHz 9.565 MHz 18.850 MHz 18.723 MHz 18.876 MHz	N/A N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A N/A
	Mid Channel LTE5, 2655 MHz High Channel LTE15, 2687.5 MHz Low Channel LTE10, 2625 MHz Mid Channel LTE10, 2655 MHz High Channel LTE10, 2685 MHz Low Channel LTE20, 2630 MHz Mid Channel LTE20, 2655 MHz High Channel LTE20, 2656 MHz Low Channel LTE20, 2655 MHz Low Channel LTE20, 2655 MHz			4.794 MHz 4.797 MHz 4.797 MHz 9.549 MHz 9.436 MHz 9.565 MHz 18.723 MHz 18.723 MHz 18.736 MHz	N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A N/A
	Mid Channel LTE5, 2655 MHz High Channel LTE5, 2687.5 MHz Low Channel LTE10, 2625 MHz Mid Channel LTE10, 2655 MHz High Channel LTE10, 2685 MHz Low Channel LTE10, 2685 MHz Low Channel LTE20, 2630 MHz Mid Channel LTE20, 2655 MHz High Channel LTE20, 2680 MHz Low Channel LTE5, 2622.5 MHz Mid Channel LTE5, 2625.5 MHz Mid Channel LTE5, 2655 MHz			4.794 MHz 4.787 MHz 4.797 MHz 9.549 MHz 9.436 MHz 9.565 MHz 18.850 MHz 18.723 MHz 18.876 MHz 4.790 MHz 4.777 MHz	N/A N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A N/A N/A
	Mid Channel LTE5, 2655 MHz High Channel LTE10, 2625 MHz Low Channel LTE10, 2625 MHz Mid Channel LTE10, 2625 MHz High Channel LTE10, 2655 MHz High Channel LTE20, 2630 MHz Mid Channel LTE20, 2630 MHz Mid Channel LTE20, 2665 MHz High Channel LTE20, 2680 MHz High Channel LTE5, 2622.5 MHz Mid Channel LTE5, 2655 MHz Mid Channel LTE5, 2655 MHz Mid Channel LTE5, 2655 MHz High Channel LTE5, 2687.5 MHz			4.794 MHz 4.787 MHz 4.797 MHz 9.549 MHz 9.436 MHz 9.565 MHz 18.850 MHz 18.723 MHz 18.76 MHz 4.777 MHz 4.777 MHz	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A
	Mid Channel LTE5, 2655 MHz High Channel LTE10, 2625 MHz Low Channel LTE10, 2625 MHz Mid Channel LTE10, 2655 MHz High Channel LTE10, 2685 MHz High Channel LTE20, 2630 MHz Mid Channel LTE20, 2630 MHz Mid Channel LTE20, 2655 MHz High Channel LTE20, 2680 MHz Low Channel LTE5, 2622.5 MHz Mid Channel LTE5, 2682.5 MHz Mid Channel LTE5, 2685 MHz High Channel LTE5, 2685 MHz Mid Channel LTE10, 2655 MHz			4.794 MHz 4.787 MHz 4.797 MHz 9.549 MHz 9.436 MHz 9.565 MHz 18.723 MHz 18.723 MHz 4.790 MHz 4.777 MHz 4.777 MHz 9.553 MHz	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A
	Mid Channel LTE5, 2655 MHz High Channel LTE10, 2625 MHz Low Channel LTE10, 2625 MHz Mid Channel LTE10, 2625 MHz High Channel LTE10, 2685 MHz High Channel LTE20, 2630 MHz Mid Channel LTE20, 2630 MHz Mid Channel LTE20, 2685 MHz High Channel LTE20, 2680 MHz High Channel LTE5, 2622.5 MHz Mid Channel LTE5, 2652.5 MHz Mid Channel LTE5, 2655 MHz Mid Channel LTE5, 2687.5 MHz Low Channel LTE10, 2685 MHz Mid Channel LTE10, 2625 MHz Mid Channel LTE10, 2685 MHz High Channel LTE10, 2685 MHz High Channel LTE10, 2685 MHz			4.794 MHz 4.797 MHz 9.549 MHz 9.436 MHz 9.436 MHz 18.850 MHz 18.876 MHz 18.723 MHz 18.777 MHz 4.777 MHz 4.777 MHz 9.553 MHz 9.511 MHz 9.495 MHz	N/A	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A
	Mid Channel LTE5, 2655 MHz High Channel LTE10, 2625 MHz Low Channel LTE10, 2625 MHz Mid Channel LTE10, 2655 MHz High Channel LTE10, 2655 MHz High Channel LTE20, 2630 MHz Mid Channel LTE20, 2630 MHz Mid Channel LTE20, 2685 MHz High Channel LTE20, 2680 MHz Low Channel LTE5, 2625 MHz Mid Channel LTE5, 2655 MHz High Channel LTE5, 2655 MHz Mid Channel LTE5, 2655 MHz High Channel LTE10, 2625 MHz Mid Channel LTE10, 2625 MHz Mid Channel LTE10, 2625 MHz Mid Channel LTE10, 2685 MHz Low Channel LTE10, 2685 MHz Low Channel LTE10, 2685 MHz Low Channel LTE10, 2630 MHz			4.794 MHz 4.787 MHz 4.797 MHz 9.549 MHz 9.436 MHz 9.565 MHz 18.723 MHz 18.723 MHz 18.777 MHz 4.777 MHz 4.777 MHz 9.553 MHz 9.495 MHz 9.495 MHz	N/A	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A
	Mid Channel LTE5, 2655 MHz High Channel LTE10, 2625 MHz Low Channel LTE10, 2625 MHz Mid Channel LTE10, 2625 MHz High Channel LTE10, 2685 MHz High Channel LTE20, 2630 MHz Mid Channel LTE20, 2630 MHz Mid Channel LTE20, 2685 MHz High Channel LTE20, 2680 MHz High Channel LTE5, 2622.5 MHz Mid Channel LTE5, 2652.5 MHz Mid Channel LTE5, 2655 MHz Mid Channel LTE5, 2687.5 MHz Low Channel LTE10, 2685 MHz Mid Channel LTE10, 2625 MHz Mid Channel LTE10, 2685 MHz High Channel LTE10, 2685 MHz High Channel LTE10, 2685 MHz			4.794 MHz 4.797 MHz 9.549 MHz 9.436 MHz 9.436 MHz 18.850 MHz 18.876 MHz 18.723 MHz 18.777 MHz 4.777 MHz 4.777 MHz 9.553 MHz 9.511 MHz 9.495 MHz	N/A	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A

Report No. KMWC0080 82/203

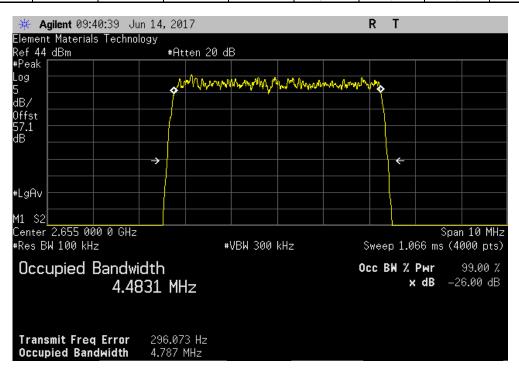


Antenna Port 1, Low Channel LTE5, 2622.5 MHz

| Value | Limit | Result |
| 4.794 MHz | N/A | N/A |



	Antenna Po	rt 1, Mid Channel L	TE5, 2655 MHz			
			Value	Limit	Result	_
			4.787 MHz	N/A	N/A	T

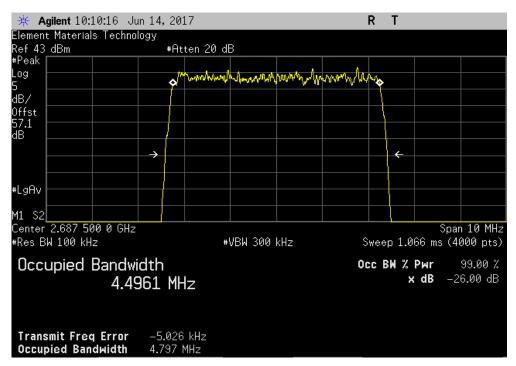


Report No. KMWC0080 83/203

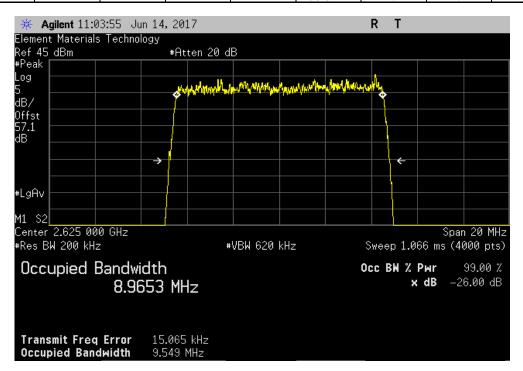


Antenna Port 1, High Channel LTE5, 2687.5 MHz

| Value | Limit | Result |
| 4.797 MHz | N/A | N/A |

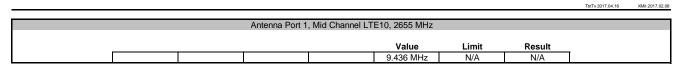


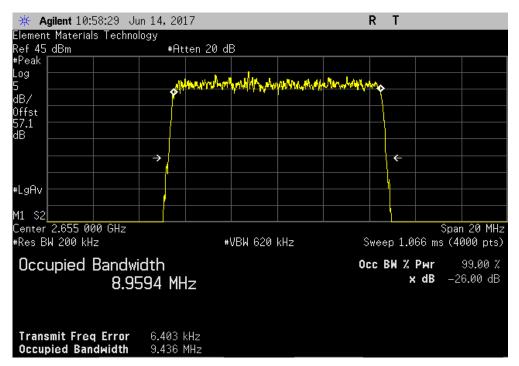
	Antenna Port 1,	, Low Channel LT	E10, 2625 MHz			
			Value	Limit	Result	_
			9.549 MHz	N/A	N/A	ĺ



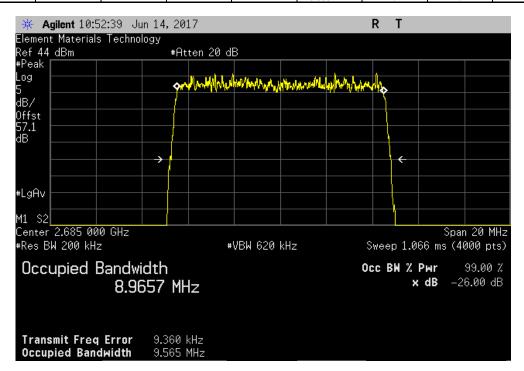
Report No. KMWC0080 84/203





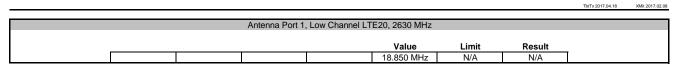


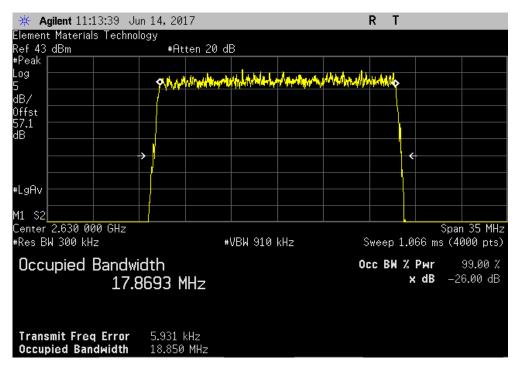
	Antenna Port 1,	High Channel LT	E10, 2685 MHz			
			Value	Limit	Result	_
			9.565 MHz	N/A	N/A	ſ



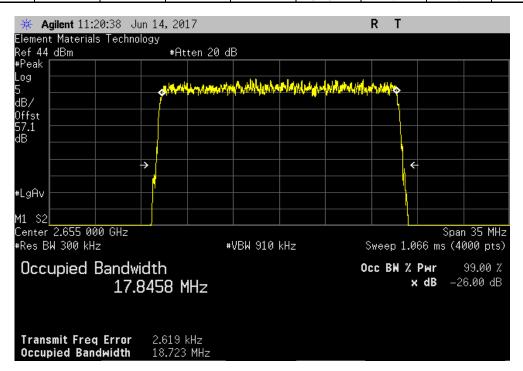
Report No. KMWC0080 85/203







	Antenna Port 1	, Mid Channel LT	E20, 2655 MHz		
			Value	Limit	Result
			18.723 MHz	N/A	N/A

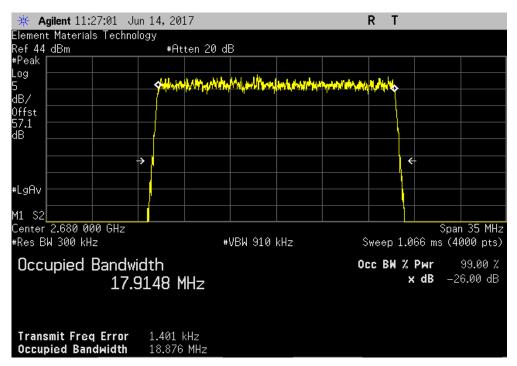


Report No. KMWC0080 86/203

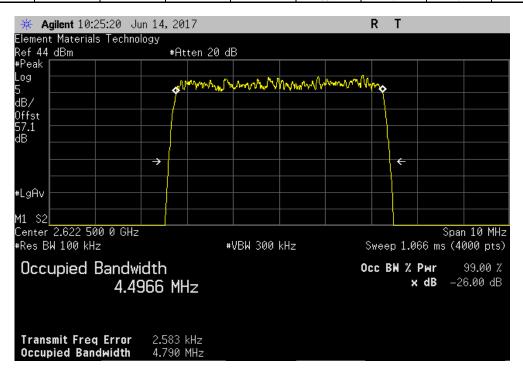


Antenna Port 1, High Channel LTE20, 2680 MHz

| Value | Limit | Result |
| 18.876 MHz | N/A | N/A |



		Antenna Port 2,	Low Channel LT	E5, 2622.5 MHz			
				Value	Limit	Result	_
				4.790 MHz	N/A	N/A	ĺ

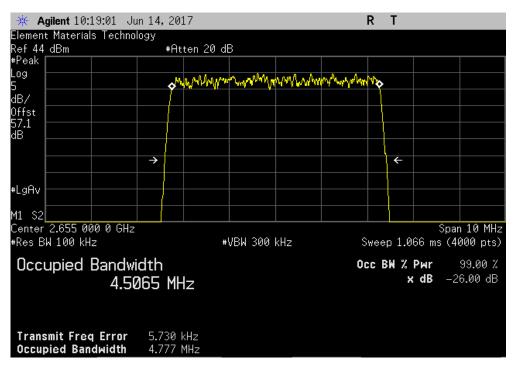


Report No. KMWC0080 87/203

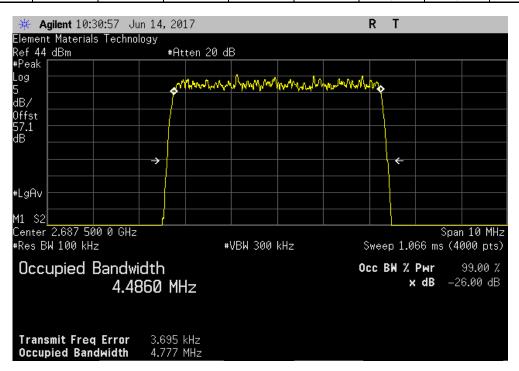


Antenna Port 2, Mid Channel LTE5, 2655 MHz

Value Limit Result
4.777 MHz N/A N/A

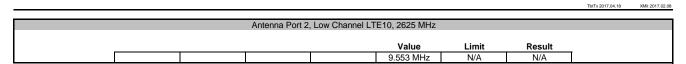


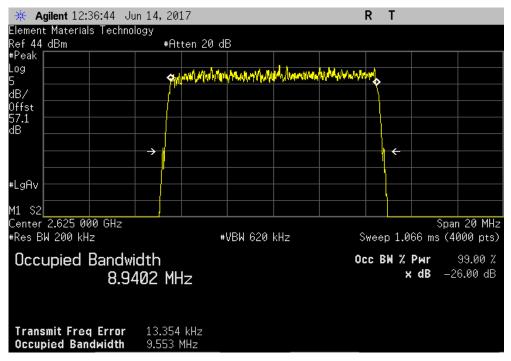
	Antenna Port 2,	High Channel LT	E5, 2687.5 MHz			
			Value	Limit	Result	_
			4.777 MHz	N/A	N/A	



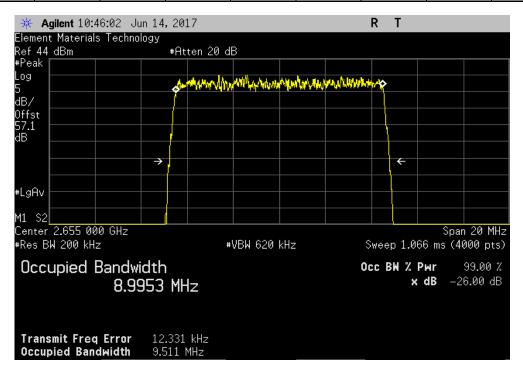
Report No. KMWC0080 88/203







	Antenna Port 2	, Mid Channel LT	E10, 2655 MHz		
			Value	Limit	Result

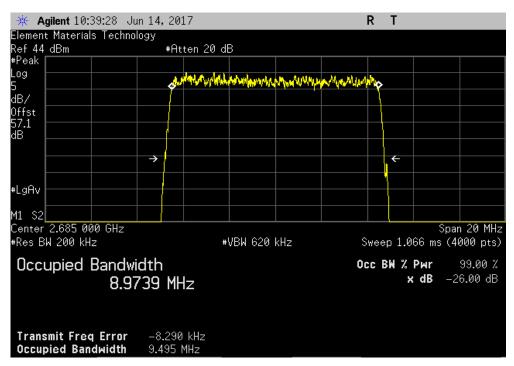


Report No. KMWC0080 89/203

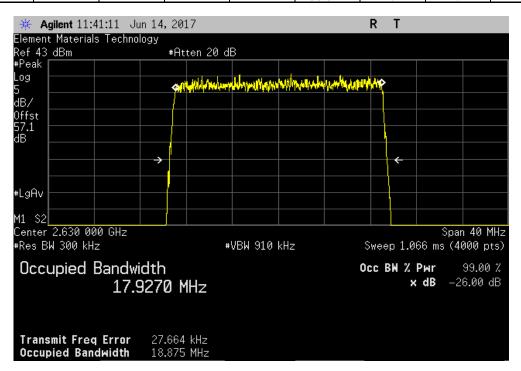


Antenna Port 2, High Channel LTE10, 2685 MHz

| Value | Limit | Result |
| 9.495 MHz | N/A | N/A |



	Antenna Port 2,	Low Channel LT	E20, 2630 MHz		
			Value	Limit	Result
			18.875 MHz	N/A	N/A

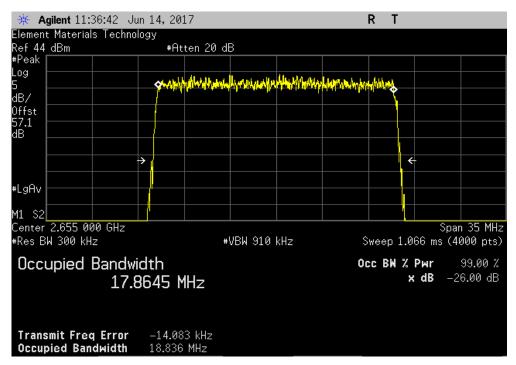


Report No. KMWC0080 90/203

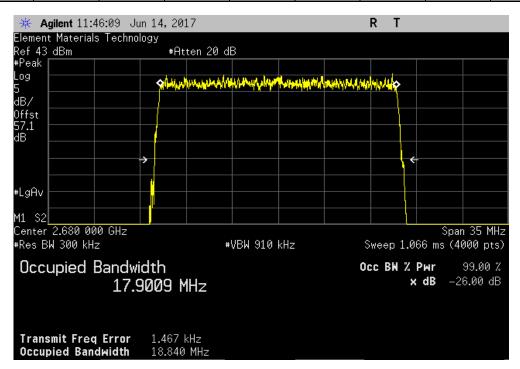


Antenna Port 2, Mid Channel LTE20, 2655 MHz

| Value | Limit | Result |
| 18.836 MHz | N/A | N/A |



		Antenna Port 2,	High Channel LT	TE20, 2680 MHz		
				Value	Limit	Result
				18.840 MHz	N/A	N/A



Report No. KMWC0080 91/203

OUT OF BAND EMISSIONS - LTE BAND 7



PSA-ESCI 2017 01 2

92/203

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

MODES OF OPERATION

Transmitting at Low Ch 2622.5 MHz, Mid Ch 2655 MHz, & High Ch 2687.5 MHz

POWER SETTINGS INVESTIGATED

48 VDC

CONFIGURATIONS INVESTIGATED

KMWC0080 - 1

FREQUENCY RANGE INVESTIGATED

Start Frequency 30 MHz Stop Frequency 27000 MHz

SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Generator - Signal	Keysight	N5182B	TFX	4/16/2015	36 mo
Antenna - Double Ridge	EMCO	3115	AHB	3/21/2016	24 mo
Filter - Low Pass	Micro-Tronics	LPM50003	LFA	10/17/2016	12 mo
Antenna - Biconilog	EMCO	3142	AXB	11/6/2015	24 mo
Antenna - Standard Gain	ETS Lindgren	3160-07	AHR	NCR	NCR
Antenna - Standard Gain	ETS Lindgren	3160-08	AHT	NCR	NCR
Antenna - Standard Gain	ETS Lindgren	3160-09	AHN	NCR	NCR
Amplifier - Pre-Amplifier	Miteq	AMF-4D-010120-30-10P-1	AOP	7/13/2017	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AOE	8/10/2016	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AOF	8/10/2016	12 mo
Cable	Northwest EMC	8-18GHz RE Cables	OCO	8/10/2016	12 mo
Cable	Northwest EMC	18-26GHz RE Cables	OCK	1/3/2017	12 mo
Power Sensor	Agilent	E4412A	SQE	1/26/2017	12 mo
Filter - Band Pass/Notch	K&L Microwave	3TNF-500/1000-N/N	HFR	3/3/2016	12 mo
Antenna - Double Ridge	ETS Lindgren	3117	AHQ	9/24/2015	24 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-118002650-25-10P	AOI	1/3/2017	12 mo
Filter - Low Pass	Micro-Tronics	LPM50003	HGO	3/28/2016	12 mo
Filter - High Pass	Micro-Tronics	HPM50108	HHW	8/10/2016	12 mo
Amplifier - Pre-Amplifier	Miteq	AM-1402	AOZ	8/10/2016	12 mo
Cable	Northwest EMC	10kHz-1GHz RE Cables	OCH	8/9/2016	12 mo
Cable	Northwest EMC	1-8GHz RE Cables	OCJ	7/13/2017	12 mo
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	11/2/2016	12 mo

TEST DESCRIPTION

The EUT was tested with shielded terminators on the RF output ports instead of antennas.

For licensed transmitters, the FCC references TIA/EIA-603 as the measurement procedure standard. TIA/EIA-603 Section 2.2.12 describes a method for measuring radiated spurious emissions that utilizes an antenna substitution method:

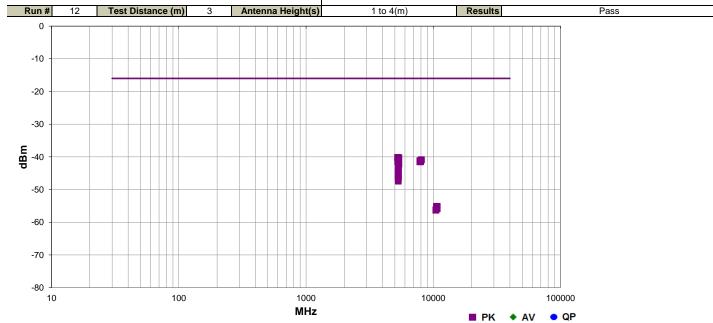
At an approved test site, the transmitter is place on a remotely controlled turntable, and the measurement antenna is placed 3 meters from the transmitter. The turntable azimuth is varied to maximize the level of spurious emissions. The height of the measurement antenna is also varied from 1 to 4 meters. The amplitude and frequency of the highest emissions are noted. The transmitter is then replaced with a ½ wave dipole that is successively tuned to each of the highest spurious emissions for emissions below 1 GHz, and a horn antenna for emissions above 1 GHz. A signal generator is connected to the dipole (horn antenna for frequencies above 1 GHz), and its output is adjusted to match the level previously noted for each frequency. The output of the signal generator is recorded, and by factoring in the cable loss to the antenna and its gain; the power (dBm) into an ideal ½ wave dipole antenna is determined for each radiated spurious emission.

Report No. KMWC0080

OUT OF BAND EMISSIONS - LTE BAND 7



		_			EmiR5 2017.01.25		PSA-ESCI 2017.01.26
Work Order:		Date:	06/19/		- 1.		
Project:		Temperature:	22 °(1 2. 2	Miller	
Job Site:	OC07	Humidity:	45.8%				
Serial Number:		Barometric Pres.:	1013 m	nbar T	ested by: Salvador Solo	rzano and Johnny Candelas	
	CWS-3050-07						
Configuration:							
	Parallel Wireless Inc.						
Attendees:							
EUT Power:							
Operating Mode:	Transmitting at Low C	Ch 2622.5 MHz, Mid Ch	2655 MHz,	& High Ch 2687.5 MI	łz		
Deviations:	None						
Comments:	2x40W The -13dBm specifica 10*log(# of antennas)		ered by 3dB	to account for the 2	oort MIMO configuration	n. Correction factor base	ed upon the formula of
Test Specifications			Т	Test Method			
FCC 27.53:2017				ANSI/TIA/EIA-603-D-2	010		-
Run # 12	Test Distance (m)	3 Antenna	Height(s)	1 to 4(m)	Results	F	Pass
0							



	Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
	5244.145	1.0	0.0	Vert	PK	9.71E-08	-40.1	-16.0	-24.1	Low Ch, EUT Horz, LTE5
	5375.205	1.0	90.0	Vert	PK	9.49E-08	-40.2	-16.0	-24.2	High CH, EUT Horz, LTE5
	5309.508	1.0	97.0	Vert	PK	8.46E-08	-40.7	-16.0	-24.7	Mid Ch, EUT Horz, LTE5
	8063.540	1.0	141.0	Vert	PK	8.26E-08	-40.8	-16.0	-24.8	High CH, EUT Horz, LTE5
	8062.110	3.1	177.0	Horz	PK	8.07E-08	-40.9	-16.0	-24.9	High CH, EUT Horz, LTE5
	7966.480	1.9	170.0	Vert	PK	7.71E-08	-41.1	-16.0	-25.1	Mid Ch, EUT Horz, LTE5
	7869.120	1.0	182.0	Vert	PK	7.71E-08	-41.1	-16.0	-25.1	Low Ch, EUT Horz, LTE5
	5309.183	1.0	227.0	Vert	PK	7.54E-08	-41.2	-16.0	-25.2	Mid Ch, EUT on Side, LTE5
	5309.075	1.0	94.0	Vert	PK	7.36E-08	-41.3	-16.0	-25.3	Mid Ch, EUT Horz, LTE10
	7965.995	1.0	153.0	Horz	PK	7.20E-08	-41.4	-16.0	-25.4	Mid Ch, EUT Horz, LTE5
	5246.390	1.7	249.0	Horz	PK	7.20E-08	-41.4	-16.0	-25.4	Low Ch, EUT Horz, LTE5
	5312.017	1.0	278.0	Horz	PK	7.03E-08	-41.5	-16.0	-25.5	Mid Ch, EUT Horz, LTE5
	7867.885	1.0	293.0	Horz	PK	7.03E-08	-41.5	-16.0	-25.5	Low Ch, EUT Horz, LTE5
	5310.500	1.0	346.0	Vert	PK	6.41E-08	-41.9	-16.0	-25.9	Mid Ch, EUT Vert LTE5
	5309.108	1.0	246.0	Horz	PK	6.13E-08	-42.1	-16.0	-26.1	Mid Ch, EUT on Side, LTE5
	5375.200	1.0	355.0	Horz	PK	5.99E-08	-42.2	-16.0	-26.2	High CH, EUT Horz, LTE5
	5310.442	1.0	339.0	Horz	PK	4.98E-08	-43.0	-16.0	-27.0	Mid Ch, EUT Vert LTE5
	5310.480	2.7	315.0	Vert	PK	4.75E-08	-43.2	-16.0	-27.2	Mid Ch, EUT Horz, Dual Carriers Adjacent LTE5-LTE10 2655-2662.5
	5308.540	1.0	128.0	Vert	PK	4.14E-08	-43.8	-16.0	-27.8	Mid Ch, EUT Horz, Dual Carriers Adjacent LTE5-LTE5 2655 -2660
	5309.210	1.0	127.0	Vert	PK	4.14E-08	-43.8	-16.0	-27.8	Mid Ch, EUT Horz, Dual Carriers Edge to Edge LTE5-LTE5 2655 -2622.5
	5308.725	1.0	33.0	Horz	PK	3.78E-08	-44.2	-16.0	-28.2	Mid Ch, EUT Horz, LTE10
	5309.395	3.5	321.0	Vert	PK	3.44E-08	-44.6	-16.0	-28.6	Mid Ch, EUT Horz, LTE20
	5309.305	1.0	240.0	Horz	PK	3.44E-08	-44.6	-16.0	-28.6	Mid Ch, EUT Horz, Dual Carriers Adjacent LTE5-LTE10 2655-2662.5

Report No. KMWC0080 93/203

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
5309.975	1.1	334.0	Vert	PK	3.37E-08	-44.7	-16.0	-28.7	Mid Ch, EUT Horz, Dual Carriers Edge to Edge LTE5-LTE20 2655 -2622.5
5309.760	1.0	312.0	Vert	PK	2.80E-08	-45.5	-16.0	-29.5	Mid Ch, EUT Horz, Dual Carriers Edge to Edge LTE5-LTE10 2655 -2622.5
5309.530	1.0	240.0	Horz	PK	2.67E-08	-45.7	-16.0	-29.7	Mid Ch, EUT Horz, Dual Carriers Adjacent LTE5-LTE20 2655-2677.5
5310.305	1.0	333.0	Vert	PK	2.67E-08	-45.7	-16.0	-29.7	Mid Ch, EUT Horz, Dual Carriers Adjacent LTE5-LTE20 2655-2677.5
5309.200	1.0	358.0	Horz	PK	2.44E-08	-46.1	-16.0	-30.1	Mid Ch, EUT Horz, Dual Carriers Edge to Edge LTE5-LTE5 2655 -2622.5
5309.880	3.3	269.0	Horz	PK	2.44E-08	-46.1	-16.0	-30.1	Mid Ch, EUT Horz, Dual Carriers Edge to Edge LTE5-LTE10 2655 -2622.5
5308.740	1.0	249.0	Horz	PK	2.17E-08	-46.6	-16.0	-30.6	Mid Ch, EUT Horz, Dual Carriers Adjacent LTE5-LTE5 2655 -2660
5310.495	1.0	344.0	Horz	PK	2.03E-08	-46.9	-16.0	-30.9	Mid Ch, EUT Horz, LTE20
5309.775	1.0	106.0	Horz	PK	1.81E-08	-47.4	-16.0	-31.4	Mid Ch, EUT Horz, Dual Carriers Edge to Edge LTE5-LTE20 2655 -2622.5
10621.280	1.0	91.0	Vert	PK	3.07E-09	-55.1	-16.0	-39.1	Mid Ch, EUT Horz, LTE5
10748.730	1.0	233.0	Horz	PK	3.07E-09	-55.1	-16.0	-39.1	High CH, EUT Horz, LTE5
10620.240	1.0	0.0	Horz	PK	3.00E-09	-55.2	-16.0	-39.2	Mid Ch, EUT Horz, LTE5
10750.470	1.0	315.0	Vert	PK	2.61E-09	-55.8	-16.0	-39.8	High CH, EUT Horz, LTE5
10491.260	2.6	291.0	Vert	PK	2.38E-09	-56.2	-16.0	-40.2	Low Ch, EUT Horz, LTE5
10491.270	1.0	194.0	Horz	PK	2.33E-09	-56.3	-16.0	-40.3	Low Ch, EUT Horz, LTE5



XMit 2017.02.08

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Power Supply - DC	Hewlett Packard	6574A	TPX	NCR	NCR
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	2/5/2018
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Block - DC	Fairview Microwave	SD3379	AMV	1/11/2017	1/11/2018
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	11/2/2016	11/2/2017

CLIENT PROVIDED EQUIPMENT

Description	Manufacturer	Model	Last Cal.	Cal. Due
High Power Attenuator - 30dB	Aeroflex/Weinschel	53-30-43	NCR	NCR
Attenuator - 20dB	N/A	N/A	NCR	NCR
Power Divider	Fairview Microwave	MP8748-2	NCR	NCR
50Ohm Terminator	Aeroflex/Weinschel	1455-4	NCR	NCR
High Power Terminator	Telcon	KTMO400800060	NCR	NCR

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. Analyzer plots utilizing a 1 MHz resolution bandwidth and no video filtering were made for each mode listed in the datasheet.

The peak conducted power of spurious emissions, up to the 10th harmonic of the transmit frequency, were investigated to ensure they were less than or equal to the limit. Emissions close to the limit were re-measured using an RMS Average detector to match the method used during output power measurements.

Report No. KMWC0080



				TbtTx 2017.04.18	XMit 2
	T: CWS-3050-07			KMWC0080	
Serial Number			Date: Temperature:	06/14/17	
	r: Parallel Wireless Inc. s: Daniel Kim			46.4% RH	
	t: None		Barometric Pres.		
	y: Salvador Solorzano and Johnny Candelas	Power: 48VDC	Job Site:		
T SPECIFICA		Test Method			
27:2017		ANSI/TIA/EIA-603-D-2010			
MENTS					
		tor + 20dB Attenuator + Power Divider + Cable Loss = 57.1dB tota			
-13dBm spec	cification limit has been lowered by 3dB to account for the	2 port MIMO configuration. Correction factor based upon the forn	nula of 10*log(# of antennas) Usin	g -16dBm	
IATIONS FRO	OM TEST STANDARD				
e	SIN 1201 OTARDARD				
		0 1100			
figuration #	1	for S. lather			
	Signature	2			
		Frequency	Max Value	Limit	
nno Dort 1		Range	(dBm)	≤ (dBm)	Result
nna Port 1	Low Channel LTE5, 2622.5 MHz	30 MHz - 1 GHz	-32.57	-16	Pass
	Low Channel LTE5, 2622.5 MHz	1 GHz - 3 GHz	-21.75	-16	Pass
	Low Channel LTE5, 2622.5 MHz	3 GHz - 15 GHz	-19.47	-16	Pass
	Low Channel LTE5, 2622.5 MHz	15 GHz - 27 GHz	-17.74	-16	Pass
	Mid Channel LTE5, 2655 MHz	30 MHz - 1 GHz	-32.81	-16	Pass
	Mid Channel LTE5, 2655 MHz	1 GHz - 3 GHz	-22.53	-16	Pass
	Mid Channel LTE5, 2655 MHz	3 GHz - 15 GHz	-19.66	-16	Pass
	Mid Channel LTE5, 2655 MHz	15 GHz - 27 GHz	-17.10	-16	Pass
	High Channel LTE5, 2687.5 MHz	30 MHz - 1 GHz	-33.20	-16	Pass
	High Channel LTE5, 2687.5 MHz	1 GHz - 3 GHz	-22.56	-16	Pass
	High Channel LTE5, 2687.5 MHz	3 GHz - 15 GHz	-20.41	-16	Pass
	High Channel LTE5, 2687.5 MHz	15 GHz - 27 GHz	-16.20	-16	Pass
	Low Channel LTE10, 2625 MHz	30 MHz - 1 GHz	-32.65	-16	Pass
	Low Channel LTE10, 2625 MHz	1 GHz - 3 GHz	-22.70	-16	Pass
	Low Channel LTE10, 2625 MHz	3 GHz - 15 GHz	-19.44	-16	Pass
	Low Channel LTE10, 2625 MHz	15 GHz - 27 GHz	-16.90	-16	Pass
	Mid Channel LTE10, 2655 MHz	30 MHz - 1 GHz	-32.76	-16	Pass
	Mid Channel LTE10, 2655 MHz	1 GHz - 3 GHz	-22.51	-16	Pass
	Mid Channel LTE10, 2655 MHz Mid Channel LTE10, 2655 MHz	3 GHz - 15 GHz 15 GHz - 27 GHz	-19.21 -16.57	-16 -16	Pass Pass
	High Channel LTE10, 2685 MHz	30 MHz - 1 GHz	-33.17	-16	Pass
	High Channel LTE10, 2685 MHz	1 GHz - 3 GHz	-22.75	-16	Pass
	High Channel LTE10, 2685 MHz	3 GHz - 15 GHz	-19.22	-16	Pass
	High Channel LTE10, 2685 MHz	15 GHz - 27 GHz	-16.44	-16	Pass
	Low Channel LTE20, 2630 MHz	30 MHz - 1 GHz	-33.64	-16	Pass
	Low Channel LTE20, 2630 MHz	1 GHz - 3 GHz	-21.95	-16	Pass
	Low Channel LTE20, 2630 MHz	3 GHz - 15 GHz	-19.02	-16	Pass
	Low Channel LTE20, 2630 MHz	15 GHz - 27 GHz	-16.53	-16	Pass
	Mid Channel LTE20, 2655 MHz	30 MHz - 1 GHz	-33.39	-16	Pass
	Mid Channel LTE20, 2655 MHz	1 GHz - 3 GHz	-23.61	-16	Pass
	Mid Channel LTE20, 2655 MHz	3 GHz - 15 GHz	-19.86	-16	Pass
	Mid Channel LTE20, 2655 MHz	15 GHz - 27 GHz	-16.61	-16	Pass
	High Channel LTE20, 2680 MHz	30 MHz - 1 GHz	-32.51	-16	Pass
	High Channel LTE20, 2680 MHz	1 GHz - 3 GHz	-21.87	-16	Pass
	High Channel LTE20, 2680 MHz	3 GHz - 15 GHz	-19.03	-16	Pass
_	High Channel LTE20, 2680 MHz	15 GHz - 27 GHz	-16.19	-16	Pass
na Port 2					_
	Low Channel LTE5, 2622.5 MHz	30 MHz - 1 GHz	-31.77	-16	Pass
	Low Channel LTE5, 2622.5 MHz	1 GHz - 3 GHz	-23.28	-16	Pass
	Low Channel LTE5, 2622.5 MHz	3 GHz - 15 GHz	-19.37	-16	Pass
	Low Channel LTE5, 2622.5 MHz	15 GHz - 27 GHz	-16.51	-16	Pass
	Mid Channel LTE5, 2655 MHz	30 MHz - 1 GHz	-33.41	-16 -16	Pass
	Mid Channel LTE5, 2655 MHz Mid Channel LTE5, 2655 MHz	1 GHz - 3 GHz 3 GHz - 15 GHz	-23.14 -19.91	-16 -16	Pass Pass
	Mid Channel LTE5, 2655 MHz	15 GHz - 15 GHz	-16.32	-16	Pass
	High Channel LTE5, 2687.5 MHz	30 MHz - 1 GHz	-33.60	-16	Pass
	High Channel LTE5, 2687.5 MHz	1 GHz - 3 GHz	-21.72	-16	Pass
	High Channel LTE5, 2687.5 MHz	3 GHz - 15 GHz	-19.17	-16	Pass
	High Channel LTE5, 2687.5 MHz	15 GHz - 27 GHz	-16.44	-16	Pass
	Low Channel LTE10, 2625 MHz	30 MHz - 1 GHz	-33.21	-16	Pass
	Low Channel LTE10, 2625 MHz	1 GHz - 3 GHz	-23.23	-16	Pass
	Low Channel LTE10, 2625 MHz	3 GHz - 15 GHz	-19.57	-16	Pass
	Low Channel LTE10, 2625 MHz	15 GHz - 27 GHz	-16.68	-16	Pass
	Mid Channel LTE10, 2655 MHz	30 MHz - 1 GHz	-33.68	-16	Pass
	Mid Channel LTE10, 2655 MHz	1 GHz - 3 GHz	-17.37	-16	Pass
	Mid Channel LTE10, 2655 MHz	3 GHz - 15 GHz	-19.20	-16	Pass
	Mid Channel LTE10, 2655 MHz	15 GHz - 27 GHz	-16.69	-16	Pass
	High Channel LTE10, 2685 MHz	30 MHz - 1 GHz	-33.42	-16	Pass
	High Channel LTE10, 2685 MHz	1 GHz - 3 GHz	-21.43	-16	Pass
	High Channel LTE10, 2685 MHz	3 GHz - 15 GHz	-18.38	-16	Pass
	High Channel LTE10, 2685 MHz	15 GHz - 27 GHz	-16.37	-16	Pass
	Low Channel LTE20, 2630 MHz	30 MHz - 1 GHz	-32.97 23.75	-16	Pass
	Low Channel LTE20, 2630 MHz	1 GHz - 3 GHz	-22.75	-16	Pass
	Low Channel LTE20, 2630 MHz	3 GHz - 15 GHz	-19.79	-16	Pass
	Low Channel LTE20, 2630 MHz	15 GHz - 27 GHz	-16.91	-16	Pass
	Mid Channel LTE20, 2655 MHz	30 MHz - 1 GHz	-33.08 -22.42	-16 -16	Pass
			-22.42	-16	Pass
	Mid Channel LTE20, 2655 MHz	1 GHz - 3 GHz			Door
	Mid Channel LTE20, 2655 MHz Mid Channel LTE20, 2655 MHz	3 GHz - 15 GHz	-19.43	-16	
	Mid Channel LTE20, 2655 MHz Mid Channel LTE20, 2655 MHz Mid Channel LTE20, 2655 MHz	3 GHz - 15 GHz 15 GHz - 27 GHz	-19.43 -16.36	-16 -16	Pass
	Mid Channel LTE20, 2655 MHz Mid Channel LTE20, 2655 MHz Mid Channel LTE20, 2655 MHz High Channel LTE20, 2680 MHz	3 GHz - 15 GHz 15 GHz - 27 GHz 30 MHz - 1 GHz	-19.43 -16.36 -33.18	-16 -16 -16	Pass Pass
	Mid Channel LTE20, 2655 MHz Mid Channel LTE20, 2655 MHz Mid Channel LTE20, 2655 MHz	3 GHz - 15 GHz 15 GHz - 27 GHz	-19.43 -16.36	-16 -16	Pass Pass Pass Pass Pass

Report No. KMWC0080 96/203

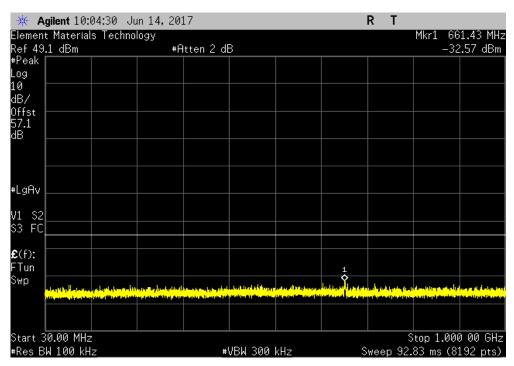


Antenna Port 1, Low Channel LTE5, 2622.5 MHz

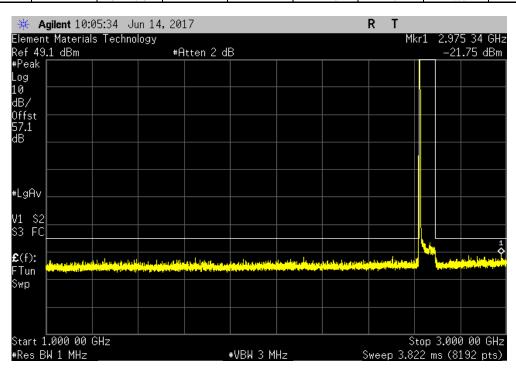
Frequency
Range
(dBm) ≤ (dBm) Result

30 MHz - 1 GHz

-32.57
-16
Pass



	Antenna Port 1, Low Channel L	TE5, 2622.5 MHz		
Frequency		Max Value	Limit	
Range		(dBm)	≤ (dBm)	Result
1 GHz - 3 GH	Iz	-21.75	-16	Pass



Report No. KMWC0080 97/203



Antenna Port 1, Low Channel LTE5, 2622.5 MHz

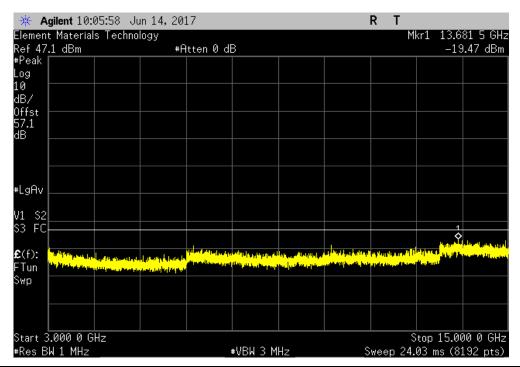
Frequency
Range
(dBm) ≤ (dBm) Result

3 GHz - 15 GHz

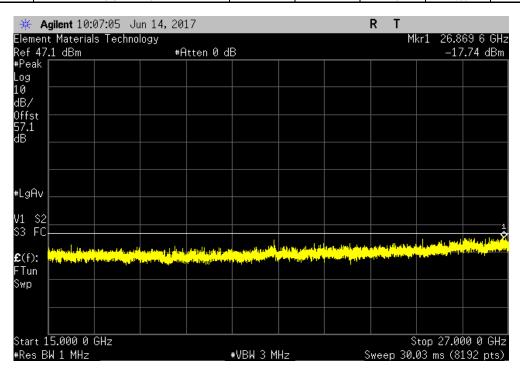
3 GHz - 15 GHz

-19.47
-16

Pass



	Antenna Port 1, Low Channel L7	E5, 2622.5 MHz		
Frequency		Max Value	Limit	
Range		(dBm)	≤ (dBm)	Result
15 GHz - 27 GHz		-17.74	-16	Pass



Report No. KMWC0080 98/203

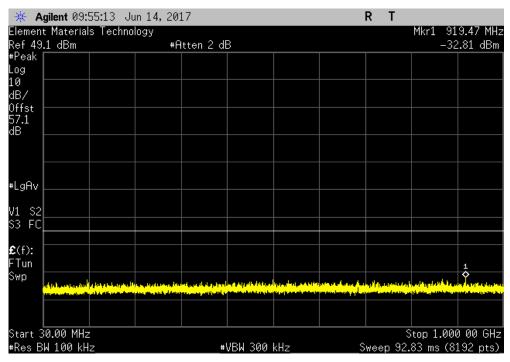


Antenna Port 1, Mid Channel LTE5, 2655 MHz

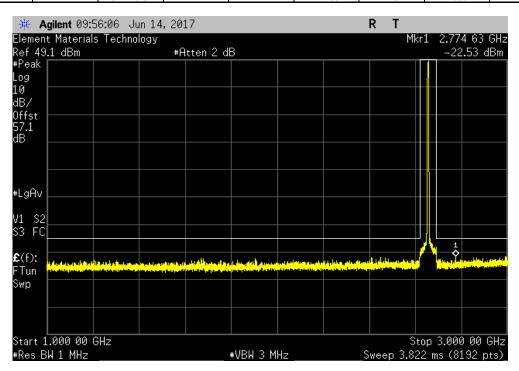
Frequency
Range
(dBm) ≤ (dBm) Result

30 MHz - 1 GHz

-32.81
-16
Pass



	Antenna Port 1, Mid Channel LTE5, 2655 MHz							
Frequency		Max Value	Limit					
Range		(dBm)	≤ (dBm)	Result				
1 GHz - 3 GHz		-22.53	-16	Pass				



Report No. KMWC0080 99/203

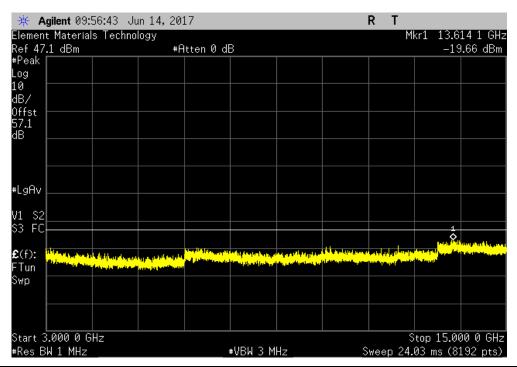


Antenna Port 1, Mid Channel LTE5, 2655 MHz

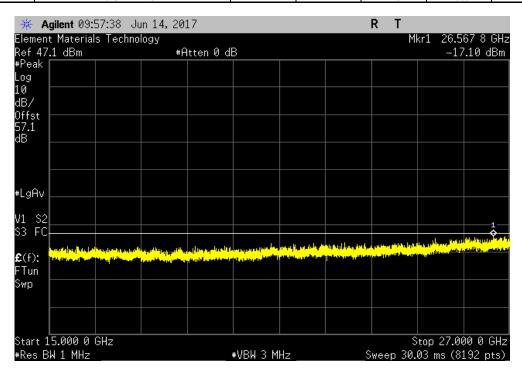
Frequency
Range
(dBm) ≤ (dBm) Result

3 GHz - 15 GHz

-19.66
-16
Pass



Antenna Port 1, Mid Channel LTE5, 2655 MHz							
Frequency		Max Value	Limit				
Range		(dBm)	≤ (dBm)	Result			
15 GHz - 27 GHz		-17.1	-16	Pass			



Report No. KMWC0080 100/203

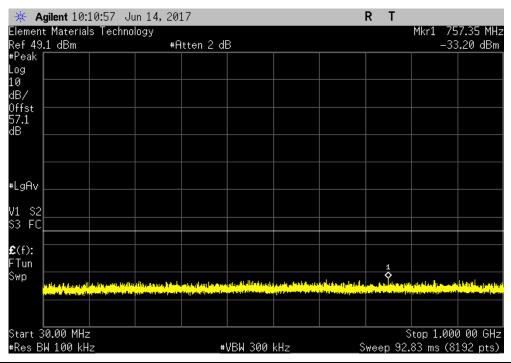


Antenna Port 1, High Channel LTE5, 2687.5 MHz

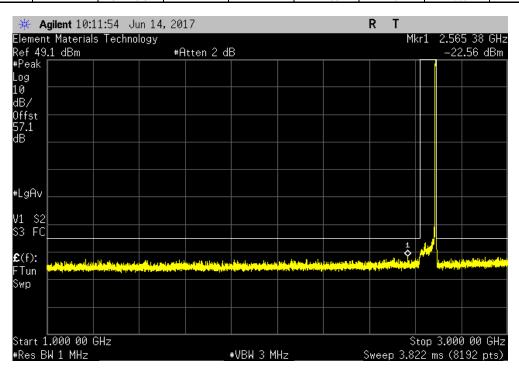
Frequency
Range
(dBm) ≤ (dBm) Result

30 MHz - 1 GHz

-33.2
-16
Pass



	Antenna Port 1, High Char	nnel LTE5, 2687.5 MHz		
Freq	uency	Max Value	Limit	
Ra	nge	(dBm)	≤ (dBm)	Result
1 GHz	- 3 GHz	-22.56	-16	Pass



Report No. KMWC0080 101/203



Antenna Port 1, High Channel LTE5, 2687.5 MHz

Frequency

Range

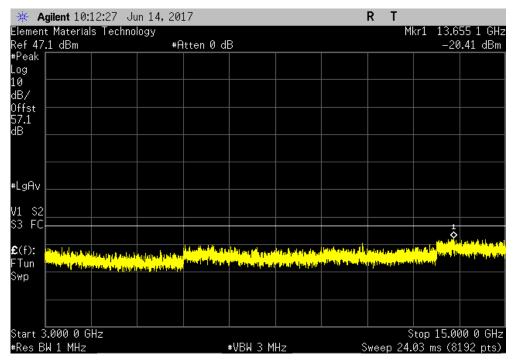
(dBm) ≤ (dBm) Result

3 GHz - 15 GHz

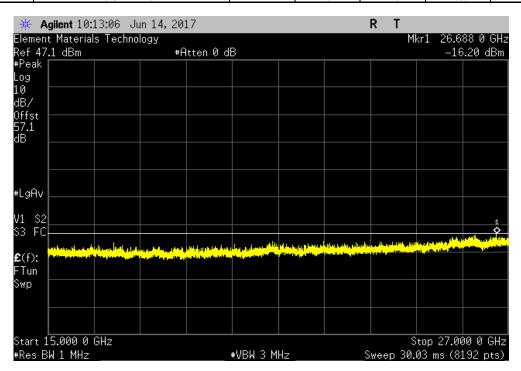
-20.41

-16

Pass



	Antenna Port 1, High Channel	TE5, 2687.5 MHz		
Frequency	/	Max Value	Limit	
Range		(dBm)	≤ (dBm)	Result
15 GHz - 27 G	GHz	-16.2	-16	Pass



Report No. KMWC0080 102/203

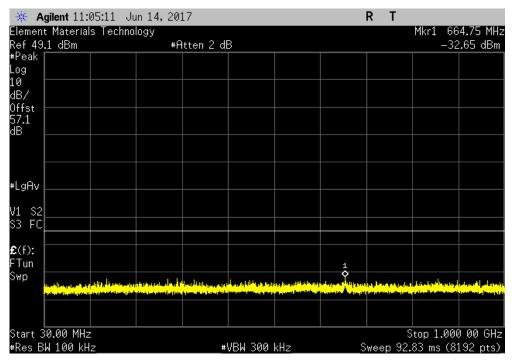


Antenna Port 1, Low Channel LTE10, 2625 MHz

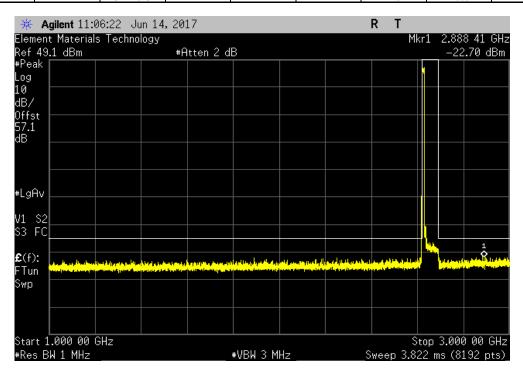
Frequency
Range
(dBm) ≤ (dBm) Result

30 MHz - 1 GHz

-32.65
-16
Pass



Antenna Port	1, Low Channel LTE10, 2625 MHz		
Frequency	Max Value	Limit	
Range	(dBm)	≤ (dBm)	Result
1 GHz - 3 GHz	-22.7	-16	Pass



Report No. KMWC0080 103/203



Antenna Port 1, Low Channel LTE10, 2625 MHz

Frequency

Range

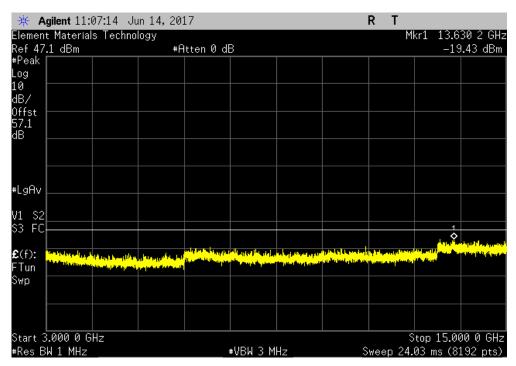
(dBm) ≤ (dBm) Result

3 GHz - 15 GHz

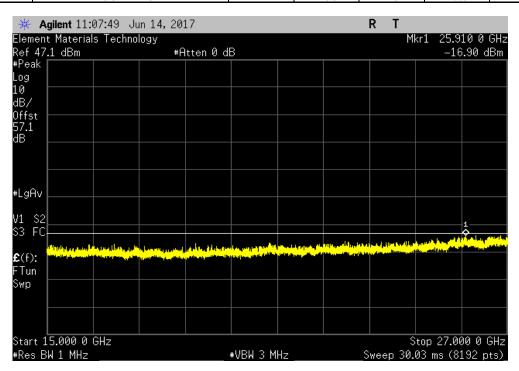
3 GHz - 15 GHz

-19.44
-16

Pass



	Antenna Port 1, Low Channel	_TE10, 2625 MHz		
Frequency		Max Value	Limit	
Range		(dBm)	≤ (dBm)	Result
15 GHz - 27 GHz	:	-16.9	-16	Pass



Report No. KMWC0080 104/203

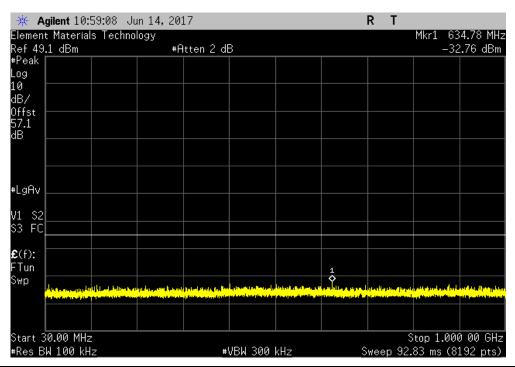


Antenna Port 1, Mid Channel LTE10, 2655 MHz

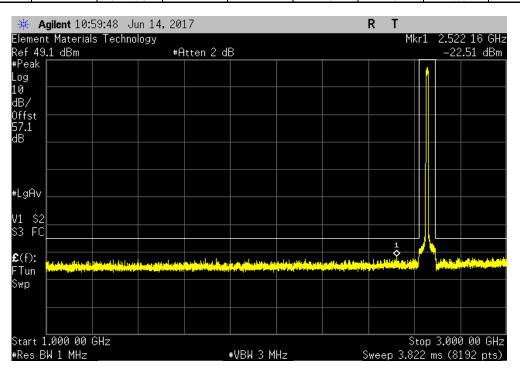
Frequency
Range
(dBm) ≤ (dBm) Result

30 MHz - 1 GHz

-32.76
-16
Pass

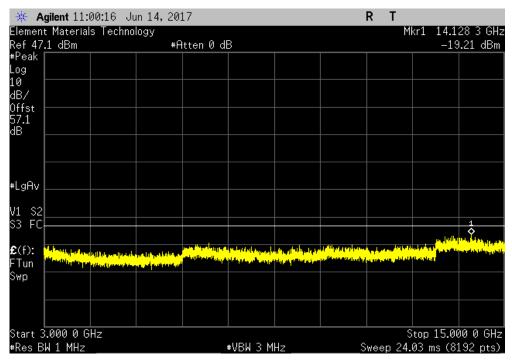


	Antenna Port 1, Mid	Channel LTE10, 2655 MHz		
Fre	quency	Max Value	Limit	
R	ange	(dBm)	≤ (dBm)	Result
1 GH	z - 3 GHz	-22.51	-16	Pass

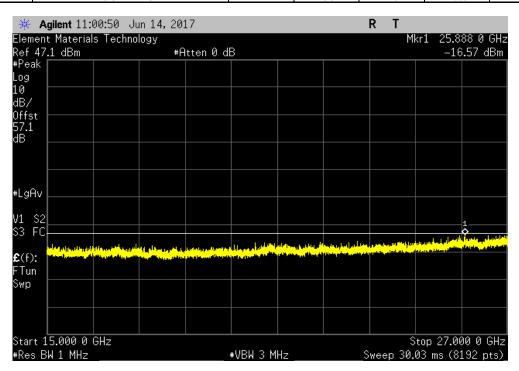


Report No. KMWC0080 105/203





	Antenna Port 1, Mid Channel I	_TE10, 2655 MHz		
Frequency		Max Value	Limit	
Range		(dBm)	≤ (dBm)	Result
15 GHz - 27 GH	-lz	-16.57	-16	Pass



Report No. KMWC0080 106/203

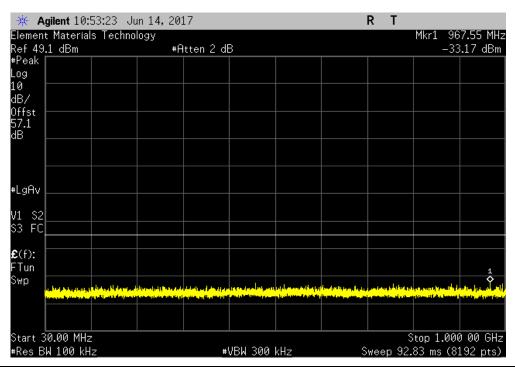


Antenna Port 1, High Channel LTE10, 2685 MHz

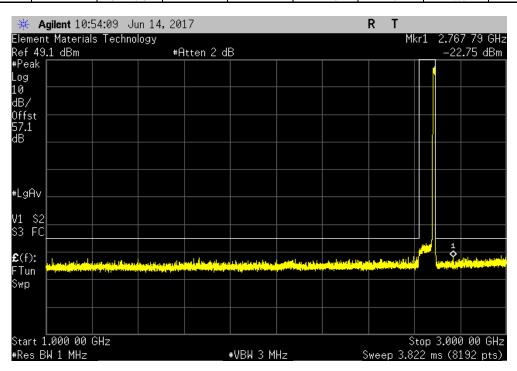
Frequency
Range
(dBm) ≤ (dBm) Result

30 MHz - 1 GHz

-33.17
-16
Pass



	Antenna Port 1, High Channel LTE1	0, 2685 MHz		
Frequency		Max Value	Limit	
Range		(dBm)	≤ (dBm)	Result
1 GHz - 3 GHz		-22.75	-16	Pass



Report No. KMWC0080 107/203



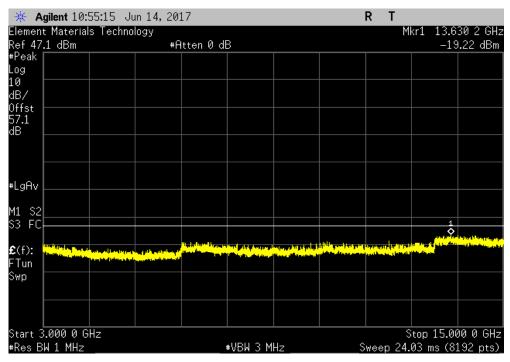
Antenna Port 1, High Channel LTE10, 2685 MHz

Frequency
Range
(dBm) ≤ (dBm) Result

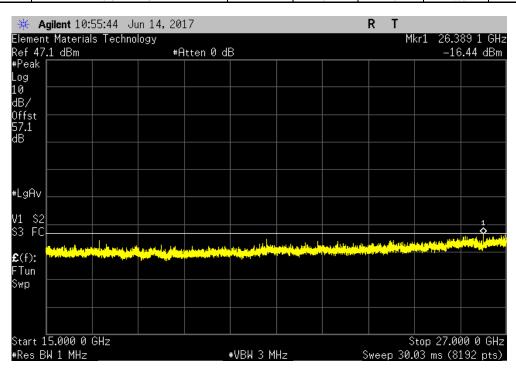
3 GHz - 15 GHz

-19.22
-16

Pass



	Antenna Port 1, F	High Channel LT	E10, 2685 MHz		
Fre	quency		Max Value	Limit	
F	Range		(dBm)	≤ (dBm)	Result
15 GH	lz - 27 GHz		-16.44	-16	Pass



Report No. KMWC0080 108/203

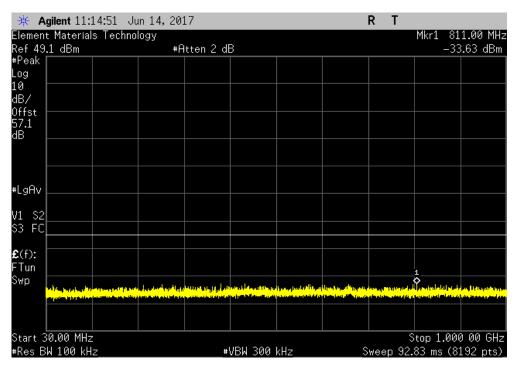


Antenna Port 1, Low Channel LTE20, 2630 MHz

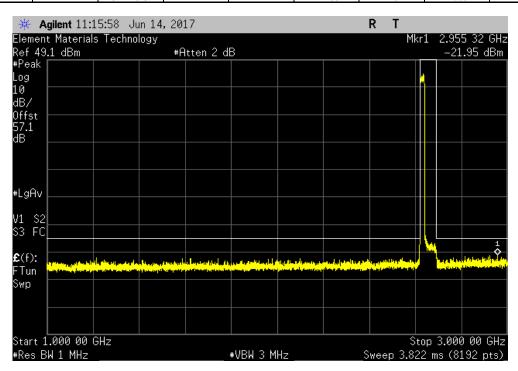
Frequency
Range
(dBm) ≤ (dBm) Result

30 MHz - 1 GHz

-33.64
-16
Pass



Antenna Port 1	, Low Channel LTE20, 2630 MHz		
Frequency	Max Value	Limit	
Range	(dBm)	≤ (dBm)	Result
1 GHz - 3 GHz	-21.95	-16	Pass



Report No. KMWC0080 109/203

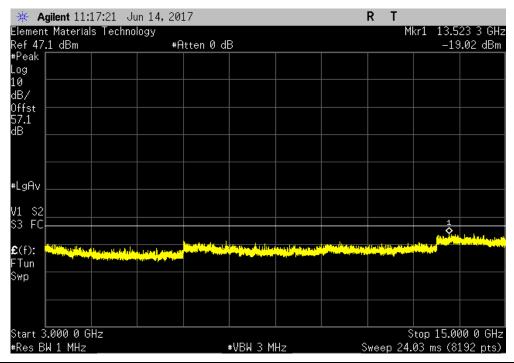


Antenna Port 1, Low Channel LTE20, 2630 MHz

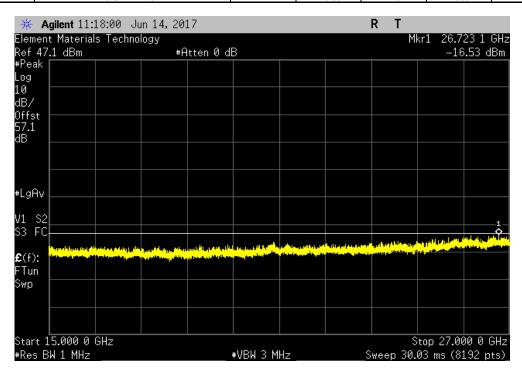
Frequency
Range
(dBm) ≤ (dBm) Result

3 GHz - 15 GHz

-19.02
-16
Pass



	Antenna Port 1, Low Channel L	TE20, 2630 MHz		
Frequency		Max Value	Limit	
Range		(dBm)	≤ (dBm)	Result
15 GHz - 27 GHz		-16.53	-16	Pass



Report No. KMWC0080 110/203

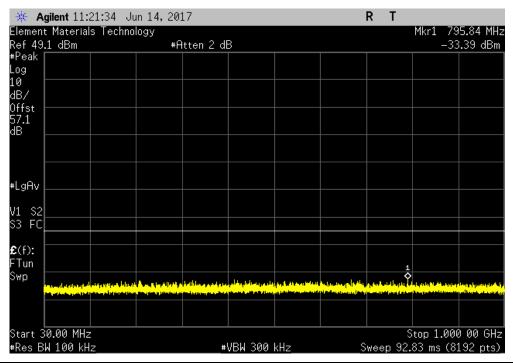


Antenna Port 1, Mid Channel LTE20, 2655 MHz

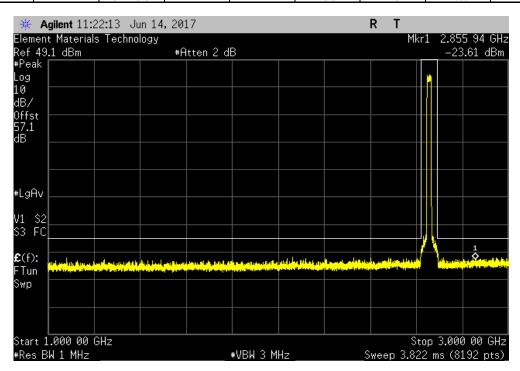
Frequency
Range
(dBm) ≤ (dBm) Result

30 MHz - 1 GHz

-33.39
-16
Pass



Anten	na Port 1, Mid Channel LTE20, 2655 MHz		
Frequency	Max Value	Limit	
Range	(dBm)	≤ (dBm)	Result
1 GHz - 3 GHz	-23.61	-16	Pass



Report No. KMWC0080 111/203

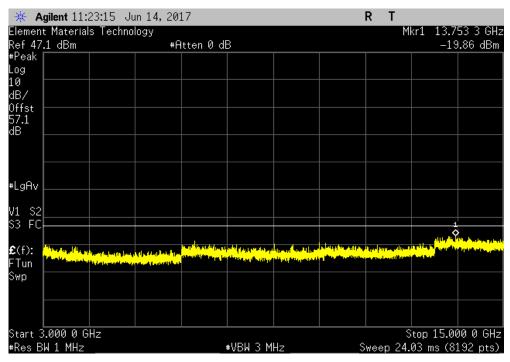


Antenna Port 1, Mid Channel LTE20, 2655 MHz

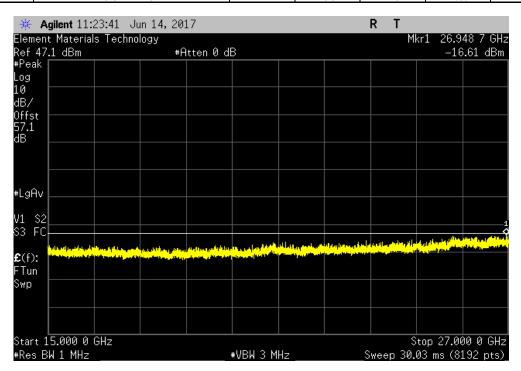
Frequency
Range
(dBm) ≤ (dBm) Result

3 GHz - 15 GHz

-19.86
-16
Pass



	Antenna Port 1, Mid Channel	LTE20, 2655 MHz		
Frequency		Max Value	Limit	
Range		(dBm)	≤ (dBm)	Result
15 GHz - 27 GHz		-16.61	-16	Pass



Report No. KMWC0080 112/203

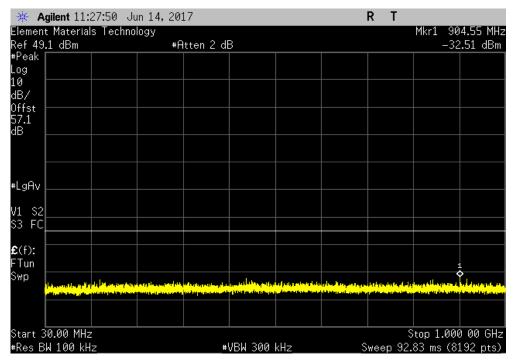


Antenna Port 1, High Channel LTE20, 2680 MHz

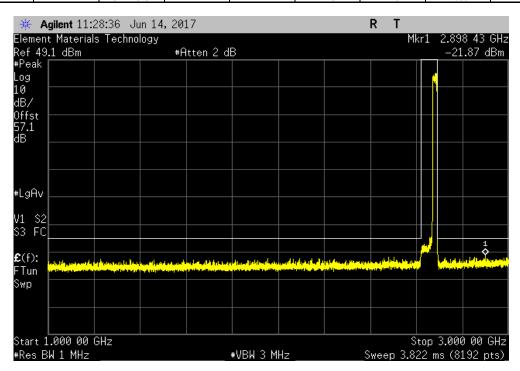
Frequency
Range
(dBm) ≤ (dBm) Result

30 MHz - 1 GHz

-32.51
-16
Pass



Antenna Port 1	, High Channel LTE20, 2680 MHz		
Frequency	Max Value	Limit	
Range	(dBm)	≤ (dBm)	Result
1 GHz - 3 GHz	-21.87	-16	Pass



Report No. KMWC0080 113/203



Antenna Port 1, High Channel LTE20, 2680 MHz

Frequency

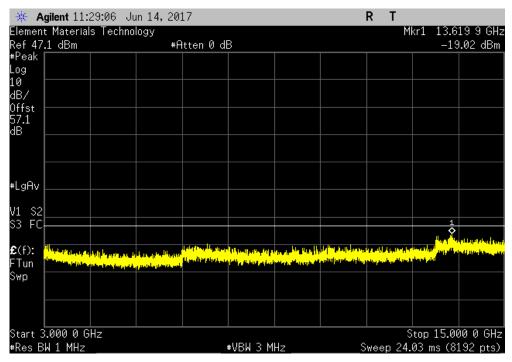
Range

(dBm) ≤ (dBm) Result

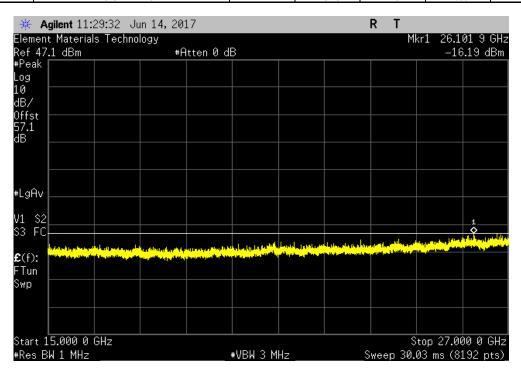
3 GHz - 15 GHz

3 GHz - 15 GHz

-19.03 -16 Pass



	Antenna Port 1, High Channel I	TE20, 2680 MHz		
Frequency		Max Value	Limit	
Range		(dBm)	≤ (dBm)	Result
15 GHz - 27 GHz	z .	-16.19	-16	Pass



Report No. KMWC0080 114/203

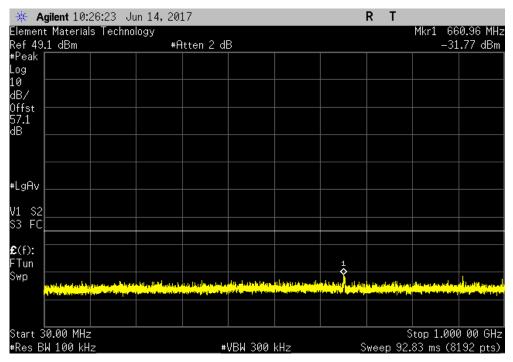


Antenna Port 2, Low Channel LTE5, 2622.5 MHz

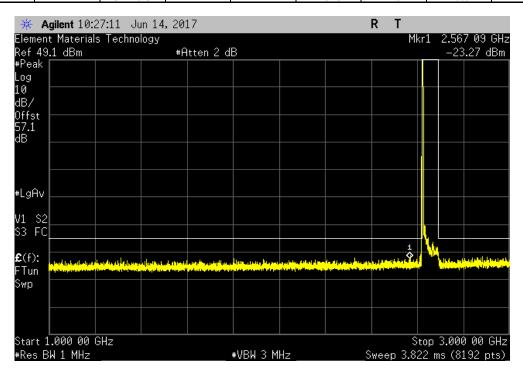
Frequency
Range
(dBm) ≤ (dBm) Result

30 MHz - 1 GHz

-31.77
-16
Pass



Antenna Port	2, Low Channel LTE5, 2622.5 MHz		
Frequency	Max Value	Limit	
Range	(dBm)	≤ (dBm)	Result
1 GHz - 3 GHz	-23.28	-16	Pass



Report No. KMWC0080 115/203



Antenna Port 2, Low Channel LTE5, 2622.5 MHz

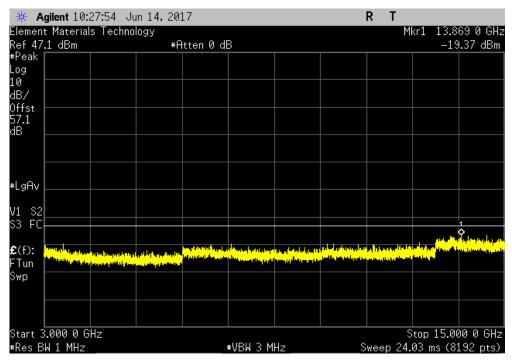
Frequency
Range
(dBm) ≤ (dBm) Result

3 GHz - 15 GHz

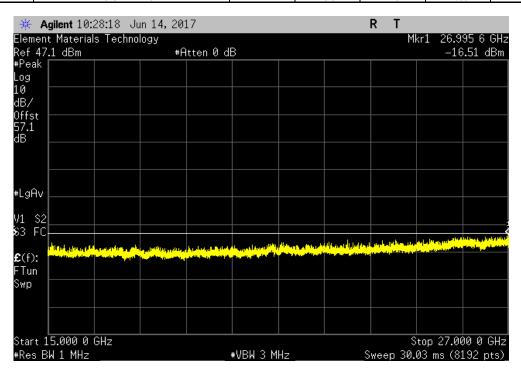
3 GHz - 15 GHz

-19.37 -16

Pass



	Antenna Port 2, Low Channel L	TE5, 2622.5 MHz		
Frequency		Max Value	Limit	
Range		(dBm)	≤ (dBm)	Result
15 GHz - 27 GHz	z	-16.51	-16	Pass



Report No. KMWC0080 116/203

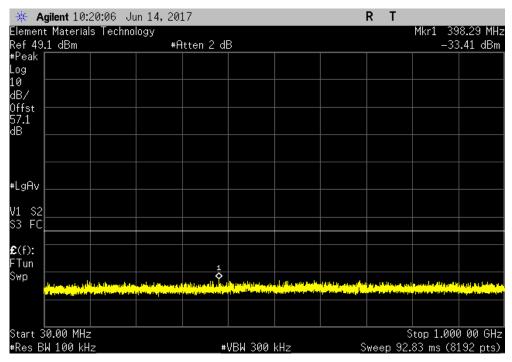


Antenna Port 2, Mid Channel LTE5, 2655 MHz

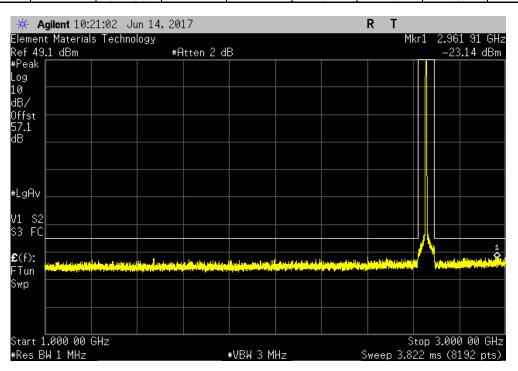
Frequency
Range
(dBm) ≤ (dBm) Result

30 MHz - 1 GHz

-33.41
-16
Pass



Antenna Port	2, Mid Channel LTE5, 2655 MHz		
Frequency	Max Value	Limit	
Range	(dBm)	≤ (dBm)	Result
1 GHz - 3 GHz	-23.14	-16	Pass



Report No. KMWC0080 117/203

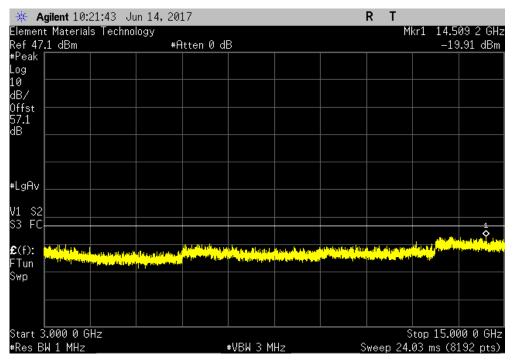


Antenna Port 2, Mid Channel LTE5, 2655 MHz

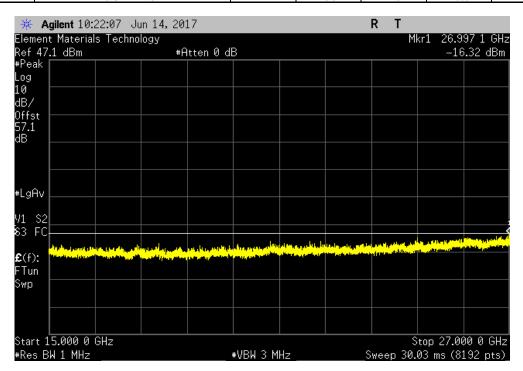
Frequency
Range
(dBm) ≤ (dBm) Result

3 GHz - 15 GHz

-19.91
-16
Pass



	Antenna Port 2, Mid Channel	LTE5, 2655 MHz		
Frequency		Max Value	Limit	
Range		(dBm)	≤ (dBm)	Result
15 GHz - 27 GHz		-16.32	-16	Pass



Report No. KMWC0080 118/203

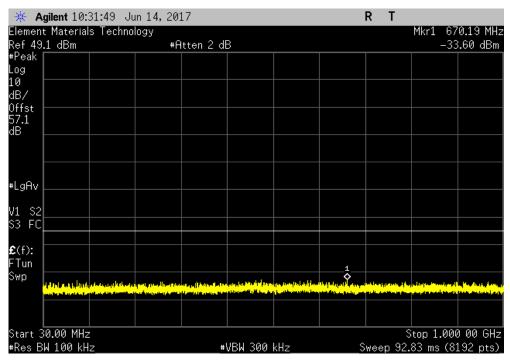


Antenna Port 2, High Channel LTE5, 2687.5 MHz

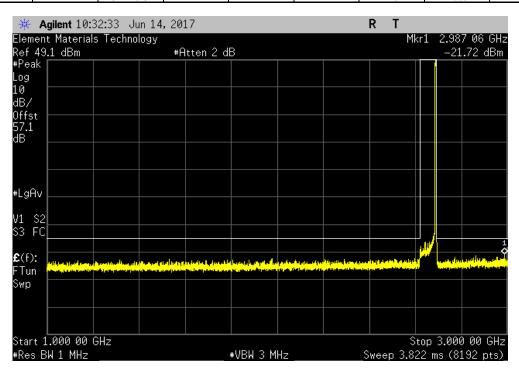
Frequency
Range
(dBm) ≤ (dBm) Result

30 MHz - 1 GHz

-33.6
-16
Pass



I	Antenna Port 2, I	High Channel LTE5, 2687.5 MHz		
I	Frequency	Max Value	Limit	
ı	Range	(dBm)	≤ (dBm)	Result
ı	1 GHz - 3 GHz	-21.72	-16	Pass



Report No. KMWC0080 119/203



Antenna Port 2, High Channel LTE5, 2687.5 MHz

Frequency

Range

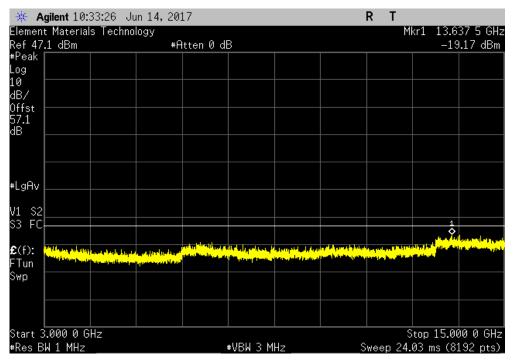
(dBm)

3 GHz - 15 GHz

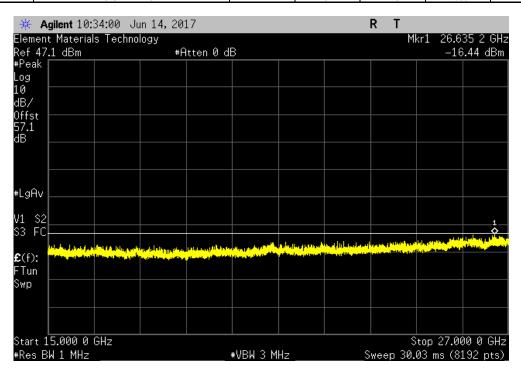
-19.17

-16

Pass



	Antenna Port 2, High Channel L	ΓΕ5, 2687.5 MHz		
Frequency		Max Value	Limit	
Range		(dBm)	≤ (dBm)	Result
15 GHz - 27 GH	z	-16.44	-16	Pass



Report No. KMWC0080 120/203

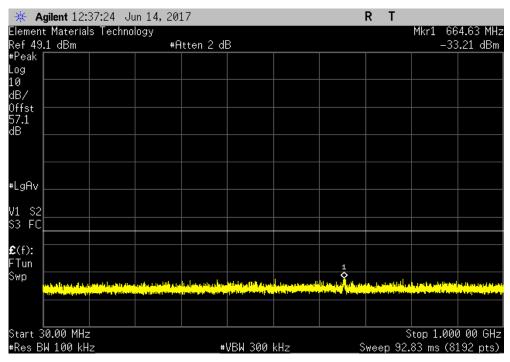


Antenna Port 2, Low Channel LTE10, 2625 MHz

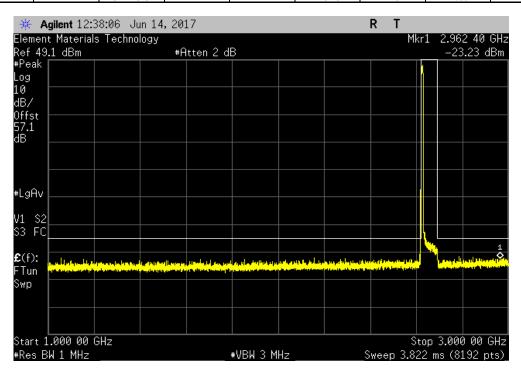
Frequency
Range
(dBm) ≤ (dBm) Result

30 MHz - 1 GHz

-33.21
-16
Pass



Antenna Port 2, Low Channel LTE10, 2625 MHz				
	Frequency	Max Value	Limit	
	Range	(dBm)	≤ (dBm)	Result
	1 GHz - 3 GHz	-23.23	-16	Pass



Report No. KMWC0080 121/203



Antenna Port 2, Low Channel LTE10, 2625 MHz

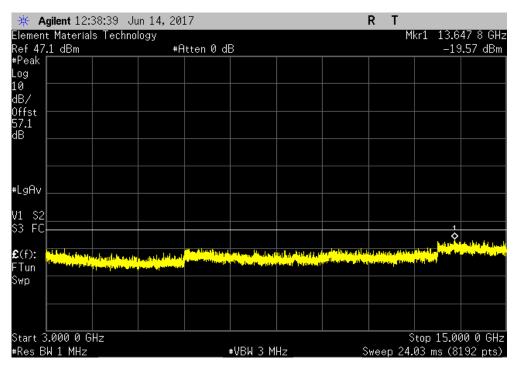
Frequency
Range
(dBm) ≤ (dBm) Result

3 GHz - 15 GHz

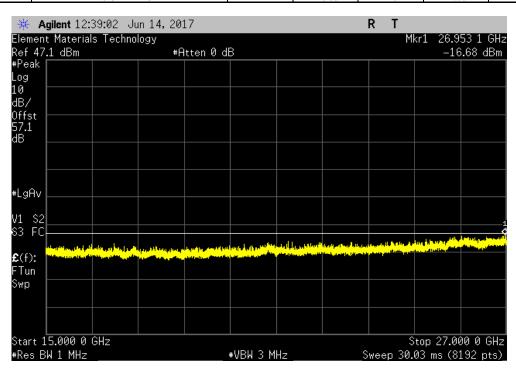
3 GHz - 15 GHz

-19.57
-16

Pass



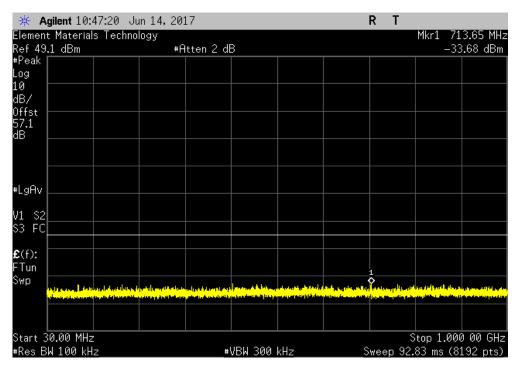
Antenna Port 2, Low Channel LTE10, 2625 MHz					
Frequency		Max Value	Limit		
Range		(dBm)	≤ (dBm)	Result	
15 GHz - 27 GHz	:	-16.68	-16	Pass	



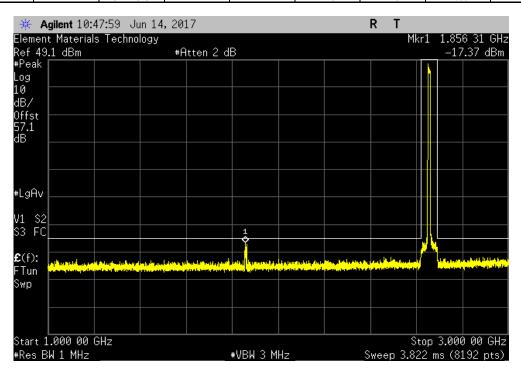
Report No. KMWC0080 122/203



Ant	tenna Port 2, Mid C	hannel LTE	10, 2655 MHz			
Frequency			Max Value	Limit		
Range			(dBm)	≤ (dBm)	Result	
30 MHz - 1 GHz			-33.68	-16	Pass	



Antenna Port	2, Mid Channel LTE10, 2655 MHz		
Frequency	Max Value	Limit	
Range	(dBm)	≤ (dBm)	Result
1 GHz - 3 GHz	-17.37	-16	Pass



Report No. KMWC0080 123/203

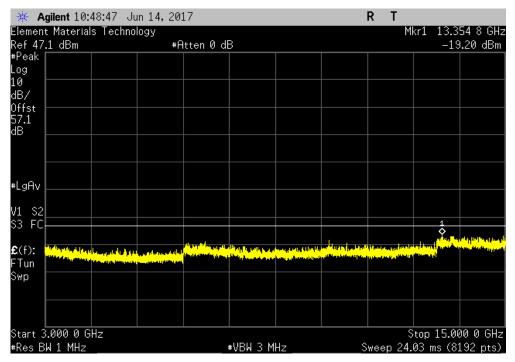


Antenna Port 2, Mid Channel LTE10, 2655 MHz

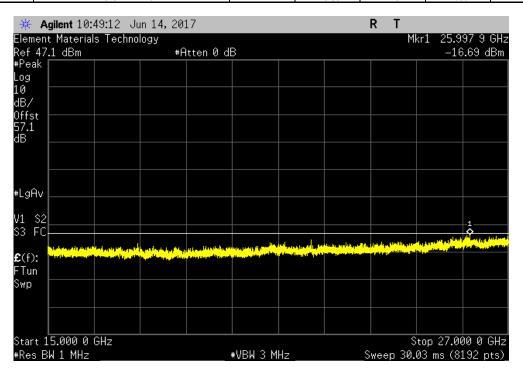
Frequency
Range
(dBm) ≤ (dBm) Result

3 GHz - 15 GHz

-19.2
-16
Pass



Antenna Port 2, Mid Channel LTE10, 2655 MHz				
Frequency		Max Value	Limit	
Range		(dBm)	≤ (dBm)	Result
15 GHz - 27 GHz		-16.69	-16	Pass



Report No. KMWC0080 124/203

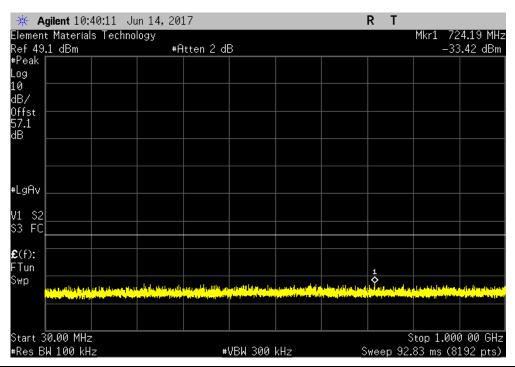


Antenna Port 2, High Channel LTE10, 2685 MHz

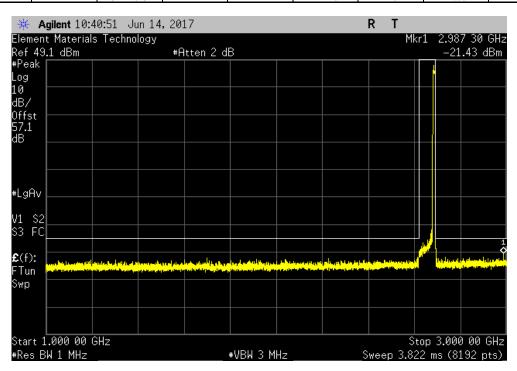
Frequency
Range
(dBm) ≤ (dBm) Result

30 MHz - 1 GHz

-33.42
-16
Pass



Antenna Port 2, High Channel LTE10, 2685 MHz					
Freq	uency	Max Value	Limit		
Ra	nge	(dBm)	≤ (dBm)	Result	
1 GHz	- 3 GHz	-21.43	-16	Pass	



Report No. KMWC0080 125/203



Antenna Port 2, High Channel LTE10, 2685 MHz

Frequency

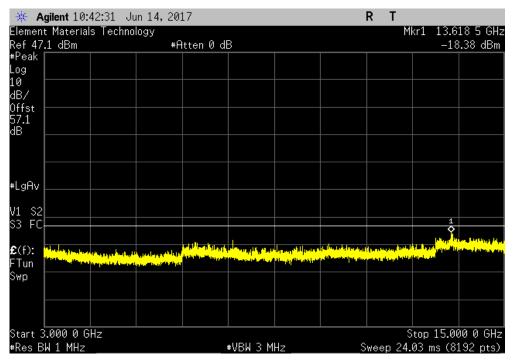
Range

(dBm) ≤ (dBm) Result

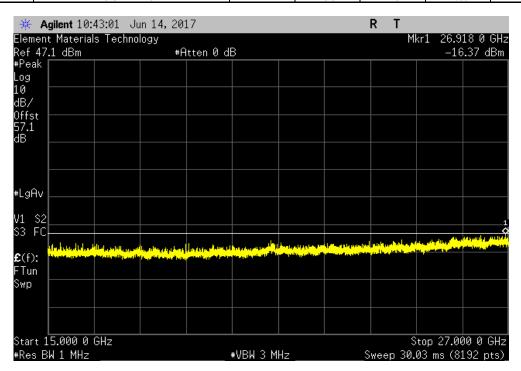
3 GHz - 15 GHz

-18.38
-16

Pass



Antenna Port 2, High Channel LTE10, 2685 MHz					
Frequency	Max Value	Limit			
Range	(dBm)	≤ (dBm)	Result		
15 GHz - 27 GHz	-16.37	-16	Pass		



Report No. KMWC0080 126/203

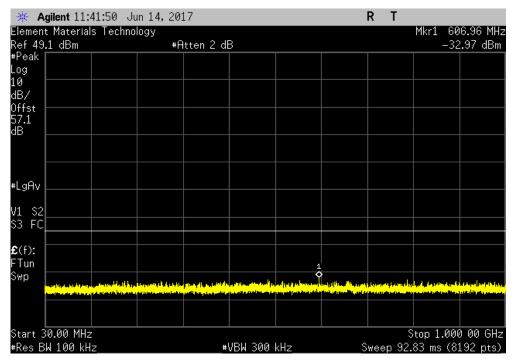


Antenna Port 2, Low Channel LTE20, 2630 MHz

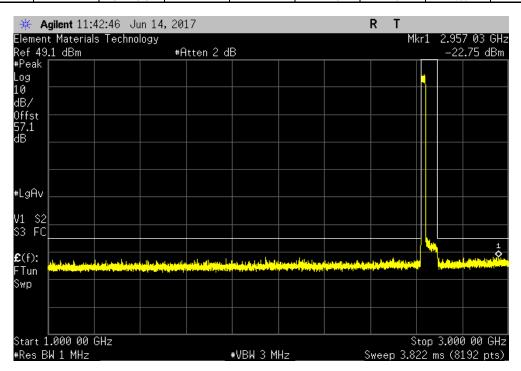
Frequency
Range
(dBm) ≤ (dBm) Result

30 MHz - 1 GHz

-32.97
-16
Pass



Antenna Port 2	, Low Channel LTE20, 2630 MHz		
Frequency	Max Value	Limit	
 Range	(dBm)	≤ (dBm)	Result
1 GHz - 3 GHz	-22.75	-16	Pass



Report No. KMWC0080 127/203

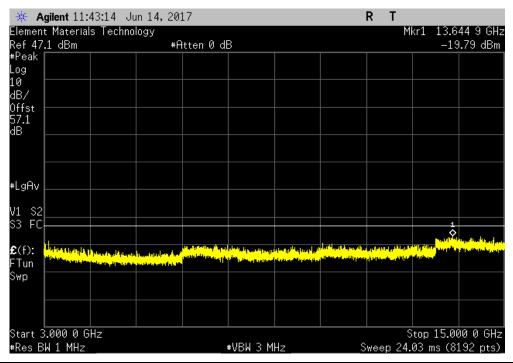


Antenna Port 2, Low Channel LTE20, 2630 MHz

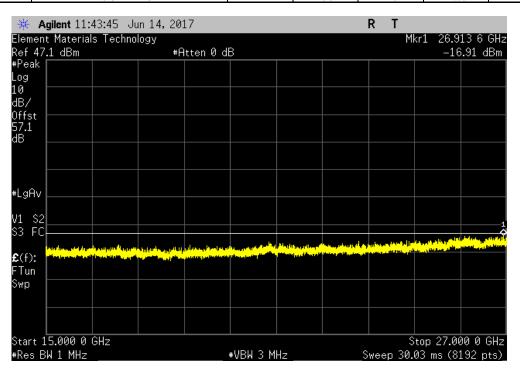
Frequency
Range
(dBm) ≤ (dBm) Result

3 GHz - 15 GHz

-19.79
-16
Pass



Antenna Port 2, Low Channel LTE20, 2630 MHz					
Frequency		Max Value	Limit		
Range		(dBm)	≤ (dBm)	Result	
15 GHz - 27 GHz		-16.91	-16	Pass	



Report No. KMWC0080 128/203

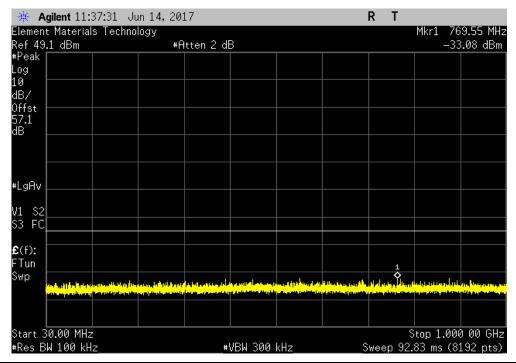


Antenna Port 2, Mid Channel LTE20, 2655 MHz

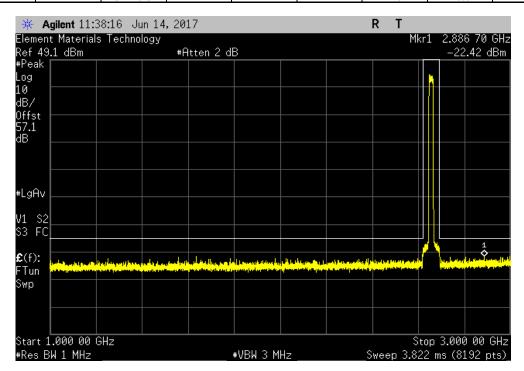
Frequency
Range
(dBm) ≤ (dBm) Result

30 MHz - 1 GHz

-33.08
-16
Pass



Antenna Port 2, Mid Channel LTE20, 2655 MHz					
Frequency	Max Value	Limit			
Range	(dBm)	≤ (dBm)	Result		
1 GHz - 3 GHz	-22.42	-16	Pass		



Report No. KMWC0080 129/203

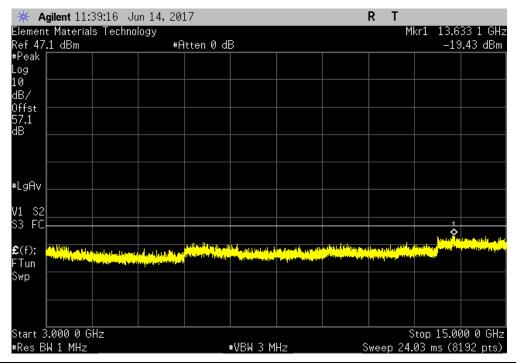


Antenna Port 2, Mid Channel LTE20, 2655 MHz

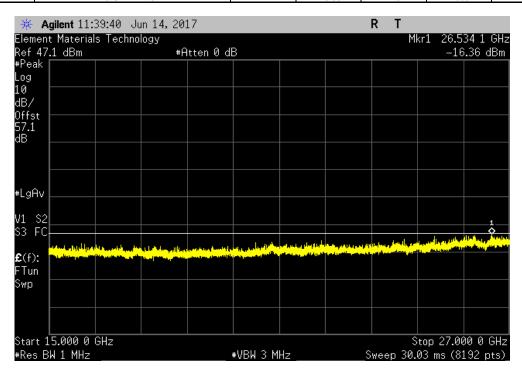
Frequency
Range
(dBm) ≤ (dBm) Result

3 GHz - 15 GHz

-19.43
-16
Pass



Antenna Port 2, Mid Channel LTE20, 2655 MHz					
Frequency		Max Value	Limit		
Range		(dBm)	≤ (dBm)	Result	
15 GHz - 27 GHz		-16.36	-16	Pass	



Report No. KMWC0080 130/203

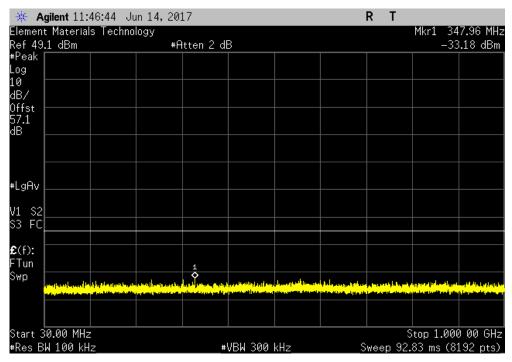


Antenna Port 2, High Channel LTE20, 2680 MHz

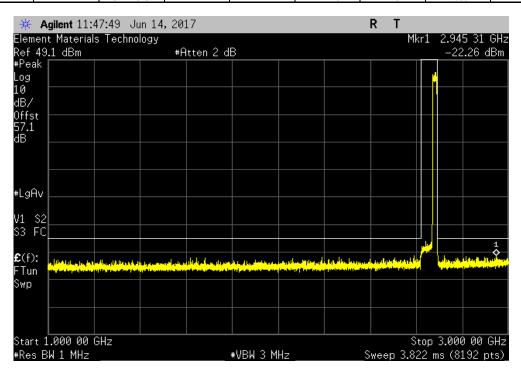
Frequency
Range
(dBm) ≤ (dBm) Result

30 MHz - 1 GHz

-33.18
-16
Pass



Antenna Port	2, High Channel LTE	20, 2680 MHz		
Frequency		Max Value	Limit	
 Range		(dBm)	≤ (dBm)	Result
1 GHz - 3 GHz		-22.26	-16	Pass



Report No. KMWC0080 131/203



Antenna Port 2, High Channel LTE20, 2680 MHz

Frequency

Range

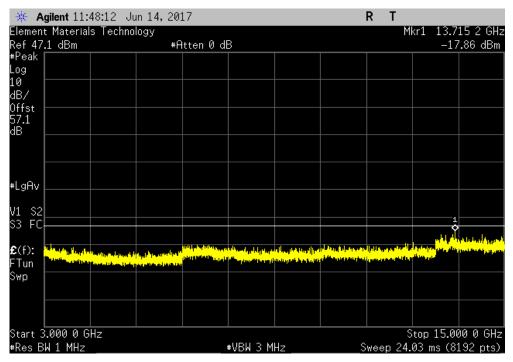
(dBm) ≤ (dBm) Result

3 GHz - 15 GHz

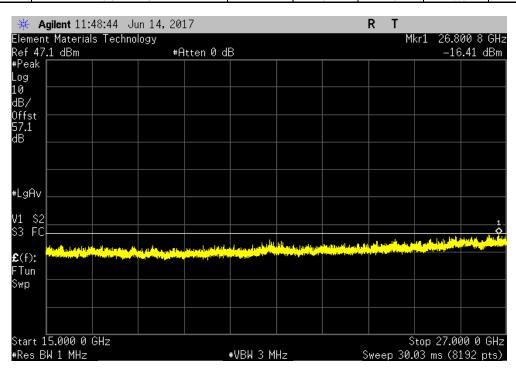
3 GHz - 15 GHz

-17.86
-16

Pass



Antenna Port 2, High Channel LTE20, 2680 MHz					
Frequency		Max Value	Limit		
Range		(dBm)	≤ (dBm)	Result	
15 GHz - 27 GHz		-16.41	-16	Pass	



Report No. KMWC0080 132/203



XMit 2017.02.08

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Power Supply - DC	Hewlett Packard	6574A	TPX	NCR	NCR
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	2/5/2018
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Block - DC	Fairview Microwave	SD3379	AMV	1/11/2017	1/11/2018
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	11/2/2016	11/2/2017

CLIENT PROVIDED EQUIPMENT

Description	Manufacturer	Model	Last Cal.	Cal. Due
High Power Attenuator - 30dB	Aeroflex/Weinschel	53-30-43	NCR	NCR
Attenuator - 20dB	N/A	N/A	NCR	NCR
Power Divider	Fairview Microwave	MP8748-2	NCR	NCR
50Ohm Terminator	Aeroflex/Weinschel	1455-4	NCR	NCR
High Power Terminator	Telcon	KTMO400800060	NCR	NCR

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The spurious RF conducted emissions at the edges of the authorized bands were measured with the EUT set to low and high transmit frequencies in the available band. The channels closest to the band edges were selected. The EUT was transmitting at the data rate(s) listed in the datasheet.

The spectrum was scanned below the lower band edge and above the higher band edge. The resolution bandwidth was set to approximately 1% of the measured emissions bandwidth within the first 1 MHz block adjacent to the transmit band. An average RMS detector was used to match the method used during Output Power. The screen capture shows the margin between the measured value and the limit at the band edge.

Report No. KMWC0080 133/203



	CWS-3050-07					Work Order:		
	See Configuration						06/14/17	
	Parallel Wireless Inc.					Temperature:		
	Daniel Kim						46.4% RH	
Project:					Bare	ometric Pres.:		
	Salvador Solorzano and	Johnny Candelas		Power: 48VDC		Job Site:	OC13	
TEST SPECIFICAT	IONS			Test Method				
FCC 27:2017				ANSI/TIA/EIA-603-D-2010				
COMMENTS								
Power Level Settin	g 40W. Reference Level O	ffset: DC Block + 30dB Atte	nuator + 20dB Atte	nuator + Power Divider + Cable Loss = 5	7.1dB total.			
The -13dBm specif	ication limit has been low	ered by 3dB to account for	the 2 port MIMO co	nfiguration. Correction factor based upo	on the formula of 10*log(# of ar	ntennas) Usin	g -16dBm	
·			-	<u> </u>			=	
DEVIATIONS FROM	M TEST STANDARD							
None								
			-	11/2				
None Configuration #	1		fe	N. Colle				
	1	Signature	fe					
	1	Signature	for	Frequency		Max Value	Limit	
Configuration #	1	Signature	fr			Max Value (dBm)	Limit ≤ (dBm)	Result
	1		fr	Frequency Range		(dBm)	≤ (dBm)	
Configuration #	1 Low Channel LTE5, 2622.5	5 MHz	- fr	Frequency Range 2.615 GHz - 2.625 GHz		(dBm) -27.87	≤ (dBm) -16	Pass
Configuration #	High Channel LTE5, 2687.	5 MHz 5 MHz	- fr	Frequency Range 2.615 GHz - 2.625 GHz 2.685 GHz - 2.695 GHz		-27.87 -27.91	≤ (dBm) -16 -16	Pass Pass
Configuration #	High Channel LTE5, 2687. Low Channel LTE10, 2625	5 MHz 5 MHz MHz	- fr	Frequency Range 2.615 GHz - 2.625 GHz 2.685 GHz - 2.695 GHz 2.61 GHz - 2.63 GHz		-27.87 -27.91 -30.78	≤ (dBm) -16 -16 -16	Pass Pass Pass
Configuration #	High Channel LTE5, 2687. Low Channel LTE10, 2625 High Channel LTE10, 2685	5 MHz 5 MHz MHz 5 MHz 5 MHz	- Je	Frequency Range 2.615 GHz - 2.625 GHz 2.685 GHz - 2.695 GHz 2.61 GHz - 2.63 GHz 2.68 GHz - 2.7 GHz		-27.87 -27.91 -30.78 -31.29	≤ (dBm) -16 -16 -16 -16 -16	Pass Pass Pass Pass
Configuration #	High Channel LTE5, 2687. Low Channel LTE10, 2625 High Channel LTE10, 2685 Low Channel LTE20, 2630	5 MHz 5 MHz MHz 5 MHz MHz MHz	- Ju	Frequency Range 2.615 GHz - 2.625 GHz 2.685 GHz - 2.695 GHz 2.61 GHz - 2.63 GHz 2.68 GHz - 2.7 GHz 2.6 GHz - 2.64 GHz		-27.87 -27.91 -30.78 -31.29 -31.81	≤ (dBm) -16 -16 -16 -16 -16 -16	Pass Pass Pass Pass Pass
Configuration # Antenna Port 1	High Channel LTE5, 2687. Low Channel LTE10, 2625 High Channel LTE10, 2685	5 MHz 5 MHz MHz 5 MHz MHz MHz	- Ju	Frequency Range 2.615 GHz - 2.625 GHz 2.685 GHz - 2.695 GHz 2.61 GHz - 2.63 GHz 2.68 GHz - 2.7 GHz		-27.87 -27.91 -30.78 -31.29	≤ (dBm) -16 -16 -16 -16 -16	Pass Pass Pass Pass
Configuration #	High Channel LTE5, 2687. Low Channel LTE10, 2625 High Channel LTE10, 2682 Low Channel LTE20, 2630 High Channel LTE20, 2680	5 MHz 5 MHz MHz 5 MHz MHz U MHz	- Fr	Frequency Range 2.615 GHz - 2.625 GHz 2.685 GHz - 2.695 GHz 2.61 GHz - 2.63 GHz 2.68 GHz - 2.7 GHz 2.6 GHz - 2.6 GHz 2.67 GHz - 2.7 GHz		-27.87 -27.91 -30.78 -31.29 -31.81 -31.32	≤ (dBm) -16 -16 -16 -16 -16 -16 -16	Pass Pass Pass Pass Pass Pass
Configuration #	High Channel LTE5, 2687. Low Channel LTE10, 2625 High Channel LTE10, 2688 Low Channel LTE20, 2630 High Channel LTE20, 2680 Low Channel LTE5, 2622.8	5 MHz 5 MHz MHz MHz MHz MHz MHz 5 MHz	- Fr	Frequency Range 2.615 GHz - 2.625 GHz 2.685 GHz - 2.695 GHz 2.61 GHz - 2.63 GHz 2.68 GHz - 2.7 GHz 2.6 GHz - 2.7 GHz 2.6 GHz - 2.7 GHz 2.67 GHz - 2.71 GHz 2.615 GHz - 2.625 GHz		-27.87 -27.91 -30.78 -31.29 -31.81 -31.32	≤ (dBm) -16 -16 -16 -16 -16 -16 -16 -16 -16	Pass Pass Pass Pass Pass Pass Pass
Configuration #	High Channel LTE5, 2687. Low Channel LTE10, 2625 High Channel LTE10, 2686 Low Channel LTE20, 2630 High Channel LTE20, 2680 Low Channel LTE5, 2622.9 High Channel LTE5, 2687.	5 MHz 5 MHz MHz 5 MHz MHz MHz 5 MHz 5 MHz	- Fr	Frequency Range 2.615 GHz - 2.625 GHz 2.685 GHz - 2.695 GHz 2.61 GHz - 2.63 GHz 2.68 GHz - 2.7 GHz 2.6 GHz - 2.7 GHz 2.6 GHz - 2.71 GHz 2.67 GHz - 2.71 GHz 2.615 GHz - 2.625 GHz 2.685 GHz - 2.695 GHz		-27.87 -27.91 -30.78 -31.29 -31.81 -31.32 -28.81 -28.36	≤ (dBm) -16 -16 -16 -16 -16 -16 -16 -16 -16 -1	Pass Pass Pass Pass Pass Pass Pass Pass
Configuration #	High Channel LTE5, 2687. Low Channel LTE10, 2625 High Channel LTE10, 2625 Low Channel LTE20, 2630 High Channel LTE20, 2680 Low Channel LTE5, 2682. High Channel LTE5, 2687. Low Channel LTE10, 2625	5 MHz 5 MHz MHz 5 MHz 5 MHz D MHz 5 MHz 5 MHz 5 MHz MHz	- Fr	Frequency Range 2.615 GHz - 2.625 GHz 2.685 GHz - 2.695 GHz 2.61 GHz - 2.63 GHz 2.68 GHz - 2.7 GHz 2.6 GHz - 2.64 GHz 2.67 GHz - 2.71 GHz 2.615 GHz - 2.625 GHz 2.685 GHz - 2.695 GHz 2.681 GHz - 2.695 GHz 2.61 GHz - 2.63		-27.87 -27.91 -30.78 -31.29 -31.81 -31.32	≤ (dBm) -16 -16 -16 -16 -16 -16 -16 -16 -16	Pass Pass Pass Pass Pass Pass Pass
Configuration #	High Channel LTE5, 2687. Low Channel LTE10, 2628 High Channel LTE10, 2688 Low Channel LTE20, 2680 High Channel LTE20, 2680 Low Channel LTE5, 2682. High Channel LTE5, 2687. Low Channel LTE10, 2628 High Channel LTE10, 2628	5 MHz 5 MHz MHz MHz MHz) MHz) MHz 5 MHz	- Fr	Frequency Range 2.615 GHz - 2.625 GHz 2.685 GHz - 2.695 GHz 2.61 GHz - 2.63 GHz 2.68 GHz - 2.7 GHz 2.6 GHz - 2.64 GHz 2.67 GHz - 2.71 GHz 2.615 GHz - 2.625 GHz 2.685 GHz - 2.695 GHz 2.61 GHz - 2.63 GHz		-27.87 -27.91 -30.78 -31.29 -31.81 -31.32 -28.81 -28.36	≤ (dBm) -16 -16 -16 -16 -16 -16 -16 -16 -16 -1	Pass Pass Pass Pass Pass Pass Pass Pass
Configuration #	High Channel LTE5, 2687. Low Channel LTE10, 2625 High Channel LTE10, 2625 Low Channel LTE20, 2630 High Channel LTE20, 2680 Low Channel LTE5, 2682. High Channel LTE5, 2687. Low Channel LTE10, 2625	5 MHz 5 MHz MHz MHz MHz) MHz) MHz 5 MHz	- Fr	Frequency Range 2.615 GHz - 2.625 GHz 2.685 GHz - 2.695 GHz 2.61 GHz - 2.63 GHz 2.68 GHz - 2.7 GHz 2.6 GHz - 2.64 GHz 2.67 GHz - 2.71 GHz 2.615 GHz - 2.625 GHz 2.685 GHz - 2.695 GHz 2.681 GHz - 2.695 GHz 2.61 GHz - 2.63		-27.87 -27.91 -30.78 -31.29 -31.81 -31.32 -28.81 -28.36 -30.91	≤ (dBm) -16 -16 -16 -16 -16 -16 -16 -16 -16 -1	Pass Pass Pass Pass Pass Pass Pass Pass

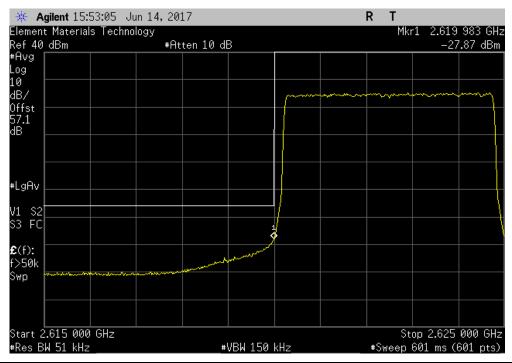
Report No. KMWC0080 134/203



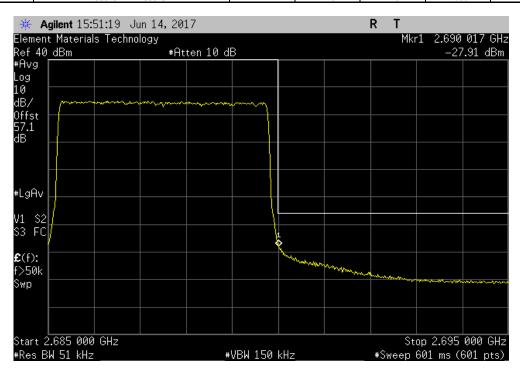
Antenna Port 1, Low Channel LTE5, 2622.5 MHz

Frequency
Range
(dBm) ≤ (dBm) Result

2.615 GHz - 2.625 GHz
-27.87 -16 Pass



Antenna Port 1, High Channel LTE5, 2687.5 MHz					
Frequency		Max Value	Limit		
Range		(dBm)	≤ (dBm)	Result	
2.685 GHz - 2.695 GHz		-27.91	-16	Pass	Ĩ



Report No. KMWC0080 135/203

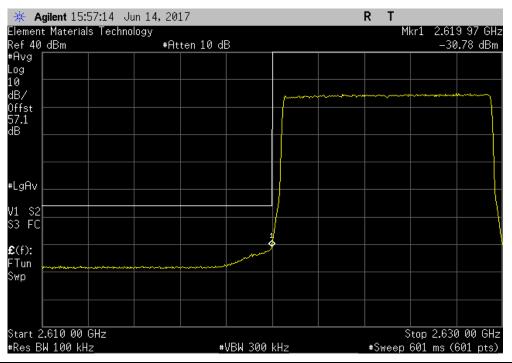


Antenna Port 1, Low Channel LTE10, 2625 MHz

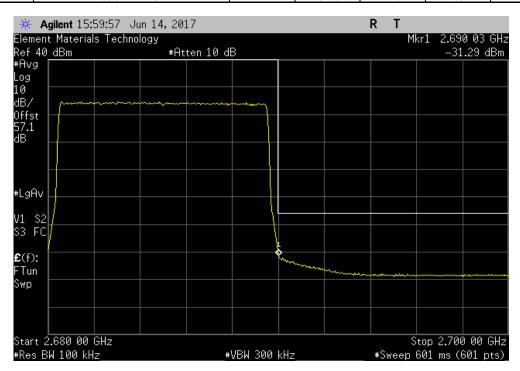
Frequency
Range
(dBm) ≤ (dBm) Result

2.61 GHz - 2.63 GHz

-30.78
-16
Pass



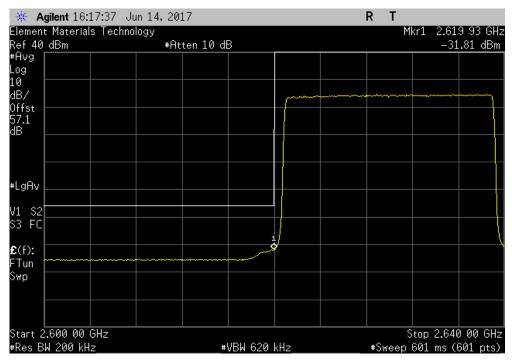
Antenna Port 1, High Channel LTE10, 2685 MHz						
Frequency	Max Value	Limit				
Range	(dBm)	≤ (dBm)	Result			
2.68 GHz - 2.7 GHz	-31.29	-16	Pass			



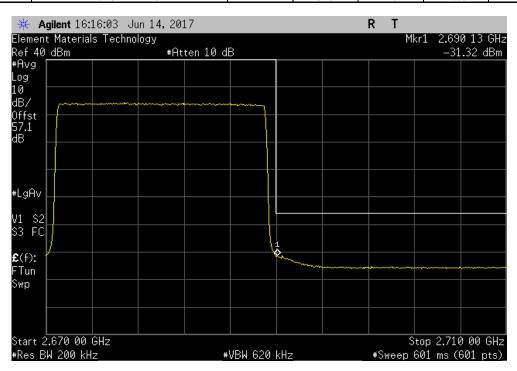
Report No. KMWC0080 136/203



	Antenna Port 1	Low Channel LTE20, 2630 Mi	-l ₂	
	, into inter our i	,		
	Frequency	Max Value	e Limit	
	Range	(dBm)	≤ (dBm)	Result
_		(==:::)	= (==:::)	
	2.6 GHz - 2.64 GHz	-31.81	-16	Pass



Antenna Port 1, High Channel LTE20, 2680 MHz					
Frequency		Max Value	Limit		
Range		(dBm)	≤ (dBm)	Result	
2.67 GHz - 2.71 GH	Hz	-31.32	-16	Pass	



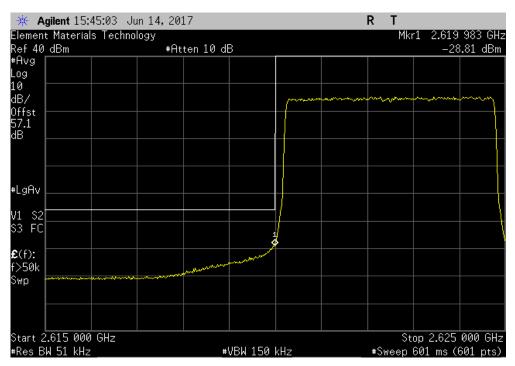
Report No. KMWC0080 137/203



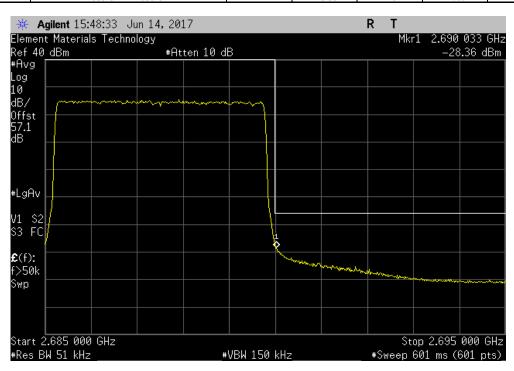
Antenna Port 2, Low Channel LTE5, 2622.5 MHz

Frequency
Range
(dBm) ≤ (dBm) Result

2.615 GHz - 2.625 GHz
-28.81 -16 Pass



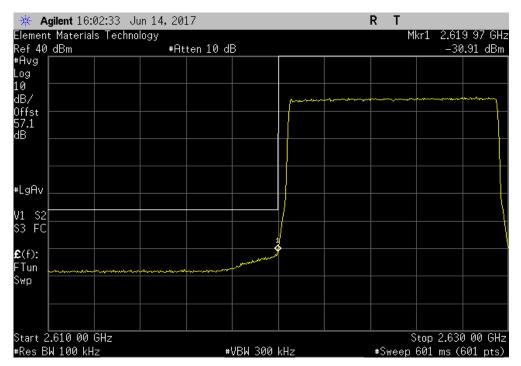
Antenna Port 2, High Channel LTE5, 2687.5 MHz					
Frequency		Max Value	Limit		
Range		(dBm)	≤ (dBm)	Result	
2.685 GHz - 2.695 (GHz	-28.36	-16	Pass	



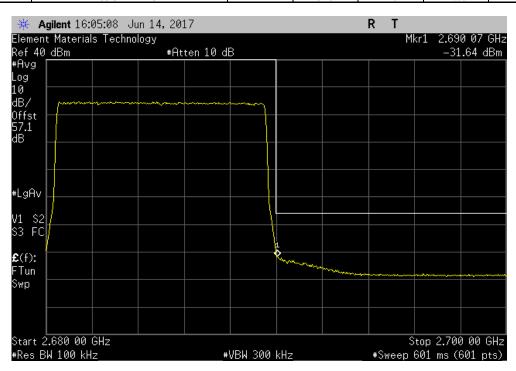
Report No. KMWC0080 138/203



				TbtTx 2017.04.18	XMit 2017.02.08
Antenna Port 2	, Low Channel LTE10, 2625 MHz				
Frequency	Max Value	Limit			
Range	(dBm)	≤ (dBm)	Result		
2.61 GHz - 2.63 GHz	-30.91	-16	Pass	Ī	

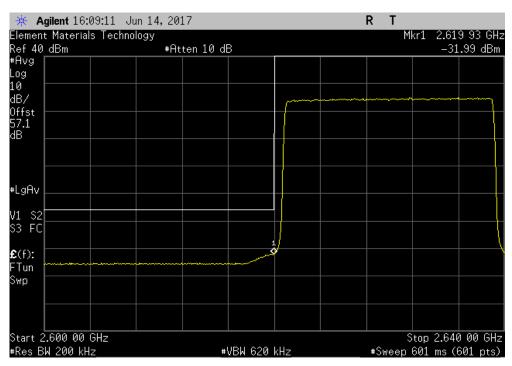


Antenna Port 2, High Channel LTE10, 2685 MHz					
Frequency		Max Value	Limit		
Range		(dBm)	≤ (dBm)	Result	
2.68 GHz - 2.7 GH	z	-31.64	-16	Pass	

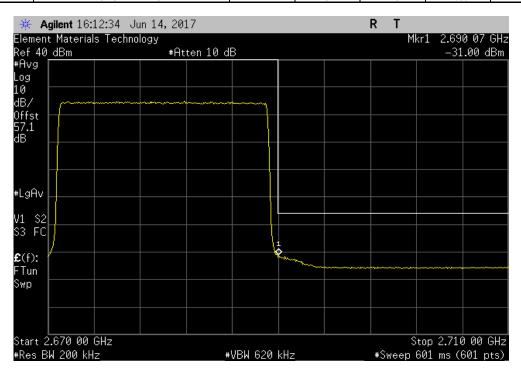


Report No. KMWC0080 139/203





Antenna Port 2, High Channel LTE20, 2680 MHz					
Frequency		Max Value	Limit		
Range		(dBm)	≤ (dBm)	Result	
2.67 GHz - 2.71 GHz		-31	-16	Pass	



Report No. KMWC0080 140/203

INTERMODULATION



XMit 2017.02.08

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Power Supply - DC	Hewlett Packard	6574A	TPX	NCR	NCR
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	2/5/2018
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Block - DC	Fairview Microwave	SD3379	AMV	1/11/2017	1/11/2018
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	11/2/2016	11/2/2017

CLIENT PROVIDED EQUIPMENT

Description	Manufacturer	Model	Last Cal.	Cal. Due
High Power Attenuator - 30dB	Aeroflex/Weinschel	53-30-43	NCR	NCR
Attenuator - 20dB	N/A	N/A	NCR	NCR
Power Divider	Fairview Microwave	MP8748-2	NCR	NCR
500hm Terminator	Aeroflex/Weinschel	1455-4	NCR	NCR
High Power Terminator	Telcon	KTMO400800060	NCR	NCR

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. Analyzer plots utilizing a 1MHz resolution bandwidth and no video filtering were made for each modulation type.

The EUT was configured with an input of two CW pulses at the edges of the band and a modulated pulse in the band. The purpose of the test is to insure that no additional signals are creating by having multiple carriers in the passband of the EUT.

Analyzer plots utilizing a 1MHz resolution bandwidth and no video filtering were made for each modulation type.

The peak conducted power of spurious emissions, up to the 10th harmonic of the transmit frequency, were investigated to ensure they were less than or equal to the spurious conducted emissions limits.

Report No. KMWC0080 141/203

INTERMODULATION



Work Order: KMWC0080 EUT: CWS-3050-07 ial Number: See Configuration
Customer: Parallel Wireless Inc. Serial Number: Date: 06/14/17 Temperature: 22.9 °C Humidity: 46.4% RH Barometric Pres.: 1014 mba Project: None Tested by: Salvador Solorzano and Johnny Candelas TEST SPECIFICATIONS Power: 48VDC Test Method Job Site: OC13 ANSI/TIA/EIA-603-D-2010 COMMENTS Power Level Setting 40W. Reference Level Offset: DC Block + 30dB Attenuator + 20dB Attenuator + Power Divider + Cable Loss = 57.1dB total The -13dBm specification limit has been lowered by 3dB to account for the 2 port MIMO configuration. Correction factor based upon the formula of 10*log(# of antennas) Using -16dBm DEVIATIONS FROM TEST STANDARD onfiguration # Signature ≤ (dBm) Result Range (dBm) Antenna Port 1 LTE5, 2622.5 MHz, Low Band Edge, adjacent secondary channel Fundamental N/A N/A N/A LTE5, 2622.5 MHz, Low Band Edge, adjacent secondary channel 30 MHz - 1 GHz -33.4 -16 Pass LTE5, 2622.5 MHz, Low Band Edge, adjacent secondary channel 1 GHz - 3 GHz -23 76 -16 Pass LTE5, 2622.5 MHz, Low Band Edge, adjacent secondary channel 3 GHz - 15 GHz -18.94 -16 Pass LTE5, 2622.5 MHz, Low Band Edge, adjacent secondary channel 15 GHz - 27 GHz -16.48 -16 Pass LTE5, 2622.5 MHz, Low Band Edge, max offset secondary channe Fundamental N/A N/A N/A LTE5, 2622.5 MHz, Low Band Edge, max offset secondary channel LTE5, 2622.5 MHz, Low Band Edge, max offset secondary channel 30 MHz - 1 GHz 1 GHz - 3 GHz -16 -16 -33.1 Pass -22.71 Pass LTE5, 2622.5 MHz, Low Band Edge, max offset secondary channel LTE5, 2622.5 MHz, Low Band Edge, max offset secondary channel -16 -16 Pass 3 GHz - 15 GHz -19 78 15 GHz - 27 GHz -16.69 Pass LTE5, 2687.5 MHz, High Band Edge, adjacent secondary channel LTE5, 2687.5 MHz, High Band Edge, adjacent secondary channel Fundamental N/A N/A N/A 30 MHz - 1 GHz -32.85 -16 Pass LTE5, 2687.5 MHz, High Band Edge, adjacent secondary channel LTE5, 2687.5 MHz, High Band Edge, adjacent secondary channel 1 GHz - 3 GHz -23 -16 Pass 3 GHz - 15 GHz -19.34 -16 Pass LTE5, 2687.5 MHz, High Band Edge, adjacent secondary channel LTE5, 2687.5 MHz, High Band Edge, max offset secondary channel 15 GHz - 27 GHz -16.22 -16 Pass Fundamental N/A N/A N/A LTE5, 2687.5 MHz, High Band Edge, max offset secondary channel LTE5, 2687.5 MHz, High Band Edge, max offset secondary channel 30 MHz - 1 GHz 1 GHz - 3 GHz -16 -16 Pass Pass -33.42 -23.65 LTE5, 2687.5 MHz, High Band Edge, max offset secondary channel LTE5, 2687.5 MHz, High Band Edge, max offset secondary channel 3 GHz - 15 GHz -18 67 -16 Pass -16 15 GHz - 27 GHz -16.97 Pass LTE10, 2625 MHz, Low Band Edge, adjacent secondary channel LTE10, 2625 MHz, Low Band Edge, adjacent secondary channel Fundamental N/A N/A N/A 30 MHz - 1 GHz -33.33 -16 Pass LTE10, 2625 MHz, Low Band Edge, adjacent secondary channel LTE10, 2625 MHz, Low Band Edge, adjacent secondary channel 1 GHz - 3 GHz -23 12 -16 Pass 3 GHz - 15 GHz -18.4 -16 Pass LTE10, 2625 MHz, Low Band Edge, adjacent secondary channel LTE10, 2625 MHz, Low Band Edge, max offset secondary channel 15 GHz - 27 GHz -16.94 -16 Pass Fundamental N/A N/A N/A LTE10, 2625 MHz, Low Band Edge, max offset secondary channel LTE10, 2625 MHz, Low Band Edge, max offset secondary channel 30 MHz - 1 GHz 1 GHz - 3 GHz -33.53 -16 -16 Pass Pass LTE10, 2625 MHz, Low Band Edge, max offset secondary channel LTE10, 2625 MHz, Low Band Edge, max offset secondary channel -16 -16 3 GHz - 15 GHz -18 96 Pass 15 GHz - 27 GHz -16.5 Pass LTE10, 2685 MHz, High Band Edge, adjacent secondary channel LTE10, 2685 MHz, High Band Edge, adjacent secondary channel Fundamental N/A N/A N/A 30 MHz - 1 GHz -32.94 -16 Pass LTE10, 2685 MHz, High Band Edge, adjacent secondary channel LTE10, 2685 MHz, High Band Edge, adjacent secondary channel 1 GHz - 3 GHz -22 14 -16 Pass 3 GHz - 15 GHz -19.77 -16 Pass LTE10, 2685 MHz, High Band Edge, adjacent secondary channel 15 GHz - 27 GHz -16.6 -16 Pass LTE10, 2685 MHz, High Band Edge, max offset secondary channel Fundamental N/A N/A N/A LTE10, 2685 MHz, High Band Edge, max offset secondary channel LTE10, 2685 MHz, High Band Edge, max offset secondary channel 30 MHz - 1 GHz 1 GHz - 3 GHz -16 -16 Pass Pass -33.42 LTE10, 2685 MHz, High Band Edge, max offset secondary channel LTE10, 2685 MHz, High Band Edge, max offset secondary channel 3 GHz - 15 GHz -19 79 -16 Pass 15 GHz - 27 GHz -16 -16.84 Pass LTE20, 2630 MHz, Low Band Edge, adjacent secondary channel LTE20, 2630 MHz, Low Band Edge, adjacent secondary channel Fundamental N/A N/A N/A 30 MHz - 1 GHz -16 Pass -33.38 LTE20, 2630 MHz, Low Band Edge, adjacent secondary channel LTE20, 2630 MHz, Low Band Edge, adjacent secondary channel 1 GHz - 3 GHz -22 87 -16 Pass 3 GHz - 15 GHz -19.35 -16 Pass LTE20, 2630 MHz, Low Band Edge, adjacent secondary channel LTE20, 2630 MHz, Low Band Edge, max offset secondary channel 15 GHz - 27 GHz -16.68 -16 Pass Fundamental N/A N/A N/A LTE20, 2630 MHz, Low Band Edge, max offset secondary channel LTE20, 2630 MHz, Low Band Edge, max offset secondary channel 30 MHz - 1 GHz 1 GHz - 3 GHz -33.3 -16 -16 Pass Pass LTE20, 2630 MHz, Low Band Edge, max offset secondary channel LTE20, 2630 MHz, Low Band Edge, max offset secondary channel 3 GHz - 15 GHz -19.05 -16 Pass 15 GHz - 27 GHz -16 -16.59 Pass LTE20, 2680 MHz, High Band Edge, adjacent secondary channel LTE20, 2680 MHz, High Band Edge, adjacent secondary channel Fundamental N/A N/A N/A 30 MHz - 1 GHz -33.23 -16 Pass LTE20, 2680 MHz, High Band Edge, adjacent secondary channel 1 GHz - 3 GHz -22 44 -16 Pass LTE20, 2680 MHz, High Band Edge, adjacent secondary channel 3 GHz - 15 GHz -19.18 -16 Pass LTE20, 2680 MHz, High Band Edge, adjacent secondary channel LTE20, 2680 MHz, High Band Edge, max offset secondary channel 15 GHz - 27 GHz -16.65 -16 Pass N/A Fundamental N/A N/A LTE20, 2680 MHz, High Band Edge, max offset secondary channel LTE20, 2680 MHz, High Band Edge, max offset secondary channel -16 -16 Pass Pass 30 MHz - 1 GHz -33.25 1 GHz - 3 GHz -22.56 LTE20, 2680 MHz, High Band Edge, max offset secondary channel 3 GHz - 15 GHz -19 62 -16 Pass 15 GHz - 27 GHz LTE20, 2680 MHz, High Band Edge, max offset secondary channel -16.69 -16 Pass Antenna Port 2 LTE5, 2622.5 MHz, Low Band Edge, adjacent secondary channel Fundamental N/A N/A N/A LTE5, 2622.5 MHz, Low Band Edge, adjacent secondary channel LTE5, 2622.5 MHz, Low Band Edge, adjacent secondary channel 30 MHz - 1 GHz -33 48 -16 Pass 1 GHz - 3 GHz -24.98 -16 Pass LTE5, 2622.5 MHz, Low Band Edge, adjacent secondary channel LTE5, 2622.5 MHz, Low Band Edge, adjacent secondary channel -16 -16 3 GHz - 15 GHz -19 Pass 15 GHz - 27 GHz -16.9 Pass LTE5, 2622.5 MHz, Low Band Edge, max offset secondary channel LTE5, 2622.5 MHz, Low Band Edge, max offset secondary channel Fundamental 30 MHz - 1 GHz N/A N/A N/A -16 -33.62 Pass LTE5, 2622.5 MHz, Low Band Edge, max offset secondary channel 1 GHz - 3 GHz -23 17 -16 Pass LTE5, 2622.5 MHz, Low Band Edge, max offset secondary channel 3 GHz - 15 GHz -19.66 -16 Pass LTE5, 2622.5 MHz, Low Band Edge, max offset secondary channel LTE5, 2687.5 MHz, High Band Edge, adjacent secondary channel 15 GHz - 27 GHz -16.59 -16 Pass Fundamental N/A N/A N/A LTE5, 2687.5 MHz, High Band Edge, adjacent secondary channel LTE5, 2687.5 MHz, High Band Edge, adjacent secondary channel 30 MHz - 1 GHz -33 16 -16 Pass 1 GHz - 3 GHz -22.19 -16 Pass LTE5, 2687.5 MHz, High Band Edge, adjacent secondary channel LTE5, 2687.5 MHz, High Band Edge, adjacent secondary channel 3 GHz - 15 GHz -19 51 -16 Pass

Report No. KMWC0080 142/203

15 GHz - 27 GHz

-16.45

Pass

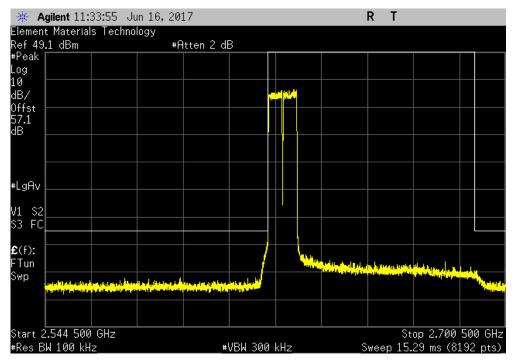
	Frequency	Max Value	Limit	
	Range	(dBm)	≤ (dBm)	Result
LTE5, 2687.5 MHz, High Band Edge, max offset secondary channel	Fundamental	N/A	N/A	N/A
LTE5, 2687.5 MHz, High Band Edge, max offset secondary channel	30 MHz - 1 GHz	-33.58	-16	Pass
LTE5, 2687.5 MHz, High Band Edge, max offset secondary channel	1 GHz - 3 GHz	-23.52	-16	Pass
LTE5, 2687.5 MHz, High Band Edge, max offset secondary channel	3 GHz - 15 GHz	-19.44	-16	Pass
LTE5, 2687.5 MHz, High Band Edge, max offset secondary channel	15 GHz - 27 GHz	-16.37	-16	Pass
LTE10, 2625 MHz, Low Band Edge, adjacent secondary channel	Fundamental	N/A	N/A	N/A
LTE10, 2625 MHz, Low Band Edge, adjacent secondary channel	30 MHz - 1 GHz	-32.9	-16	Pass
LTE10, 2625 MHz, Low Band Edge, adjacent secondary channel	1 GHz - 3 GHz	-23.39	-16	Pass
LTE10, 2625 MHz, Low Band Edge, adjacent secondary channel	3 GHz - 15 GHz	-19.39	-16	Pass
LTE10, 2625 MHz, Low Band Edge, adjacent secondary channel	15 GHz - 27 GHz	-16.67	-16	Pass
LTE10, 2625 MHz, Low Band Edge, max offset secondary channel	Fundamental	N/A	N/A	N/A
LTE10, 2625 MHz, Low Band Edge, max offset secondary channel	30 MHz - 1 GHz	-33.04	-16	Pass
LTE10, 2625 MHz, Low Band Edge, max offset secondary channel	1 GHz - 3 GHz	-23.74	-16	Pass
LTE10, 2625 MHz, Low Band Edge, max offset secondary channel	3 GHz - 15 GHz	-19.18	-16	Pass
LTE10, 2625 MHz, Low Band Edge, max offset secondary channel	15 GHz - 27 GHz	-16.29	-16	Pass
LTE10, 2685 MHz, High Band Edge, adjacent secondary channel	Fundamental	N/A	N/A	N/A
LTE10, 2685 MHz, High Band Edge, adjacent secondary channel	30 MHz - 1 GHz	-33.4	-16	Pass
LTE10, 2685 MHz, High Band Edge, adjacent secondary channel	1 GHz - 3 GHz	-23.93	-16	Pass
LTE10, 2685 MHz, High Band Edge, adjacent secondary channel	3 GHz - 15 GHz	-19.62	-16	Pass
LTE10, 2685 MHz, High Band Edge, adjacent secondary channel	15 GHz - 27 GHz	-16.89	-16	Pass
LTE10, 2685 MHz, High Band Edge, max offset secondary channel	Fundamental	N/A	N/A	N/A
LTE10, 2685 MHz, High Band Edge, max offset secondary channel	30 MHz - 1 GHz	-33.31	-16	Pass
LTE10, 2685 MHz, High Band Edge, max offset secondary channel	1 GHz - 3 GHz	-22.33	-16	Pass
LTE10, 2685 MHz, High Band Edge, max offset secondary channel	3 GHz - 15 GHz	-22.33 -18.51	-16	Pass
LTE10, 2685 MHz, High Band Edge, max offset secondary channel	15 GHz - 27 GHz	-16.73	-16	Pass
LTE20, 2630 MHz, Low Band Edge, adjacent secondary channel	Fundamental	-16.73 N/A	-16 N/A	N/A
				Pass
LTE20, 2630 MHz, Low Band Edge, adjacent secondary channel	30 MHz - 1 GHz	-33.05	-16 -16	
LTE20, 2630 MHz, Low Band Edge, adjacent secondary channel	1 GHz - 3 GHz	-24.65		Pass
LTE20, 2630 MHz, Low Band Edge, adjacent secondary channel	3 GHz - 15 GHz	-18.39	-16	Pass
LTE20, 2630 MHz, Low Band Edge, adjacent secondary channel	15 GHz - 27 GHz	-16.06	-16	Pass
LTE20, 2630 MHz, Low Band Edge, max offset secondary channel	Fundamental	N/A	N/A	N/A
LTE20, 2630 MHz, Low Band Edge, max offset secondary channel	30 MHz - 1 GHz	-32.69	-16	Pass
LTE20, 2630 MHz, Low Band Edge, max offset secondary channel	1 GHz - 3 GHz	-22.52	-16	Pass
LTE20, 2630 MHz, Low Band Edge, max offset secondary channel	3 GHz - 15 GHz	-18.73	-16	Pass
LTE20, 2630 MHz, Low Band Edge, max offset secondary channel	15 GHz - 27 GHz	-16.05	-16	Pass
LTE20, 2680 MHz, High Band Edge, adjacent secondary channel	Fundamental	N/A	N/A	N/A
LTE20, 2680 MHz, High Band Edge, adjacent secondary channel	30 MHz - 1 GHz	-33.42	-16	Pass
LTE20, 2680 MHz, High Band Edge, adjacent secondary channel	1 GHz - 3 GHz	-23.67	-16	Pass
LTE20, 2680 MHz, High Band Edge, adjacent secondary channel	3 GHz - 15 GHz	-19.18	-16	Pass
LTE20, 2680 MHz, High Band Edge, adjacent secondary channel	15 GHz - 27 GHz	-16.58	-16	Pass
LTE20, 2680 MHz, High Band Edge, max offset secondary channel	Fundamental	N/A	N/A	N/A
LTE20, 2680 MHz, High Band Edge, max offset secondary channel	30 MHz - 1 GHz	-33.53	-16	Pass
LTE20, 2680 MHz, High Band Edge, max offset secondary channel	1 GHz - 3 GHz	-23.7	-16	Pass
LTE20, 2680 MHz, High Band Edge, max offset secondary channel	3 GHz - 15 GHz	-19.31	-16	Pass
LTE20, 2680 MHz, High Band Edge, max offset secondary channel	15 GHz - 27 GHz	-16.91	-16	Pass

Report No. KMWC0080 143/203

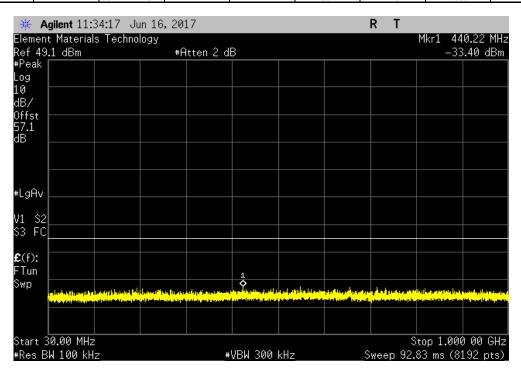
INTERMODULATION



Antenna Port 1, L	TE5, 2622.5 MHz, Low Band Ed	dge, adjacent seco	ondary channel	
Frequency		Max Value	Limit	
Range		(dBm)	≤ (dBm)	Result
Fundamental		N/A	N/A	N/A



Antenna Port 1, LTE5, 2622.5 MHz, Low	Band Edge, adjacent sec	ondary channel	
Frequency	Max Value	Limit	
Range	(dBm)	≤ (dBm)	Result
30 MHz - 1 GHz	-33.4	-16	Pass



Report No. KMWC0080 144/203



TbtTx 2017.04.18

Antenna Port 1, LTE5, 2622.5 MHz, Low Band Edge, adjacent secondary channel

Frequency

Max Value

Limit

Range

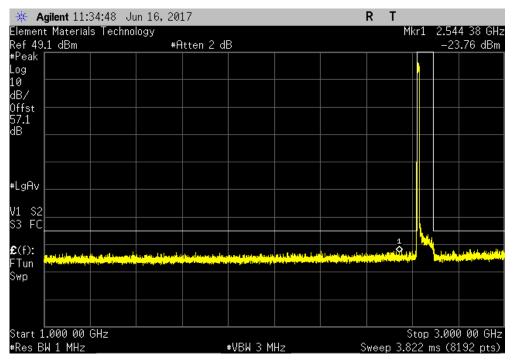
(dBm) ≤ (dBm)

Result

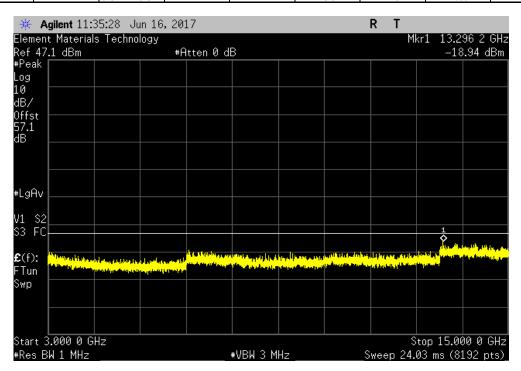
1 GHz - 3 GHz

-23.76
-16

Pass



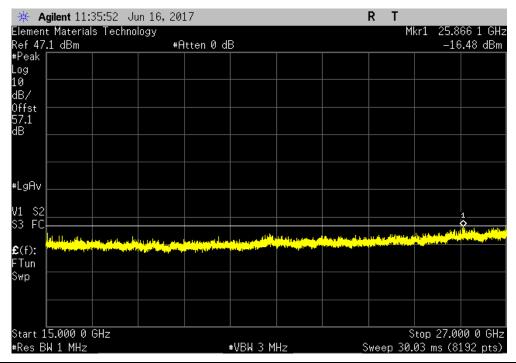
Antenna Port 1, LTE5, 2622.5 MHz, Lo	Antenna Port 1, LTE5, 2622.5 MHz, Low Band Edge, adjacent secondary channel					
Frequency	Max Value	Limit				
Range	(dBm)	≤ (dBm)	Result	_		
3 GHz - 15 GHz	-18.94	-16	Pass	ĺ		



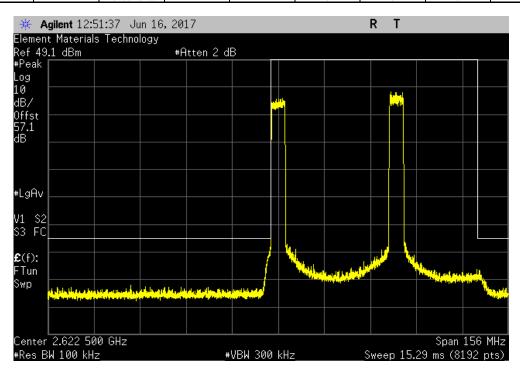
Report No. KMWC0080 145/203



Antenna Port 1, LTE5, 2622.5 M	Hz, Low Band Edge, adjacent sec	ondary channel		
Frequency	Max Value	Limit		
Range	(dBm)	≤ (dBm)	Result	
15 CHz - 27 CHz	-16.48	-16	Dace	



Antenna Port 1, LTE5, 2622.5 MHz, Low Bar	nd Edge, max offset sec	ondary channel	
Frequency	Max Value	Limit	
Range	(dBm)	≤ (dBm)	Result
Fundamental	N/A	N/A	N/A



Report No. KMWC0080 146/203



Antenna Port 1, LTE5, 2622.5 MHz, Low Band Edge, max offset secondary channel

Frequency

Max Value

Limit

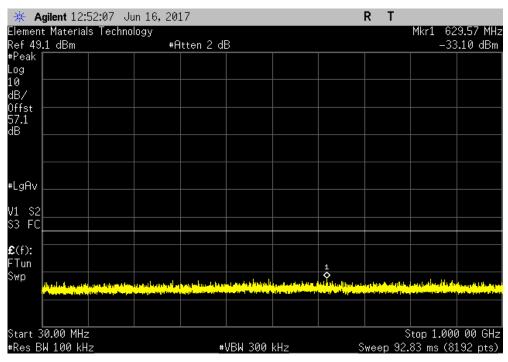
Range

(dBm) ≤ (dBm) Result

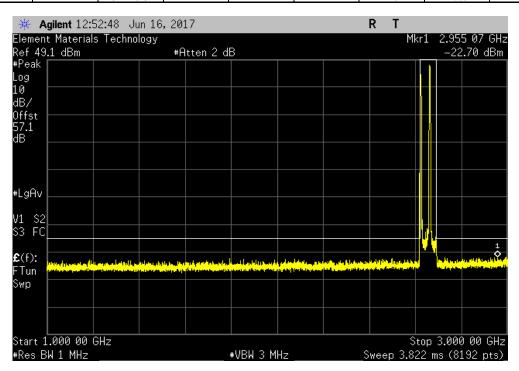
30 MHz - 1 GHz

-33.1 -16

Pass



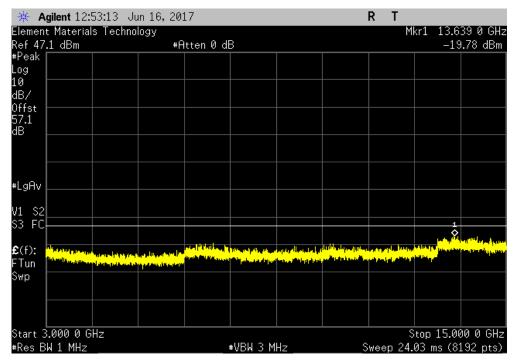
Antenna Port 1, LTE5, 2622.5 MHz, Low Band Edge, max offset secondary channel						
Frequency	Max Value	Limit				
Range	(dBm)	≤ (dBm)	Result			
1 GHz - 3 GHz	-22.71	-16	Pass			



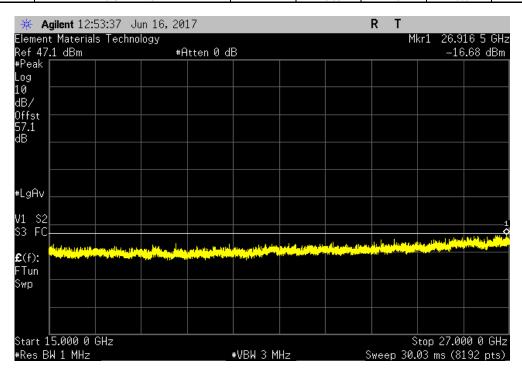
Report No. KMWC0080 147/203



					TbtTx 2017.04.18	XMit 2017.02.08			
Antenna Port 1, LTE5, 2622.5 MHz, Low Band Edge, max offset secondary channel									
Frequency		Max Value	Limit						
Range		(dBm)	≤ (dBm)	Result					
3 GHz - 15 GHz		-19.78	-16	Pass					



Antenna Port 1, LTE5, 2622.5 MHz,	Antenna Port 1, LTE5, 2622.5 MHz, Low Band Edge, max offset secondary channel						
Frequency	Max Value	Limit					
Range	(dBm)	≤ (dBm)	Result				
15 GHz - 27 GHz	-16.69	-16	Pass				

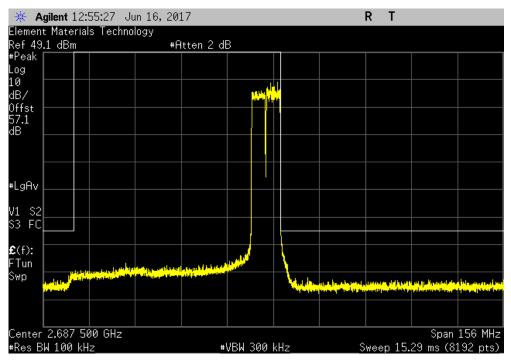


Report No. KMWC0080 148/203

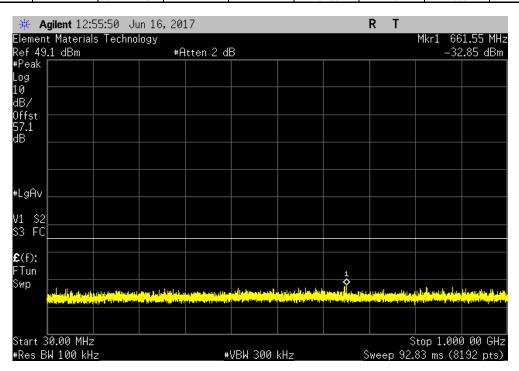


TbtTx 2017.04.18

Antenna Port 1, LTE5, 2687.5 MHz, High Band Edge, adjacent secondary channel
Frequency
Max Value Limit
Range (dBm) ≤ (dBm) Result
Fundamental N/A N/A N/A



Antenna Port 1, LTE5, 2687.5 MHz, High	Antenna Port 1, LTE5, 2687.5 MHz, High Band Edge, adjacent secondary channel						
Frequency	Max Value	Limit					
Range	(dBm)	≤ (dBm)	Result				
30 MHz - 1 GHz	-32.85	-16	Pass				



Report No. KMWC0080 149/203

1 GHz - 3 GHz



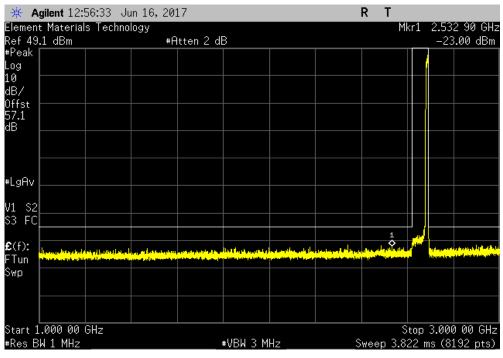
TbtTx 2017.04.18

Antenna Port 1, LTE5, 2687.5 MHz, High Band Edge, adjacent secondary channel

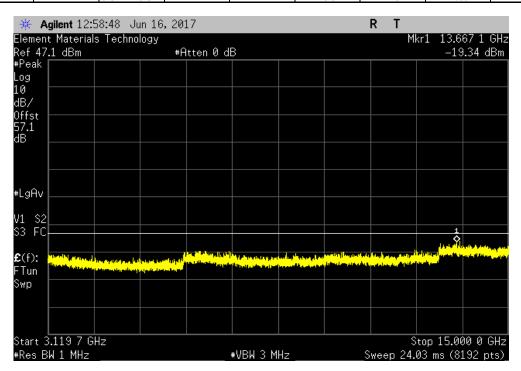
Frequency
Max Value
Limit
Range
(dBm) ≤ (dBm) Result

-16

Pass



Antenna Port 1, LTE5, 2687.5 MHz, High Band Edge, adjacent secondary channel						
Frequency		Max Value	Limit			
Range		(dBm)	≤ (dBm)	Result		
3 GHz - 15 GHz		-19.34	-16	Pass		



Report No. KMWC0080 150/203



TbtTx 2017.04.18

Antenna Port 1, LTE5, 2687.5 MHz, High Band Edge, adjacent secondary channel

Frequency

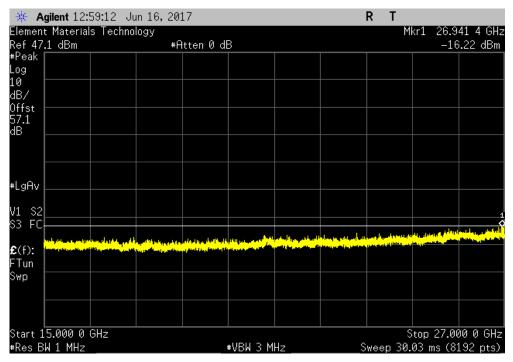
Range

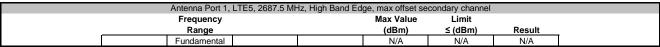
(dBm)

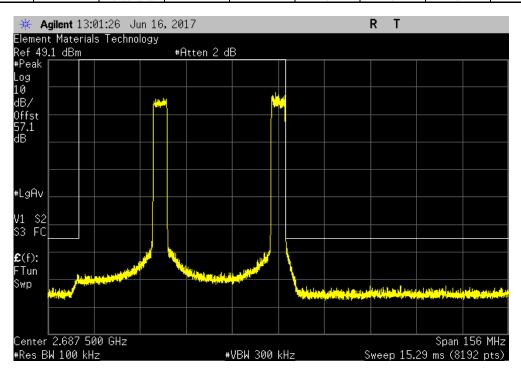
15 GHz - 27 GHz

-16.22
-16

Pass



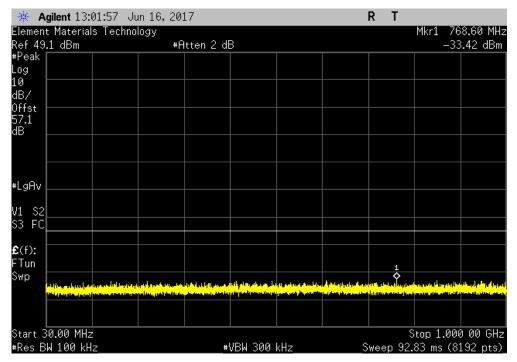




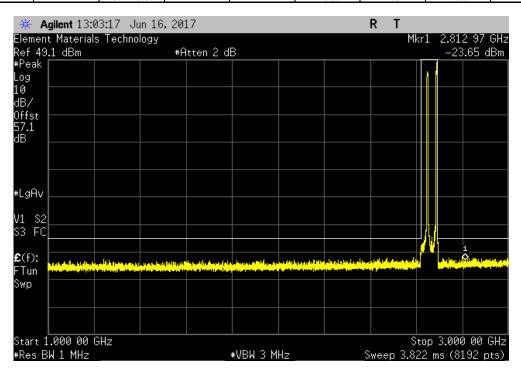
Report No. KMWC0080 151/203



				TbtTx 2017.04.18	XMit 2017.02.08
Antenna Port 1, LTE5, 2687.5 MI	Hz, High Band Edge, max offset	secondary channel			
Frequency	Max Value	Limit			
Range	(dBm)	≤ (dBm)	Result		
20 MHz 4 CHz	22.42	16	Page	T	



Antenna Port 1, LTE5, 2687.5 MH:	Antenna Port 1, LTE5, 2687.5 MHz, High Band Edge, max offset secondary channel						
Frequency	N	/lax Value	Limit				
Range		(dBm)	≤ (dBm)	Result	_		
1 GHz - 3 GHz		-23.65	-16	Pass	İ		



Report No. KMWC0080 152/203



TbtTx 2017.04.18

Antenna Port 1, LTE5, 2687.5 MHz, High Band Edge, max offset secondary channel

Frequency

Range

(dBm)

3 GHz - 15 GHz

-18.67

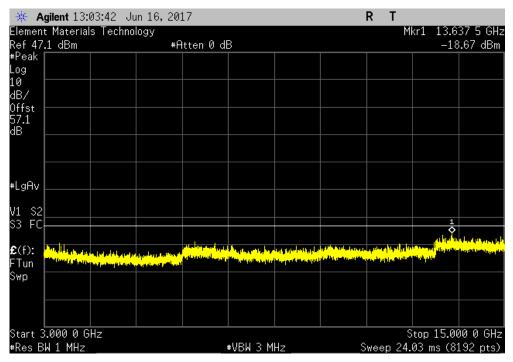
-18.67

-18.67

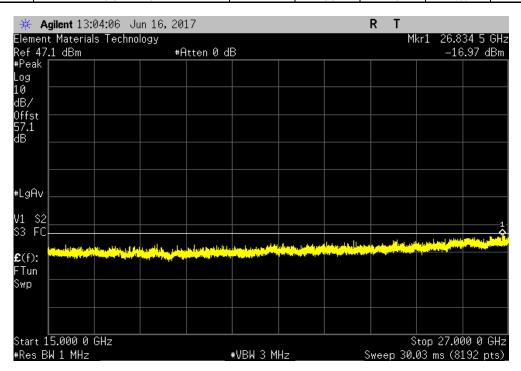
-18.67

-18.67

-18.67



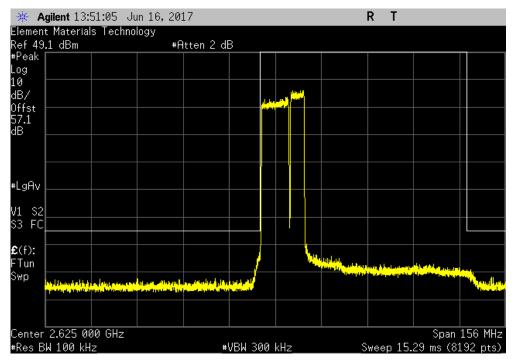
Antenna Port 1, LTE5, 2687.5 MHz, High Band Edge, max offset secondary channel						
Frequency		Max Value	Limit			
Range		(dBm)	≤ (dBm)	Result		
15 GHz - 27 GHz		-16.97	-16	Pass		



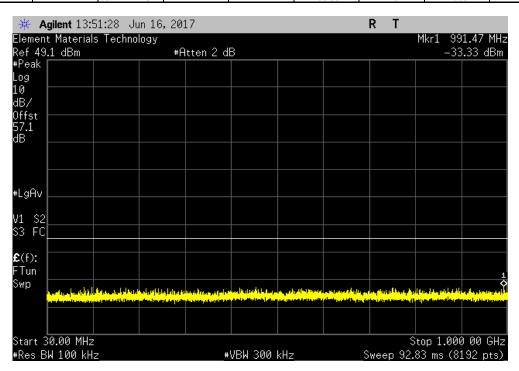
Report No. KMWC0080 153/203



				TbtTx 2017.04.18	XMit 2017.02.08
Antenna Port 1, LTE10, 26	25 MHz, Low Band Edge, adjacent seco	ondary channel			
Frequency	Max Value	Limit			
Range	(dBm)	≤ (dBm)	Result		
Fundamental	N/A	N/A	N/A	Ī	



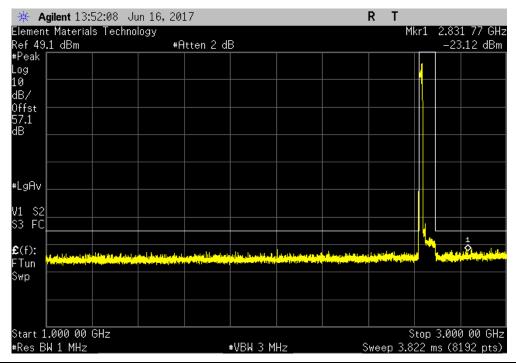
Antenna Port 1, LTE10, 2625 MHz, L	ow Band Edge, adjacent sec	ondary channel	
Frequency	Max Value	Limit	
Range	(dBm)	≤ (dBm)	Result
30 MHz - 1 GHz	-33.33	-16	Pass



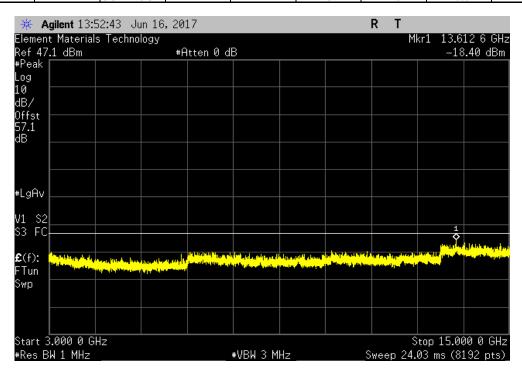
Report No. KMWC0080 154/203



					TbtTx 2017.04.18	XMit 2017.02.08			
Antenna Port 1, LTE10, 2625 MHz, Low Band Edge, adjacent secondary channel									
	Frequency	Max Value	Limit						
	Range	(dBm)	≤ (dBm)	Result					
	1 CHz - 3 CHz	-23 12	-16	Dace					



Antenna Port 1, LTE10, 2625 MHz, Low Band E	dge, adjacent seco	ondary channel	
Frequency	Max Value	Limit	
Range	(dBm)	≤ (dBm)	Result
3 GHz - 15 GHz	-18.4	-16	Pass



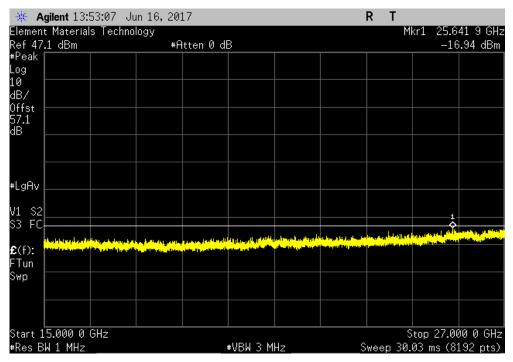
Report No. KMWC0080 155/203

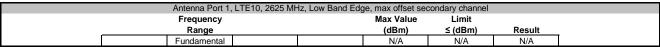


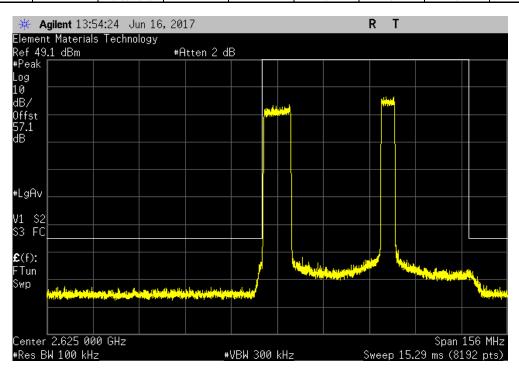
TbtTx 2017.04.18

Antenna Port 1, LTE10, 2625 MHz, Low Band Edge, adjacent secondary channel
Frequency
Max Value
Limit
Range
(dBm) ≤ (dBm) Result

15 GHz - 27 GHz
-16.94
-16 Pass



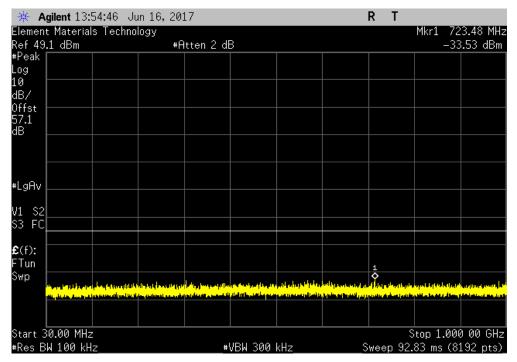




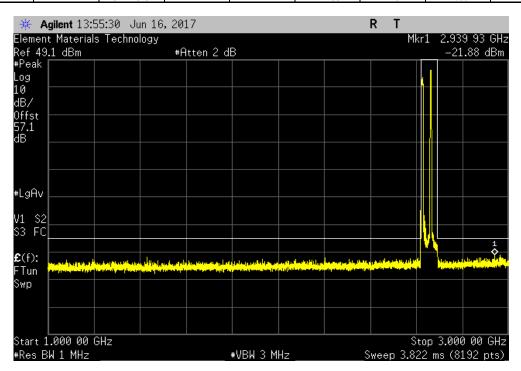
Report No. KMWC0080 156/203



					TbtTx 2017.04.18	XMit 2017.02.08
Antenna Port 1, LTE10, 2625 N	1Hz, Low Band Edge	, max offset seco	ondary channel			
Frequency		Max Value	Limit			
Range		(dBm)	≤ (dBm)	Result		
30 MHz - 1 GHz		-33.53	-16	Pass		



Antenna Port 1, LTE10, 2625 MHz	Low Band Edge, max offset sed	condary channel	
Frequency	Max Value	Limit	
Range	(dBm)	≤ (dBm)	Result
1 GHz - 3 GHz	-21.88	-16	Pass



Report No. KMWC0080 157/203



TbtTx 2017.04.18

Antenna Port 1, LTE10, 2625 MHz, Low Band Edge, max offset secondary channel

Frequency

Max Value

Limit

Range

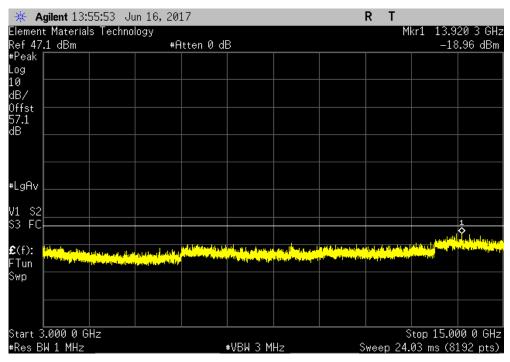
(dBm) ≤ (dBm)

Result

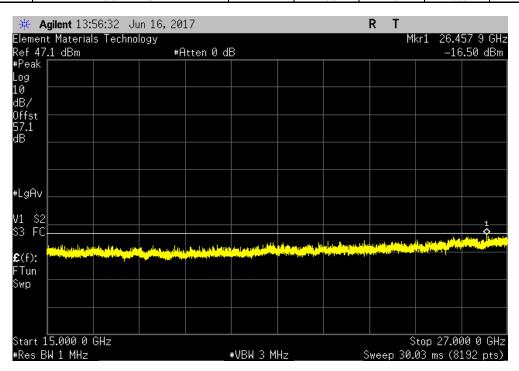
3 GHz - 15 GHz

-18.96
-16

Pass



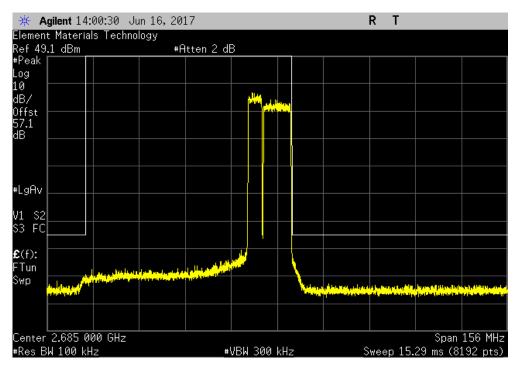
Antenna Port 1, LTE10, 2625 MHz, Low Band Edge, max offset secondary channel							
Frequency	Max Value	Limit					
Range	(dBm)	≤ (dBm)	Result	_			
15 GHz - 27 GHz	-16.5	-16	Pass	ĺ			



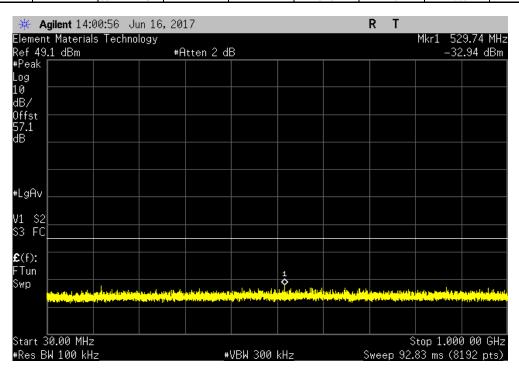
Report No. KMWC0080 158/203



					TbtTx 2017.04.18	XMit 2017.02.08
Antenna Port 1, LTE10, 2	2685 MHz, High Band Ed	dge, adjacent sec	ondary channel			
Frequency		Max Value	Limit			
Range		(dBm)	≤ (dBm)	Result		
Fundamental		N/A	N/A	N/A	Ī	



Antenna Port 1, LTE10, 2685 MHz, High Band Edge, adjacent secondary channel						
Frequency	Max Value	Limit				
Range	(dBm)	≤ (dBm)	Result	_		
30 MHz - 1 GHz	-32.94	-16	Pass	ı		



Report No. KMWC0080 159/203



TbtTx 2017.04.18

Antenna Port 1, LTE10, 2685 MHz, High Band Edge, adjacent secondary channel

Frequency

Max Value

Limit

Range

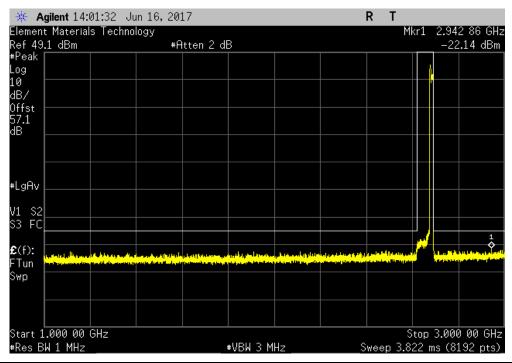
(dBm) ≤ (dBm)

Result

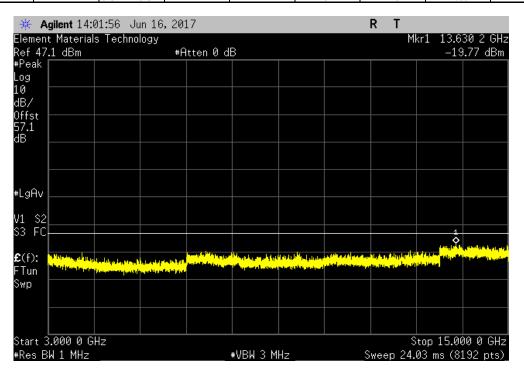
1 GHz - 3 GHz

-22.14
-16

Pass



Antenna Port 1, LTE10, 2685 MHz, High Band Edge, adjacent secondary channel								
Frequency	Max Value	Limit						
Range	(dBm)	≤ (dBm)	Result					
3 GHz - 15 GHz	-19.77	-16	Pass	Ī				



Report No. KMWC0080 160/203



Antenna Port 1, LTE10, 2685 MHz, High Band Edge, adjacent secondary channel

Frequency

Max Value

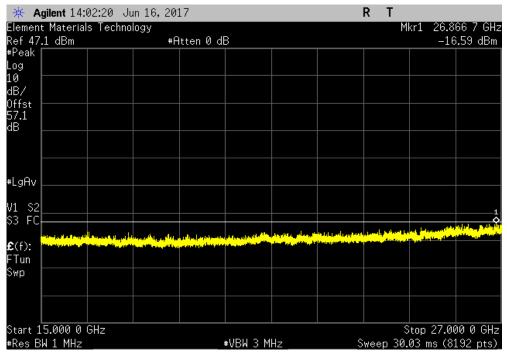
Limit

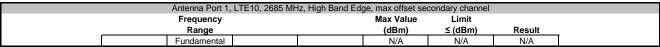
Range

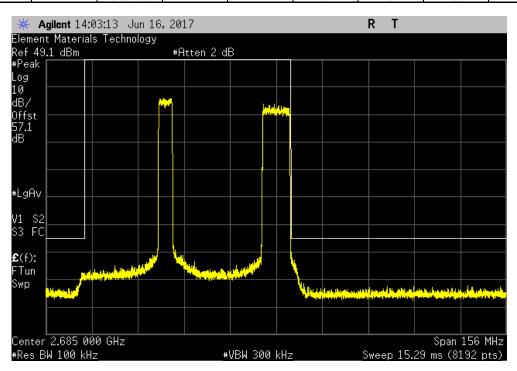
(dBm) ≤ (dBm) Result

15 GHz - 27 GHz

-16.6
-16
Pass



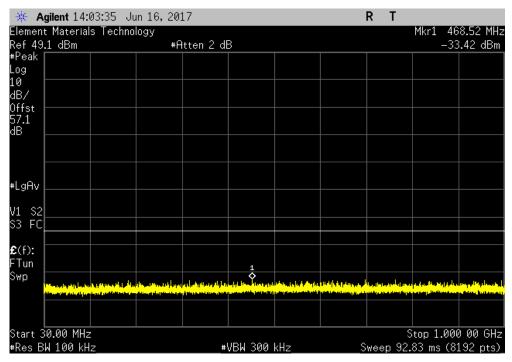




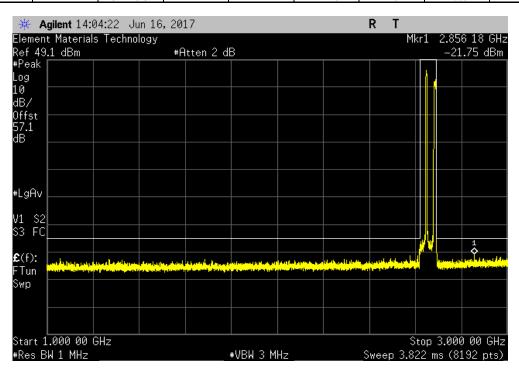
Report No. KMWC0080 161/203



						TbtTx 2017.04.18	XMit 2017.02.08
	Antenna Port 1, LTE10, 2685 MH	lz, High Band Edg	e, max offset seco	ondary channel			
	Frequency		Max Value	Limit			
	Range		(dBm)	≤ (dBm)	Result		
3	0 MHz - 1 GHz		-33.42	-16	Pass	•	



	Antenna Port 1, LTE10, 2685 MHz	, High Band Edge, max offset se	condary channel	
	Frequency	Max Value	Limit	
	Range	(dBm)	≤ (dBm)	Result
i	1 GHz - 3 GHz	-21.75	-16	Pass



Report No. KMWC0080 162/203



TbtTx 2017.04.18

Antenna Port 1, LTE10, 2685 MHz, High Band Edge, max offset secondary channel

Frequency

Max Value

Limit

Range

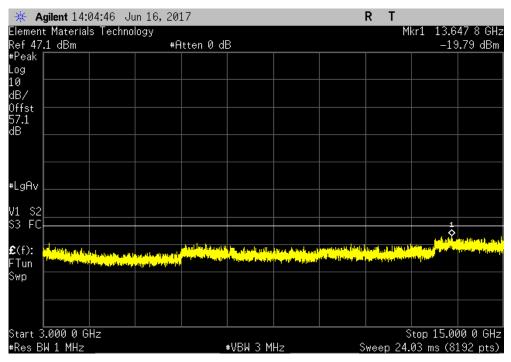
(dBm) ≤ (dBm)

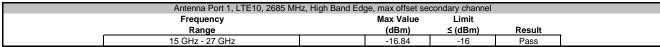
Result

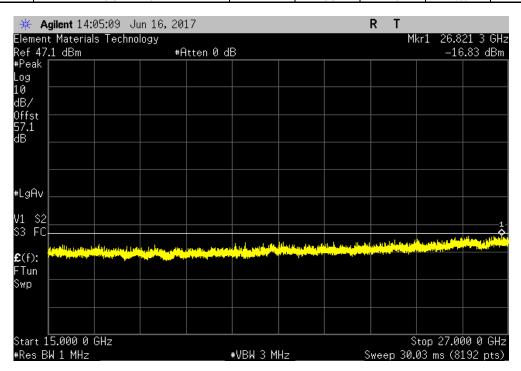
3 GHz - 15 GHz

-19.79
-16

Pass



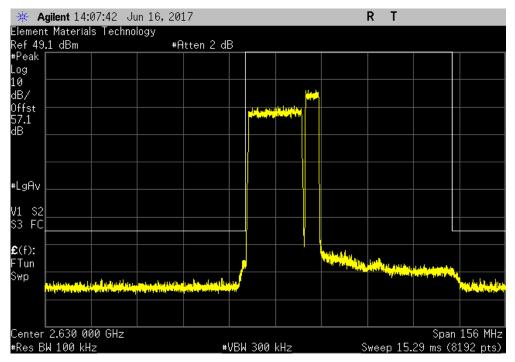




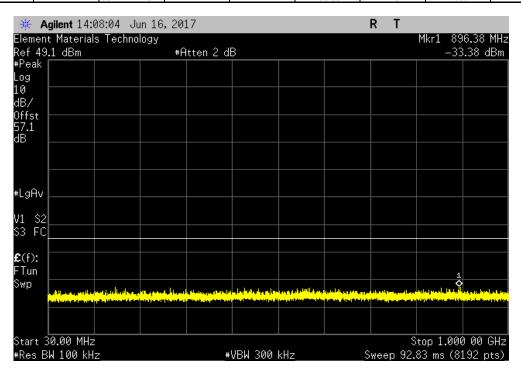
Report No. KMWC0080 163/203



				TbtTx 2017.04.18	XMit 2017.02.08
				10111/2011.04.10	70VIII 2017-02-00
Antenna Port 1, LTE20, 26	30 MHz, Low Band Edge, adjacent seco	ondary channel			
Frequency	Max Value	Limit			
Range	(dBm)	≤ (dBm)	Result		
Fundamental	N/A	N/A	N/A	Ī	



Antenna Port 1, LTE20, 2630 MHz, Low Band Edge, adjacent secondary channel					
Frequency	Max Va	ue Limit			
Range	(dBm) ≤ (dBm)	Result		
30 MHz - 1 GHz	-33.3	-16	Pass		



Report No. KMWC0080 164/203



TbtTx 2017.04.18

Antenna Port 1, LTE20, 2630 MHz, Low Band Edge, adjacent secondary channel

Frequency

Max Value

Limit

Range

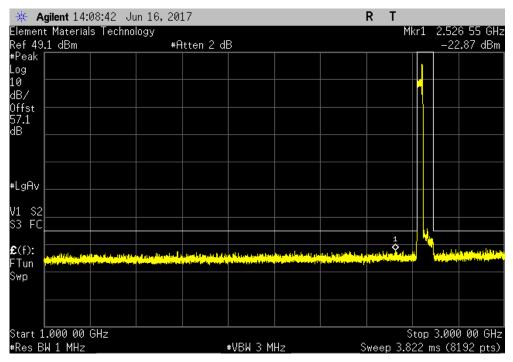
(dBm) ≤ (dBm)

Result

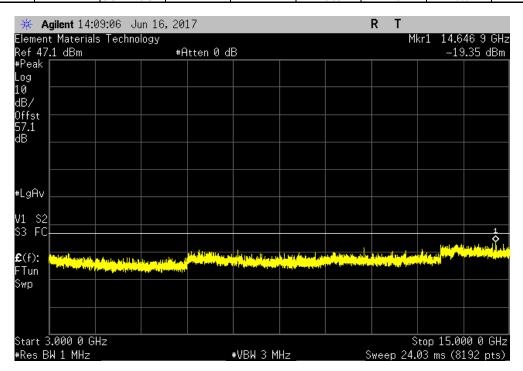
1 GHz - 3 GHz

-22.87
-16

Pass



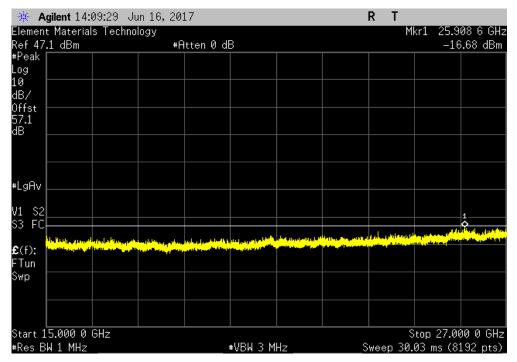
Antenna Port 1, LTE20, 2630 MHz, Low Band Edge, adjacent secondary channel					
Frequency	Frequency Max Value Limit				
Range	(dBm)	≤ (dBm)	Result		
3 GHz - 15 GHz	-19.35	-16	Pass		

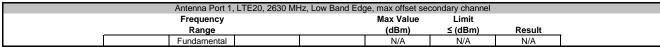


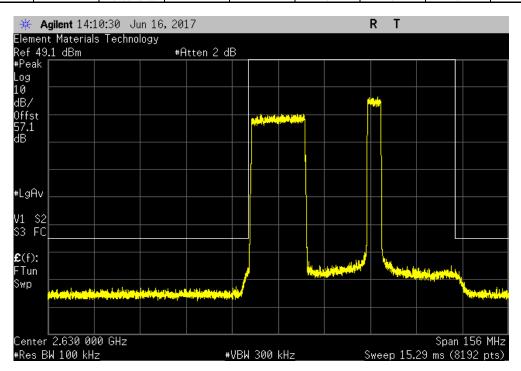
Report No. KMWC0080 165/203



						TbtTx 2017.04.18	XMit 2017.02.08
	Antenna Port 1, LTE20, 2630 M	IHz, Low Band Ed	ge, adjacent seco	ondary channel			
	Frequency		Max Value	Limit			
	Range		(dBm)	≤ (dBm)	Result		
Ī	15 CU- 27 CU-		16.60	16	Door	T	



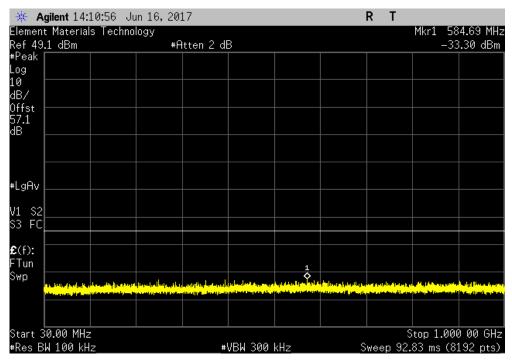




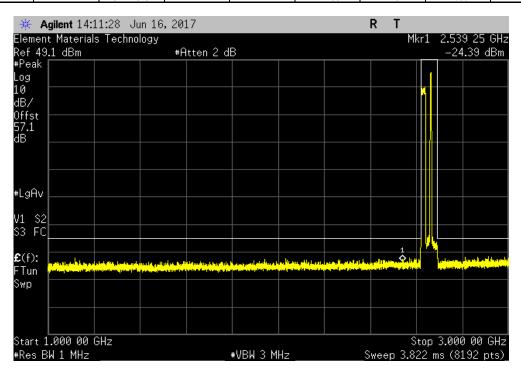
Report No. KMWC0080 166/203



				TbtTx 2017.04.18	XMit 2017.02.08
Antenna Port 1, LTE20, 2630 MHz	z, Low Band Edge, max offset sec	ondary channel			
Frequency	Max Value	Limit			
Range	(dBm)	≤ (dBm)	Result		
20 MHz 4 CHz	-33.3	16	Poss		



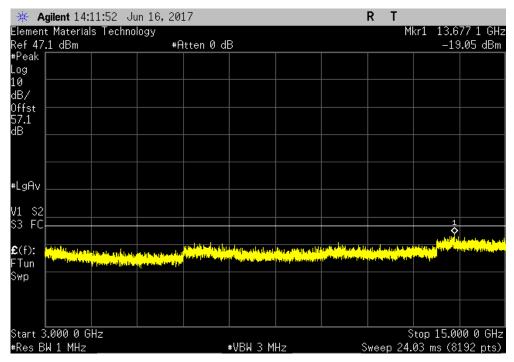
Antenna Port 1, LTE20, 2630 MHz	, Low Band Edge, max offset see	condary channel	
Frequency	Max Value	Limit	
Range	(dBm)	≤ (dBm)	Result
1 GHz - 3 GHz	-24.39	-16	Pass



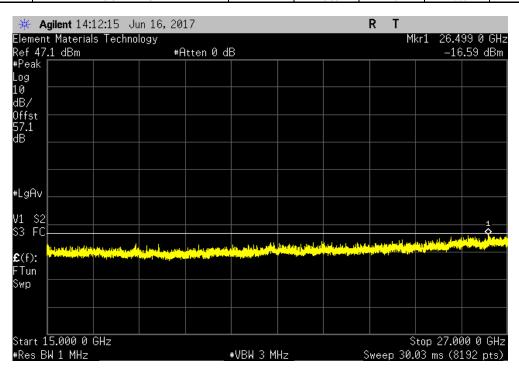
Report No. KMWC0080 167/203



						TbtTx 2017.04.18	XMit 2017.02.08
Antenna Port 1, LTE	E20, 2630 MHz, Low	Band Edge, max	offset se	condary channel			
Frequency		Max	Value	Limit			
Range		(0	IBm)	≤ (dBm)	Result		
3 GHz - 15 GHz		-1	9.05	-16	Pass		



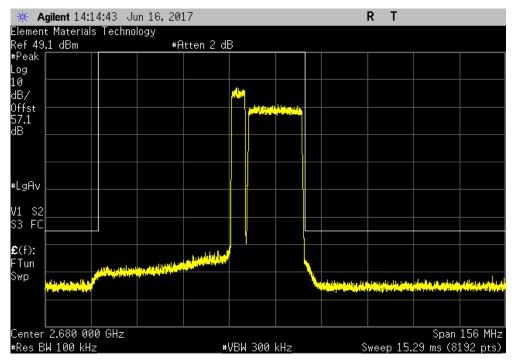
Antenna Port 1, LTE20, 2630 MHz, Low Band Edge, max offset secondary channel					
Frequency	Max Value	Limit			
Range	(dBm)	≤ (dBm)	Result		
15 GHz - 27 GHz	-16.59	-16	Pass		



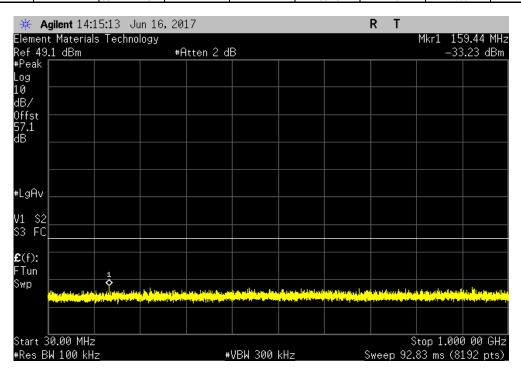
Report No. KMWC0080 168/203



_						TbtTx 2017.04.18	XMit 2017.02.08
	Antenna Port 1, LTE20, 2680	MHz, High Band E	dge, adjacent sec	ondary channel			
	Frequency		Max Value	Limit			
	Range		(dBm)	≤ (dBm)	Result		
	Fundamental		N/A	N/A	N/A		



Antenna Port 1, LTE20, 2680 MHz, High Band Edge, adjacent secondary channel					
Frequency	Max Value	Limit			
Range	(dBm)	≤ (dBm)	Result	_	
30 MHz - 1 GHz	-33.23	-16	Pass	Ī	



Report No. KMWC0080 169/203



TbtTx 2017.04.18

Antenna Port 1, LTE20, 2680 MHz, High Band Edge, adjacent secondary channel

Frequency

Max Value

Limit

Range

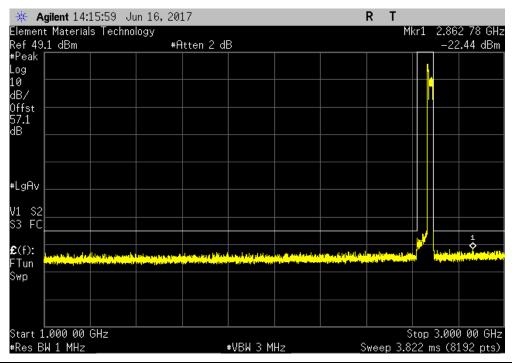
(dBm) ≤ (dBm)

Result

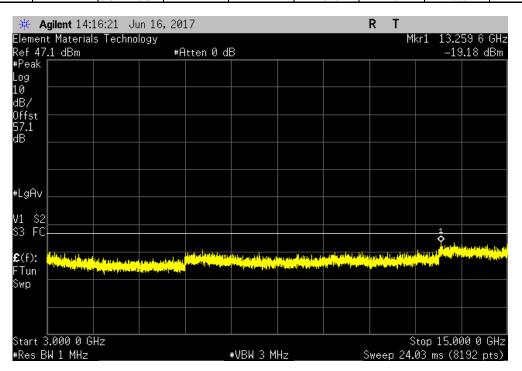
1 GHz - 3 GHz

-22.44
-16

Pass



Antenna Port 1, LTE20, 2680 MHz, High Ba	and Edge, adjacent seco	ndary channel	
Frequency	Max Value	Limit	
Range	(dBm)	≤ (dBm)	Result
3 GHz - 15 GHz	-19.18	-16	Pass



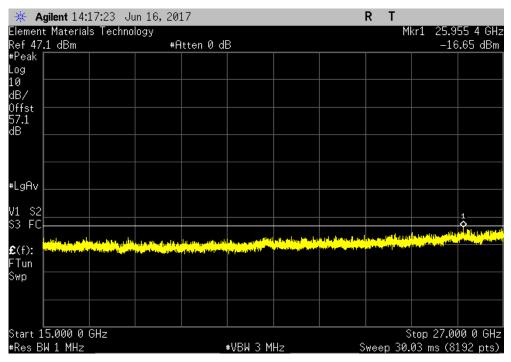
Report No. KMWC0080 170/203

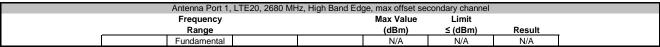


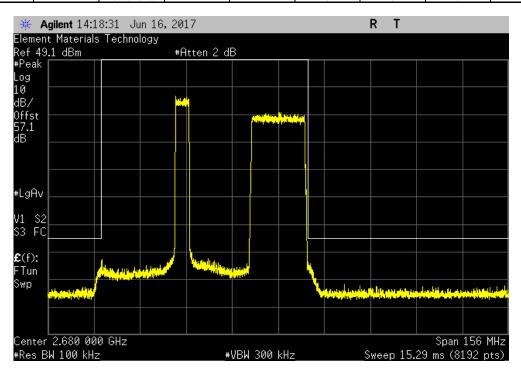
TbtTx 2017.04.18

Antenna Port 1, LTE20, 2680 MHz, High Band Edge, adjacent secondary channel
Frequency Max Value Limit
Range (dBm) ≤ (dBm) Result

15 GHz - 27 GHz -16.65 -16 Pass





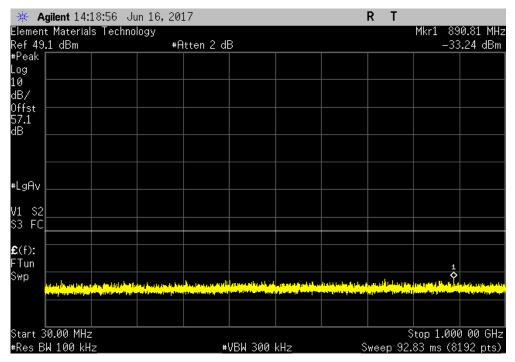


Report No. KMWC0080 171/203

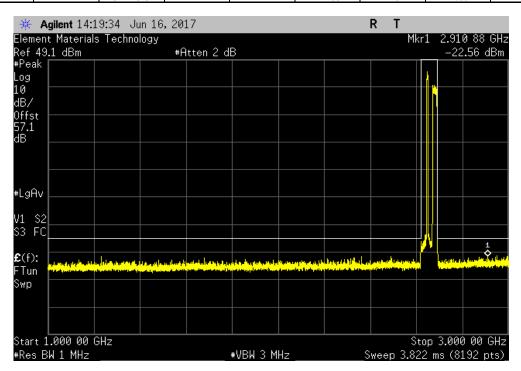


TbtTx 2017.04.18

Antenna Port 1, LTE20	0, 2680 MHz, High Band Edge	e, max offset se	condary channel	
Frequency		Max Value	Limit	
Range		(dBm)	≤ (dBm)	Result
30 MHz - 1 GHz		-33 25	-16	Pass



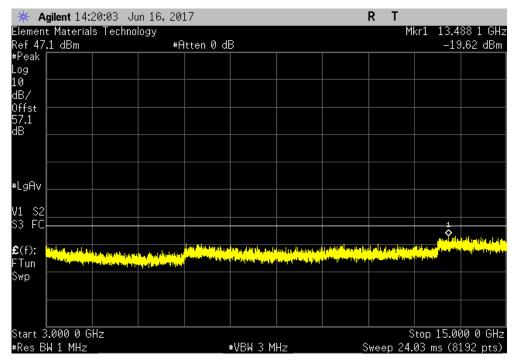
	Antenna Port 1, LTE20, 2680 MHz	, High Band Edge, max offset se	condary channel	
	Frequency	Max Value	Limit	
	Range	(dBm)	≤ (dBm)	Result
i	1 GHz - 3 GHz	-22.56	-16	Pass



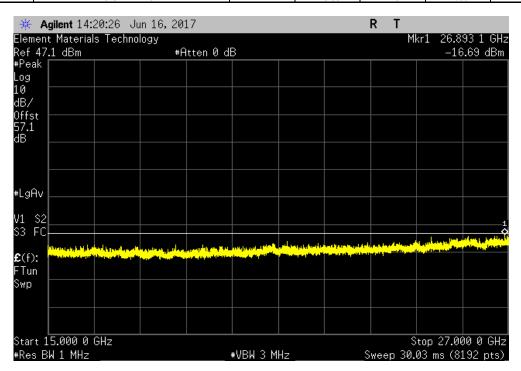
Report No. KMWC0080 172/203



					TbtTx 2017.04.18	XMit 2017.02.08
Antenna Port 1, LTE20,	2680 MHz, High Band Ed	dge, max offset sed	condary channel			
Frequency		Max Value	Limit			
Range		(dBm)	≤ (dBm)	Result		
3 GHz - 15 GHz		-19.62	-16	Pass		



Antenna Port 1, LTE20, 2680 MHz, F	ligh Band Edge, max offset se	condary channel	
Frequency	Max Value	Limit	
Range	(dBm)	≤ (dBm)	Result
15 GHz - 27 GHz	-16.69	-16	Pass

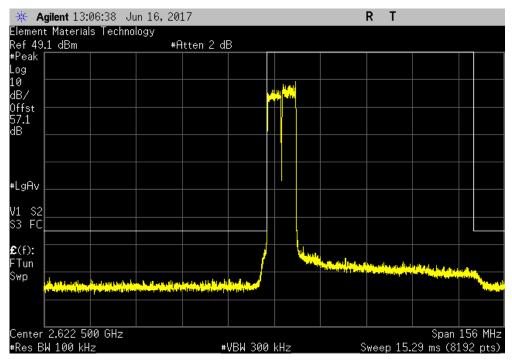


Report No. KMWC0080 173/203

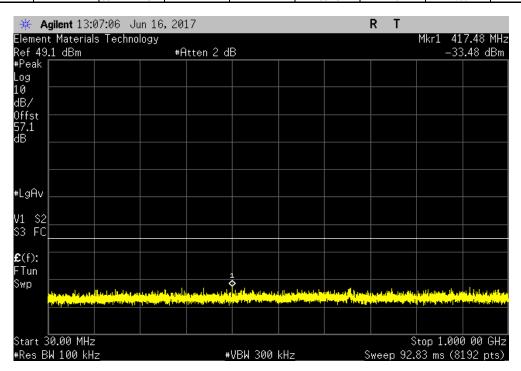


TbtTx 2017.04.18

Anten	na Port 2, LTE5, 2622.5 M	Hz, Low Band Ed	lge, adjacent sec	ondary channel	
Freq	uency		Max Value	Limit	
Ra	nge		(dBm)	≤ (dBm)	Result
Funda	mental		N/A	N/A	N/A



Antenna Port 2, LTE5, 2622.5 MHz, Lov	w Band Edge, adjacent sec	ondary channel	
Frequency	Max Value	Limit	
Range	(dBm)	≤ (dBm)	Result
30 MHz - 1 GHz	-33.48	-16	Pass



Report No. KMWC0080 174/203



TbtTx 2017.04.18

Antenna Port 2, LTE5, 2622.5 MHz, Low Band Edge, adjacent secondary channel

Frequency

Max Value

Limit

Range

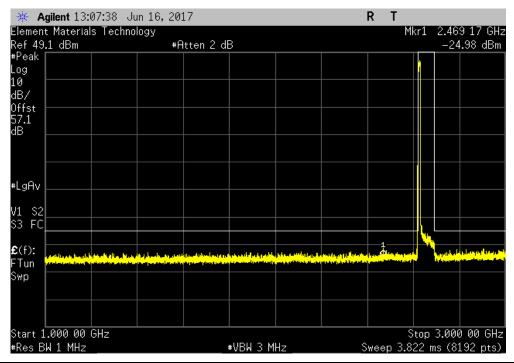
(dBm) ≤ (dBm)

Result

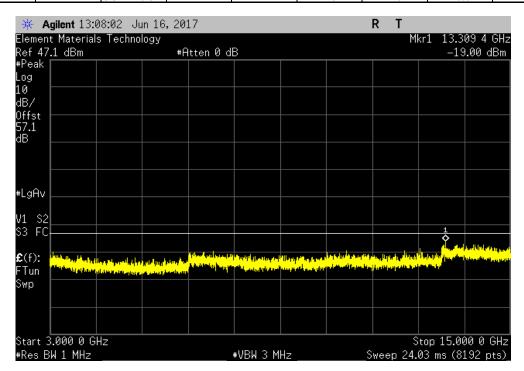
1 GHz - 3 GHz

-24.98
-16

Pass



Antenna Port 2, LTE5, 2622.5 MH	Hz, Low Band Ed	ge, adjacent sec	ondary channel		
Frequency		Max Value	Limit		
Range		(dBm)	≤ (dBm)	Result	
3 GHz - 15 GHz		-19	-16	Pass	



Report No. KMWC0080 175/203



Antenna Port 2, LTE5, 2622.5 MHz, Low Band Edge, adjacent secondary channel

Frequency

Max Value

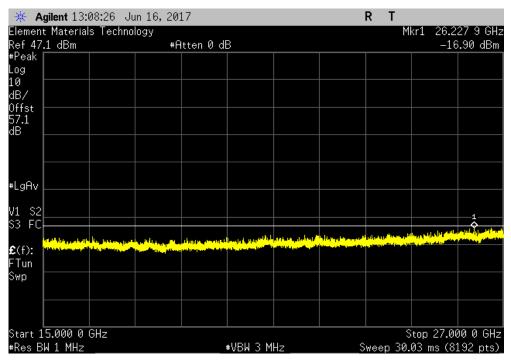
Limit

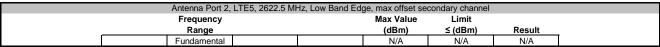
Range

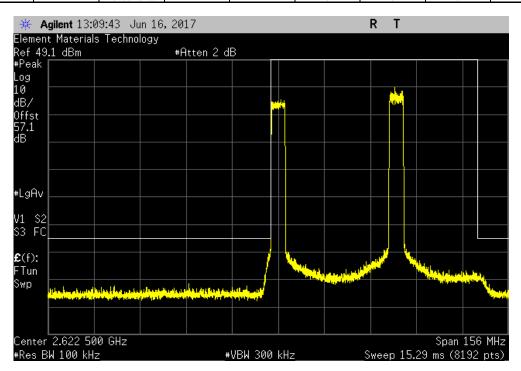
(dBm) ≤ (dBm) Result

15 GHz - 27 GHz

-16.9
-16
Pass







Report No. KMWC0080 176/203



TbtTx 2017.04.18

Antenna Port 2, LTE5, 2622.5 MHz, Low Band Edge, max offset secondary channel

Frequency

Max Value

Limit

Range

(dBm) ≤ (dBm)

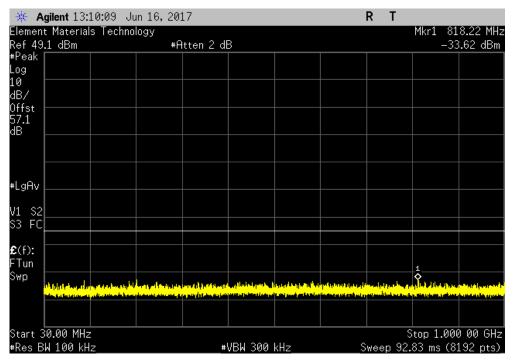
Result

30 MHz - 1 GHz

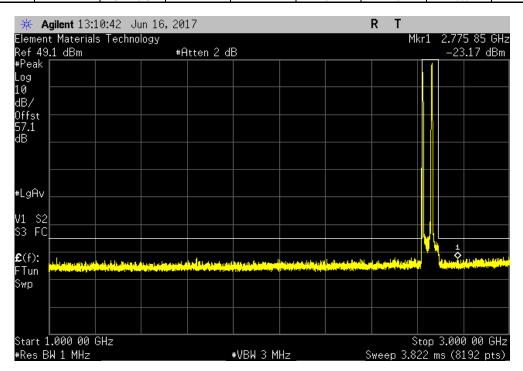
-33.62

-16

Pass



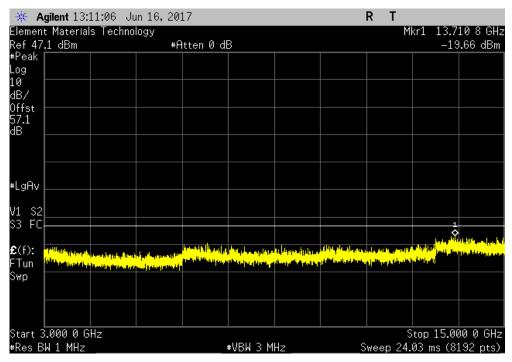
Antenna Port 2, LTE5, 2622.5 MHz, Low	Band Edge, max offset se	condary channel		
Frequency	Max Value	Limit		
Range	(dBm)	≤ (dBm)	Result	_
1 GHz - 3 GHz	-23.17	-16	Pass	ĺ



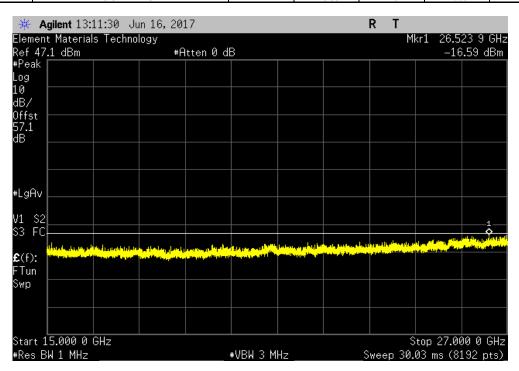
Report No. KMWC0080 177/203



Antenna Port 2, LTE5, 2622.5 M	Hz, Low Band Ed	ge, max offset sed	condary channel		
Frequency		Max Value	Limit		
Range		(dBm)	≤ (dBm)	Result	_
3 GHz - 15 GHz		-19.66	-16	Pass	



Antenna Port 2, LTE5, 2622.5 MHz,	Low Band Edge, max offset se	condary channel	
Frequency	Max Value	Limit	
Range	(dBm)	≤ (dBm)	Result
15 GHz - 27 GHz	-16.59	-16	Pass

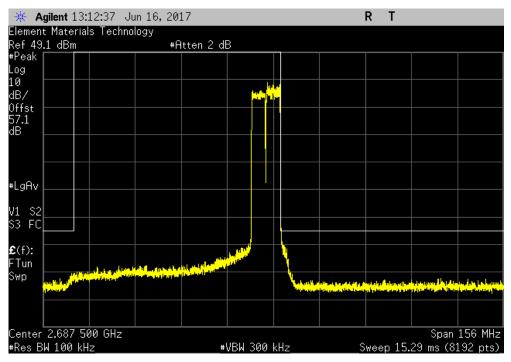


Report No. KMWC0080 178/203

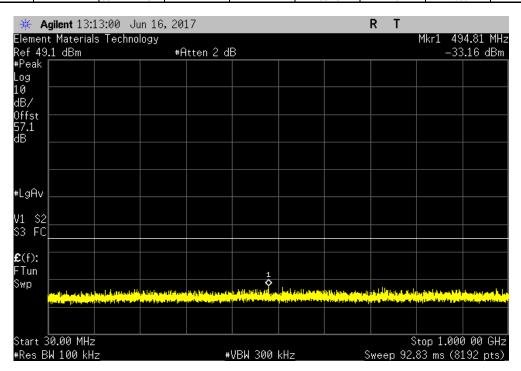


Antenna Port 2, LTE5, 2687.5 MHz, High Band Edge, adjacent secondary channel

Frequency
Max Value
Limit
Range
(dBm) ≤ (dBm) Result
Fundamental
N/A N/A N/A



Antenna Port 2, LTE5, 2687.5 MHz, F	ligh Band Edge, adjacent se	condary channel	
Frequency	Max Value	Limit	
Range	(dBm)	≤ (dBm)	Result
30 MHz - 1 GHz	-33.16	-16	Pass



Report No. KMWC0080 179/203



TbtTx 2017.04.18

Antenna Port 2, LTE5, 2687.5 MHz, High Band Edge, adjacent secondary channel

Frequency

Max Value

Limit

Range

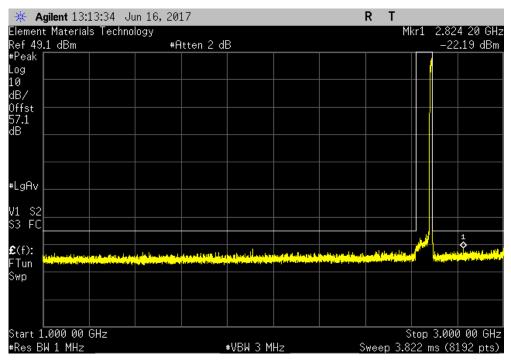
(dBm) ≤ (dBm)

Result

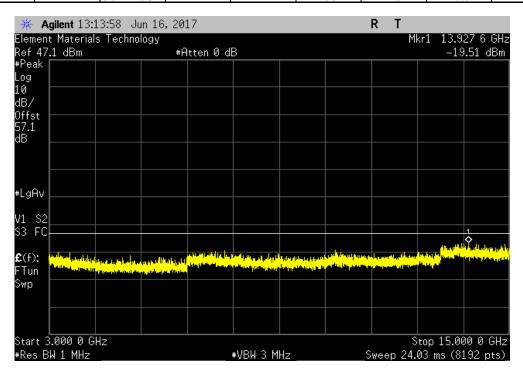
1 GHz - 3 GHz

-22.19
-16

Pass



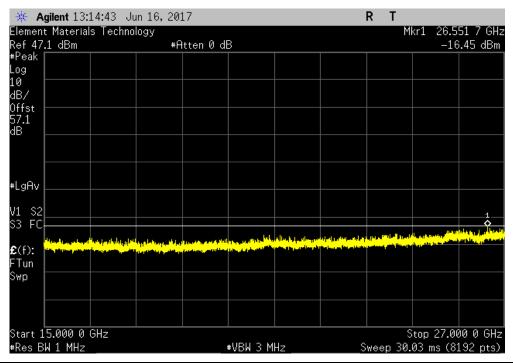
Antenna Port 2, LTE5, 2687.5 M	/IHz, High Band Ed	dge, adjacent sec	ondary channel	
Frequency		Max Value	Limit	
 Range		(dBm)	≤ (dBm)	Result
3 GHz - 15 GHz		-19.51	-16	Pass



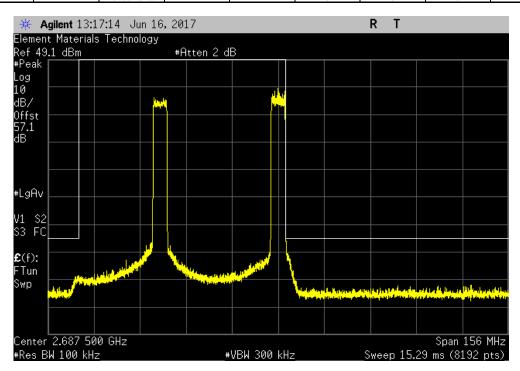
Report No. KMWC0080 180/203



	Antenna Port 2, LTE5, 2687.5 M	Hz, High Band Ed	dge, adjacent sec	ondary channel		
	Frequency		Max Value	Limit		
_	Range		(dBm)	≤ (dBm)	Result	
	15 GHz - 27 GHz		-16.45	-16	Pass	



Antenna Port 2, LTE5, 2687.5 MHz, High Band Edge, max offset secondary channel					
Frequency		Max Value	Limit		
Range		(dBm)	≤ (dBm)	Result	
Fundamental		N/A	N/A	N/A	Ī



Report No. KMWC0080 181/203



TbtTx 2017.04.18

Antenna Port 2, LTE5, 2687.5 MHz, High Band Edge, max offset secondary channel

Frequency

Max Value

Limit

Range

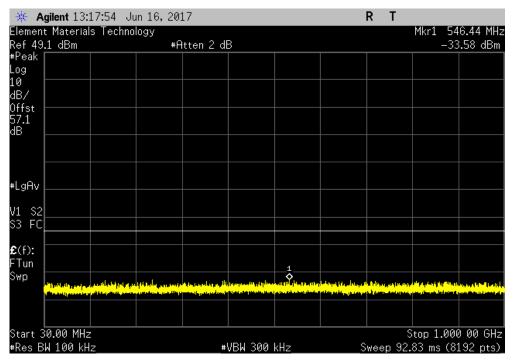
(dBm) ≤ (dBm)

Result

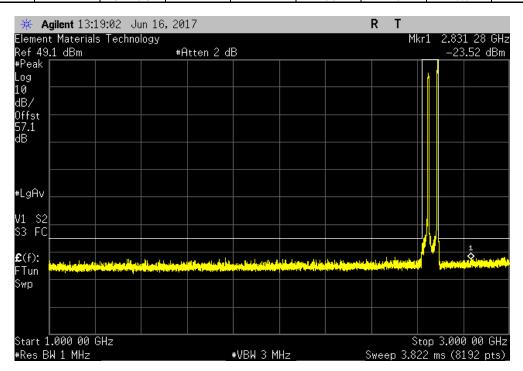
30 MHz - 1 GHz

-33.58
-16

Pass



Antenna Port 2, LTE5, 2687.5 MHz, High Band Edge, max offset secondary channel					
Frequency	Max Value Limit				
Range	(dBm) ≤ (dBm) Result				
1 GHz - 3 GHz	-23.52 -16 Pass				



Report No. KMWC0080 182/203



TbtTx 2017.04.18

Antenna Port 2, LTE5, 2687.5 MHz, High Band Edge, max offset secondary channel

Frequency

Max Value

Limit

Range

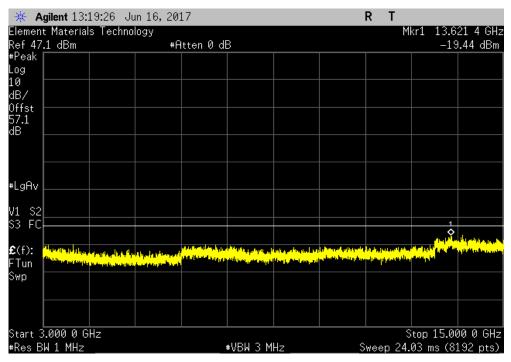
(dBm) ≤ (dBm)

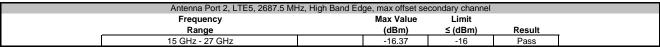
Result

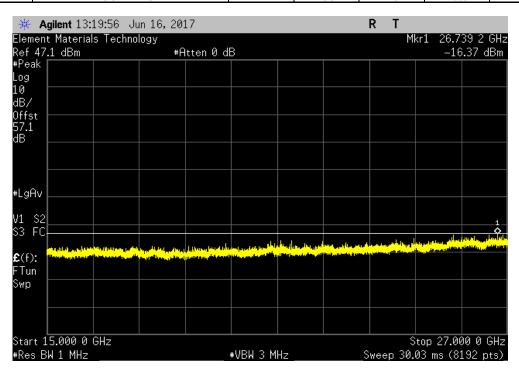
3 GHz - 15 GHz

-19.44
-16

Pass



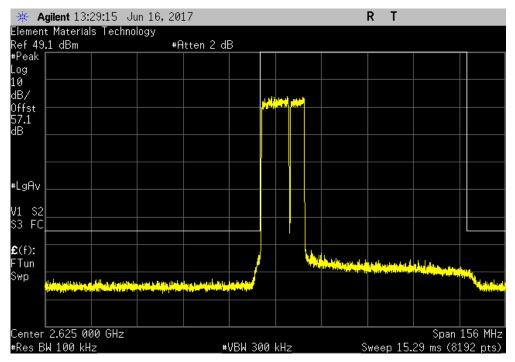




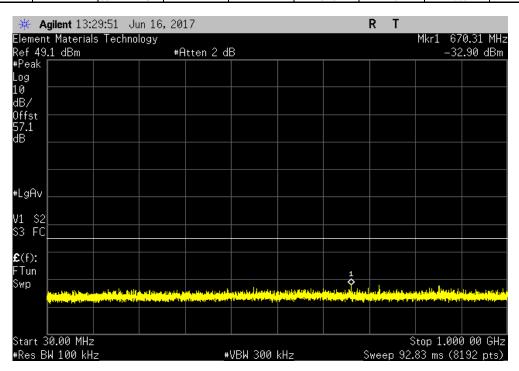
Report No. KMWC0080 183/203



				TbtTx 2017.04.18	XMit 2017.02.08
Antenna Port 2, LTE10, 2625	MHz, Low Band Edge, adjacent seco	ndary channel			
Frequency	Max Value	Limit			
Range	(dBm)	≤ (dBm)	Result		
Fundamental	N/A	N/A	N/A	Ī	



Antenna Port 2, LTE10, 2625 MHz, Low Band Edge, adjacent secondary channel				
Frequency	Max Value	Limit		
Range	(dBm)	≤ (dBm)	Result	
30 MHz - 1 GHz	-32.9	-16	Pass	



Report No. KMWC0080 184/203



TbtTx 2017.04.18

Antenna Port 2, LTE10, 2625 MHz, Low Band Edge, adjacent secondary channel

Frequency

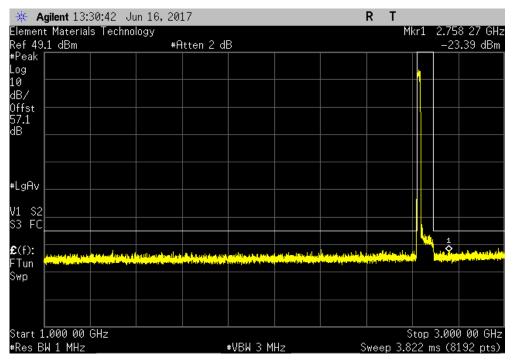
Range

(dBm) ≤ (dBm)

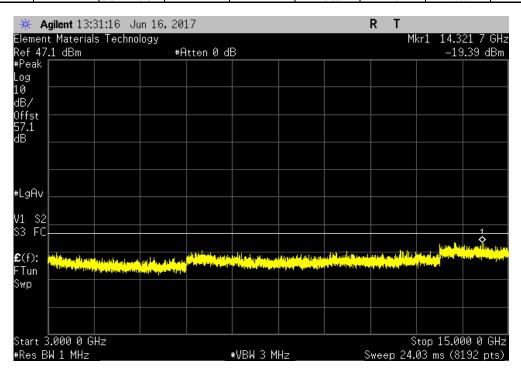
1 GHz - 3 GHz

-23.39
-16

Pass



Antenna Port 2, LTE10, 2625 MHz, Low Band Edge, adjacent secondary channel					
Frequency	Max Value	Limit			
Range	(dBm)	≤ (dBm)	Result		
3 GHz - 15 GHz	-19.39	-16	Pass		



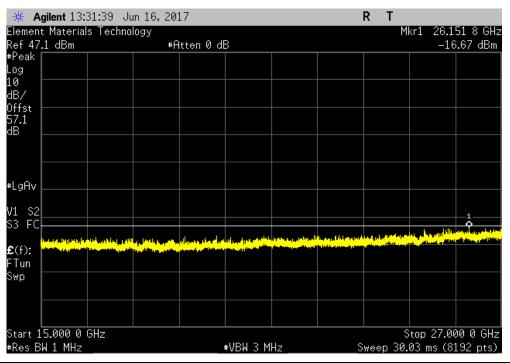
Report No. KMWC0080 185/203

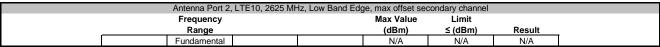


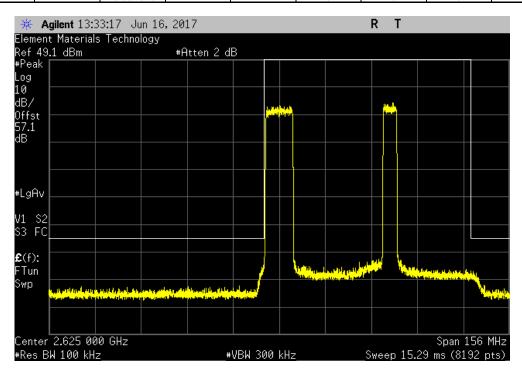
TbtTx 2017.04.18

Antenna Port 2, LTE10, 2625 MHz, Low Band Edge, adjacent secondary channel
Frequency
Max Value
Limit
Range
(dBm) ≤ (dBm) Result

15 GHz - 27 GHz
-16.67
-16 Pass







Report No. KMWC0080 186/203



Antenna Port 2, LTE10, 2625 MHz, Low Band Edge, max offset secondary channel

Frequency

Max Value

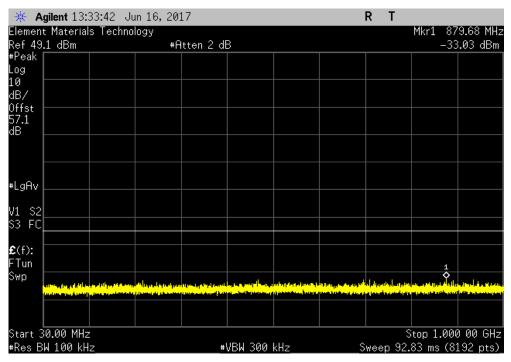
Limit

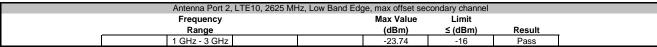
Range

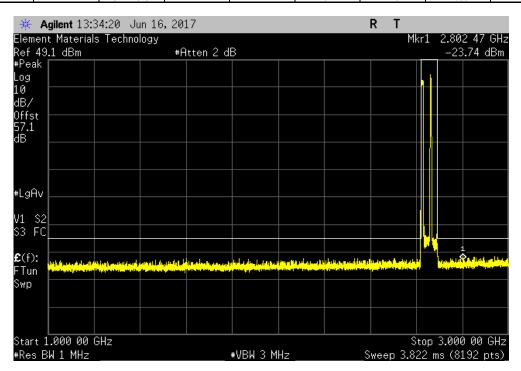
(dBm) ≤ (dBm) Result

30 MHz - 1 GHz

-33.04
-16
Pass







Report No. KMWC0080 187/203

3 GHz - 15 GHz



TbtTx 2017.04.18

Antenna Port 2, LTE10, 2625 MHz, Low Band Edge, max offset secondary channel

Frequency

Max Value

Limit

Range

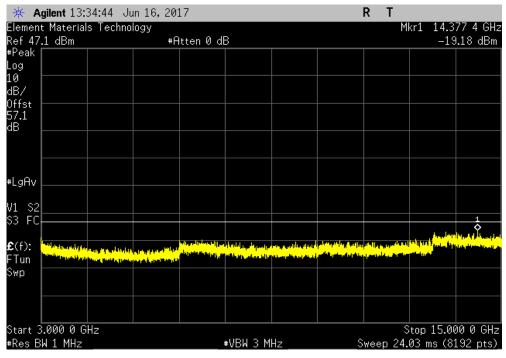
(dBm) ≤ (dBm)

Result

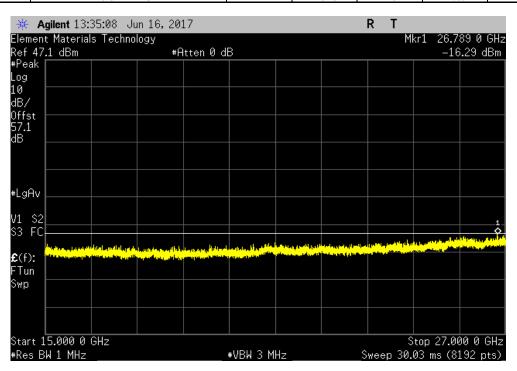
19.18

-16

Pass



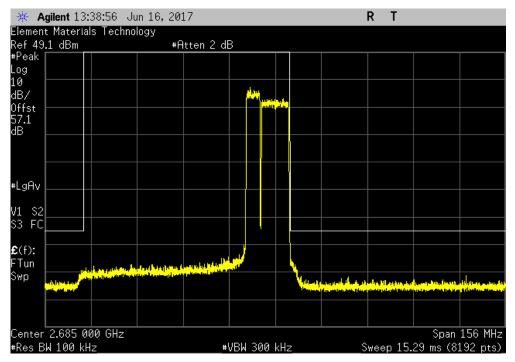
Antenna Port 2, LTE10, 2625 MHz, Low Band Edge, max offset secondary channel					
Frequency	Max Value	Limit			
Range	(dBm)	≤ (dBm)	Result		
15 GHz - 27 GHz	-16.29	-16	Pass	ĺ	



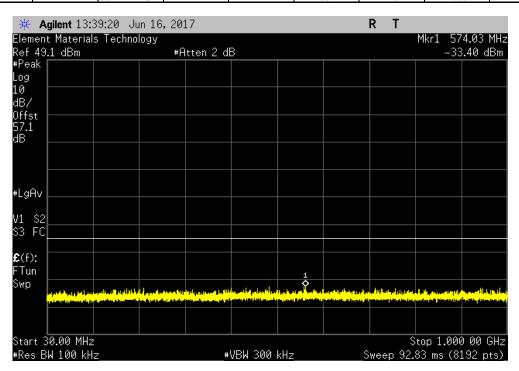
Report No. KMWC0080 188/203



				TbtTx 2017.04.18	XMit 2017.02.08
				10t1x 2017:04:10	AMIL 2017.02.00
Antenna Port 2, LTE10, 26	885 MHz, High Band Edge, adjace	nt secondary channel			
Frequency	Max Va	ue Limit			
			December		
Range	(dBm) ≤ (dBm)	Result	_	
Fundamental	N/A	N/A	N/A	Ī	



Antenna Port 2, LTE10, 2685 MHz, High Band Edge, adjacent secondary channel					
Frequency	Max Value	Limit			
Range	(dBm)	≤ (dBm)	Result		
30 MHz - 1 GHz	-33.4	-16	Pass		



Report No. KMWC0080 189/203



Antenna Port 2, LTE10, 2685 MHz, High Band Edge, adjacent secondary channel

Frequency

Max Value

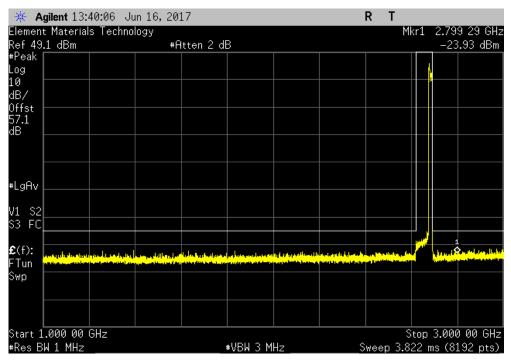
Limit

Range

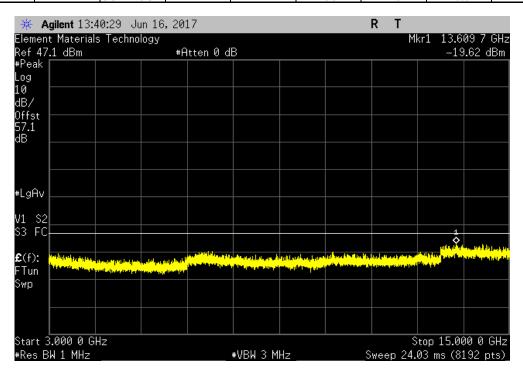
(dBm) ≤ (dBm) Result

1 GHz - 3 GHz

-23.93 -16 Pass



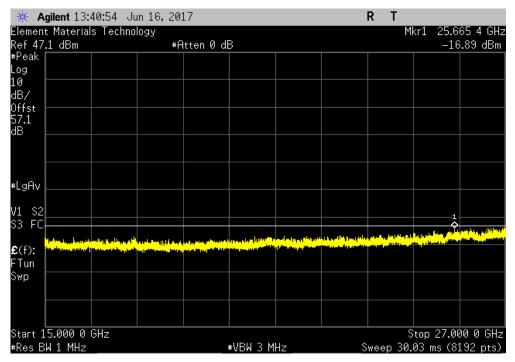
Antenna Port 2, LTE10, 2685 MHz, High Band Edge, adjacent secondary channel					
Frequency	Max Value	Limit			
Range	(dBm)	≤ (dBm)	Result	_	
3 GHz - 15 GHz	-19.62	-16	Pass	ĺ	



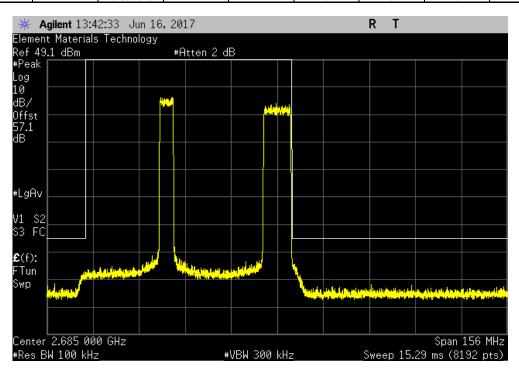
Report No. KMWC0080 190/203



					TbtTx 2017.04.18	XMit 2017.02.08
Antenna Port 2, LTE10, 2685 M	Hz, High Band Ed	dge, adjacent secc	ondary channel			
Frequency		Max Value	Limit			
Range		(dBm)	≤ (dBm)	Result		
15 GHz - 27 GHz		-16.89	-16	Page	Ī	



Antenna Port 2, LTE10, 2685 MHz, High Band Edge, max offset secondary channel					
Frequency		Max Value	Limit		
Range		(dBm)	≤ (dBm)	Result	
Fundamental		N/A	N/A	N/A	



Report No. KMWC0080 191/203



Antenna Port 2, LTE10, 2685 MHz, High Band Edge, max offset secondary channel

Frequency

Range

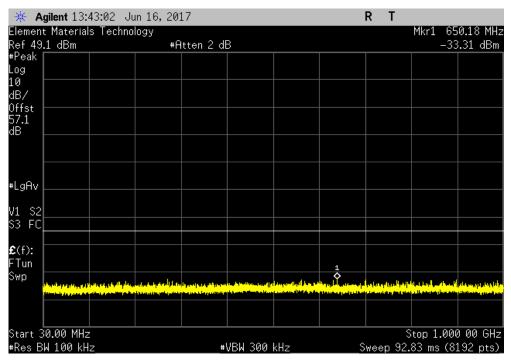
(dBm) ≤ (dBm)

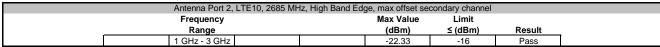
Result

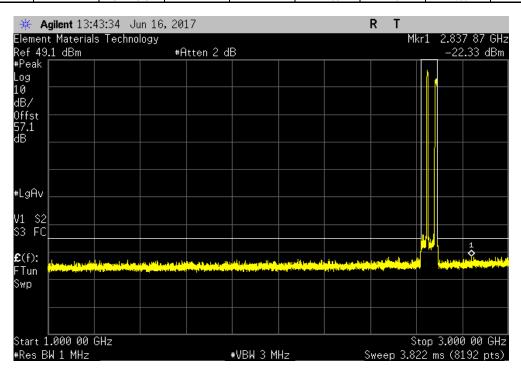
30 MHz - 1 GHz

-33.31
-16

Pass







Report No. KMWC0080 192/203



TbtTx 2017.04.18

Antenna Port 2, LTE10, 2685 MHz, High Band Edge, max offset secondary channel

Frequency

Max Value

Limit

Range

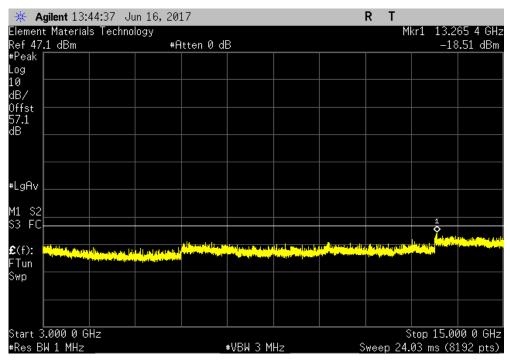
(dBm) ≤ (dBm)

Result

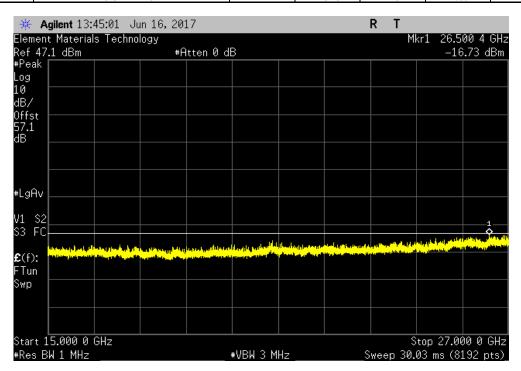
3 GHz - 15 GHz

-18.51
-16

Pass



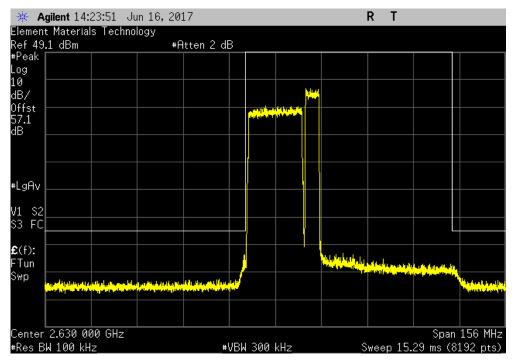
Antenna Port 2, LTE10, 2685 MHz, High Band Edge, max offset secondary channel			
Frequency	Max Value	Limit	
Range	(dBm)	≤ (dBm)	Result
15 GHz - 27 GHz	-16.73	-16	Pass



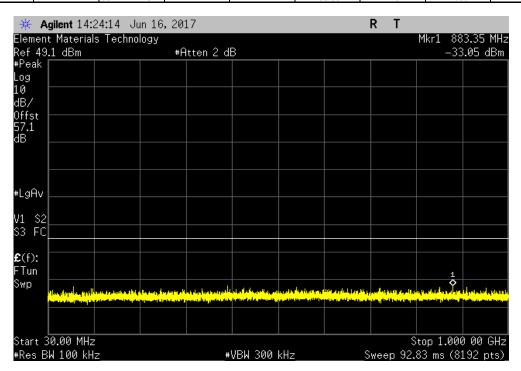
Report No. KMWC0080 193/203



					TbtTx 2017.04.18	XMit 2017.02.08
Antenna Port 2, LTE20, 26	630 MHz, Low Band Ed	ge, adjacent seco	ondary channel			
Frequency		Max Value	Limit			
Range		(dBm)	≤ (dBm)	Result		
Fundamental		N/A	N/A	N/A	Í	



Antenna Port 2, LTE20, 2630 MHz, Low Band Edge, adjacent secondary channel			
Frequency	Max Value	Limit	
Range	(dBm)	≤ (dBm)	Result
30 MHz - 1 GHz	-33.05	-16	Pass



Report No. KMWC0080 194/203



TbtTx 2017.04.18

Antenna Port 2, LTE20, 2630 MHz, Low Band Edge, adjacent secondary channel

Frequency

Max Value

Limit

Range

(dBm) ≤ (dBm)

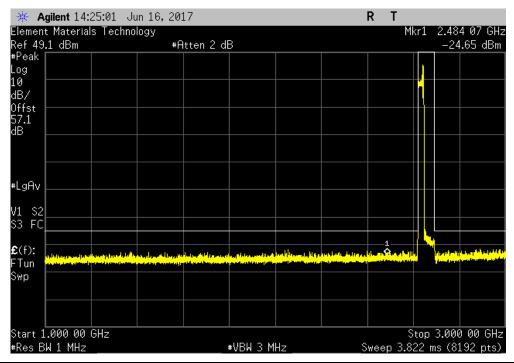
Result

1 GHz - 3 GHz

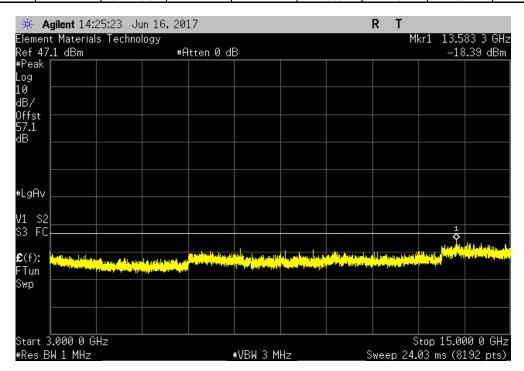
-24.65

-16

Pass



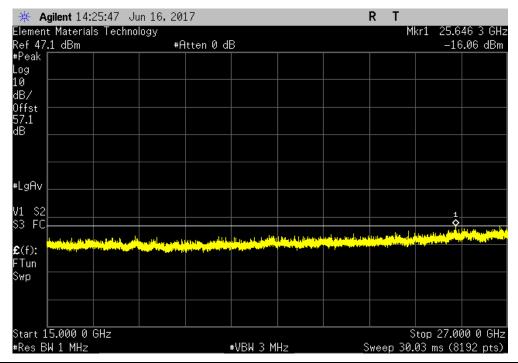
Antenna Port 2, LTE20, 2630 M	Hz, Low Band Ed	ge, adjacent seco	ondary channel		
Frequency		Max Value	Limit		
Range		(dBm)	≤ (dBm)	Result	
3 GHz - 15 GHz		-18.39	-16	Pass	

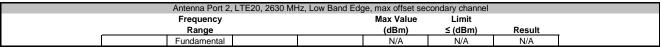


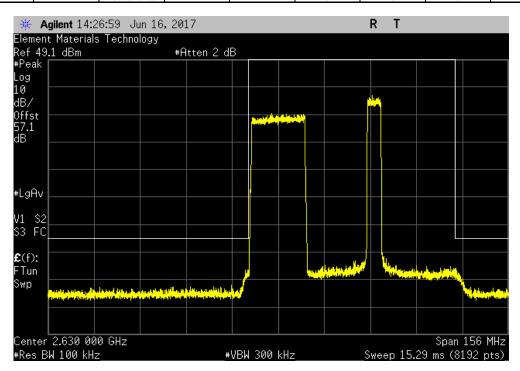
Report No. KMWC0080 195/203



				TbtTx 2017.04.18	XMit 2017.02.08
Antenna Port 2, LTE20, 2630 M	Hz, Low Band Edge, adjacent sec	ondary channel			
Frequency	Max Value	Limit			
Range	(dBm)	≤ (dBm)	Result		
15 CHz - 27 CHz	-16.06	-16	Dace		







Report No. KMWC0080 196/203



TbtTx 2017.04.18

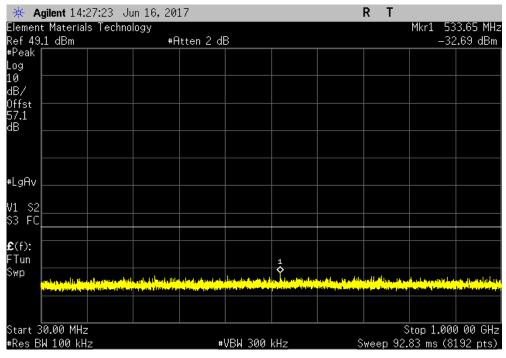
Antenna Port 2, LTE20, 2630 MHz, Low Band Edge, max offset secondary channel

Frequency

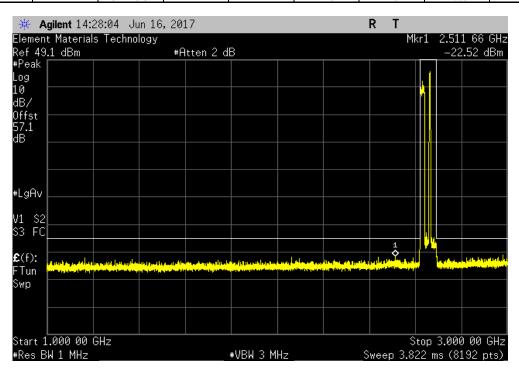
Max Value
Limit

Range
(dBm) ≤ (dBm)
Result

30 MHz - 1 GHz
-32.69
-16
Pass



Antenna Port 2, LTE20, 2630 MHz, Low Band Edge, max offset secondary channel						
	Frequency		Max Value	Limit		
	Range		(dBm)	≤ (dBm)	Result	
	1 GHz - 3 GHz		-22.52	-16	Pass	l



Report No. KMWC0080 197/203



TbtTx 2017.04.18

Antenna Port 2, LTE20, 2630 MHz, Low Band Edge, max offset secondary channel

Frequency

Max Value

Limit

Range

(dBm)

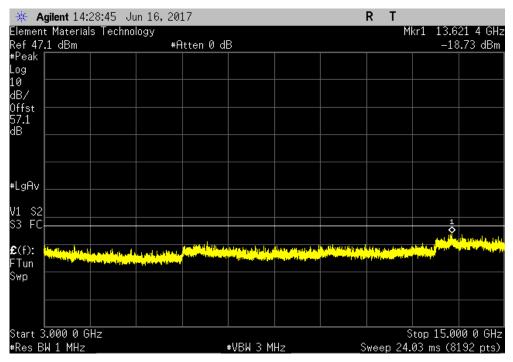
Sesult

3 GHz - 15 GHz

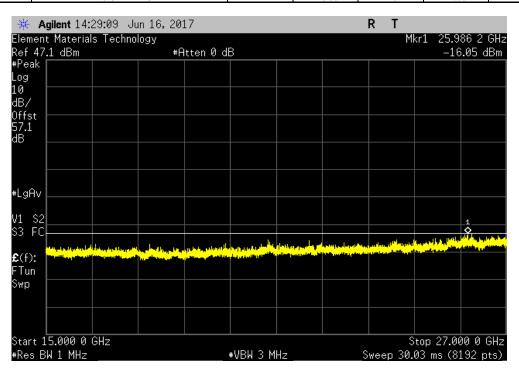
-18.73

-16

Pass



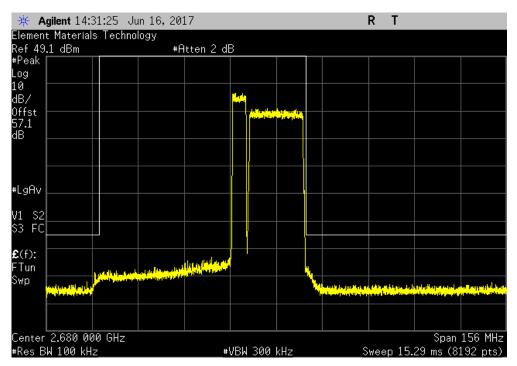
Antenna Port 2, LTE20, 2630 MHz, Low Band Edge, max offset secondary channel			
Frequency	Max Value	Limit	
Range	(dBm)	≤ (dBm)	Result
15 GHz - 27 GHz	-16.05	-16	Pass



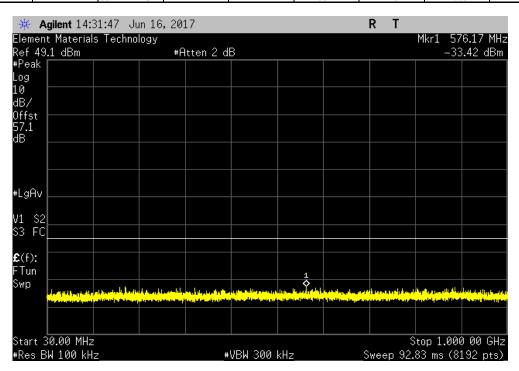
Report No. KMWC0080 198/203



				TbtTx 2017.04.18	XMit 2017.02.08
Antenna Port 2, LTE20, 2680 MHz	, High Band Edge, adjacent seco	ondary channel			
Frequency	Max Value	Limit			
Range	(dBm)	≤ (dBm)	Result		
Fundamental	N/A	N/A	N/A		



Antenna Port 2, LTE20, 2680 MHz, High Band Edge, adjacent secondary channel			
Frequency	Max Value	Limit	
Range	(dBm)	≤ (dBm)	Result
30 MHz - 1 GHz	-33.42	-16	Pass



Report No. KMWC0080 199/203



TbtTx 2017.04.18

Antenna Port 2, LTE20, 2680 MHz, High Band Edge, adjacent secondary channel

Frequency

Max Value

Limit

Range

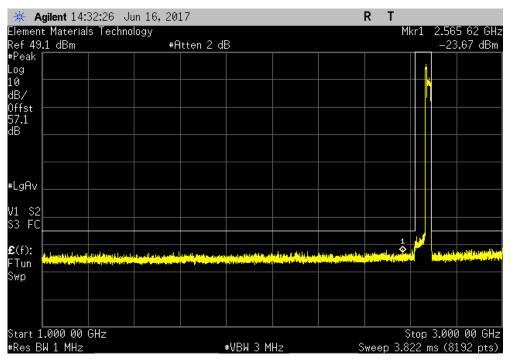
(dBm) ≤ (dBm)

Result

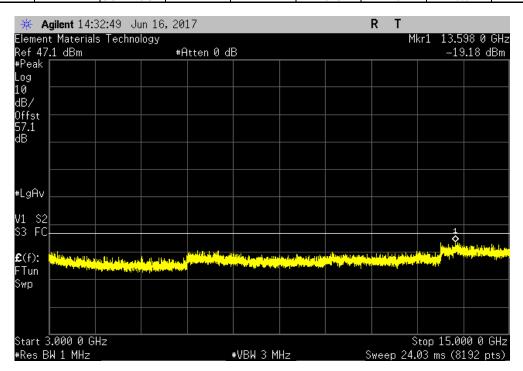
1 GHz - 3 GHz

-23.67
-16

Pass



Antenna Port 2, LTE20, 2680 MHz, High Band Edge, adjacent secondary channel			
Frequency	Max Value	Limit	
Range	(dBm)	≤ (dBm)	Result
3 GHz - 15 GHz	-19.18	-16	Pass

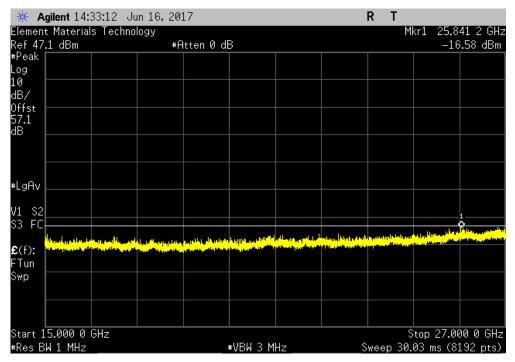


Report No. KMWC0080 200/203

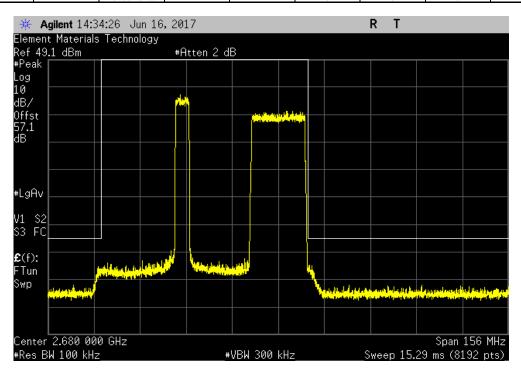


TbtTx 2017.04.18

Antenna Port 2, LTE20, 2680 MHz, High Band Edge, adjacent secondary channel					
Frequency	Max Value Lir	nit			
Range	(dBm) ≤ (d	Bm) Result			
15 GHz - 27 GHz	-16.58 -1	6 Pass			



Antenna Port 2, LTE20, 2680 MHz, High Band Edge, max offset secondary channel				
Frequency		Max Value	Limit	
Range		(dBm)	≤ (dBm)	Result
Fundamental		N/A	N/A	N/A



Report No. KMWC0080 201/203



Antenna Port 2, LTE20, 2680 MHz, High Band Edge, max offset secondary channel

Frequency

Range

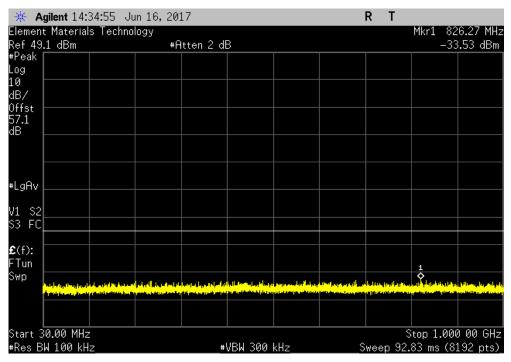
(dBm) ≤ (dBm) Result

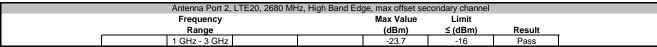
30 MHz - 1 GHz

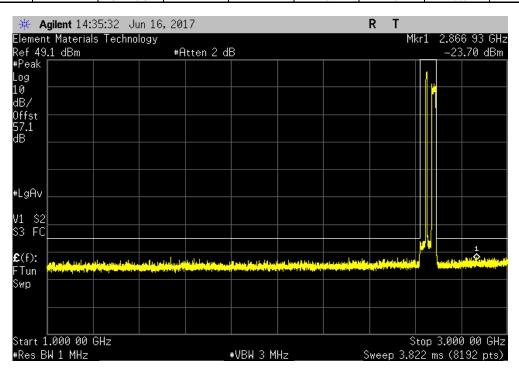
-33.53

-16

Pass







Report No. KMWC0080 202/203



TbtTx 2017.04.18

Antenna Port 2, LTE20, 2680 MHz, High Band Edge, max offset secondary channel

Frequency

Max Value

Limit

Range

(dBm)

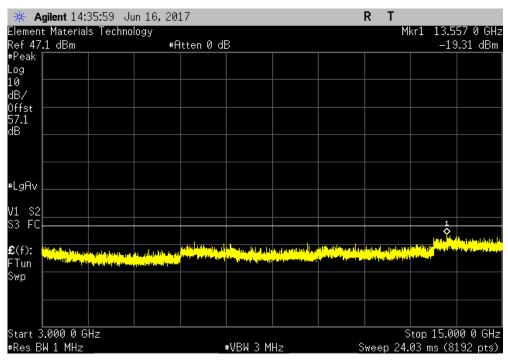
S (dBm)

Result

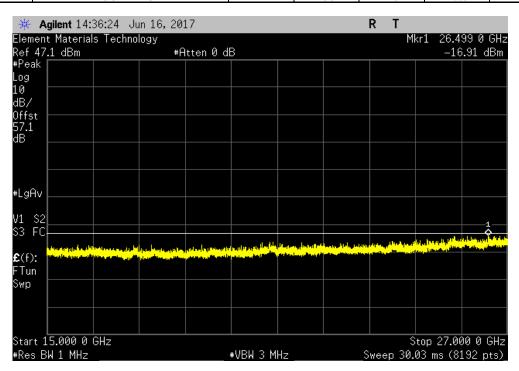
3 GHz - 15 GHz

-19.31
-16

Pass



Antenna Port 2, LTE20, 2680 MHz,	High Band Edge, max offset se	condary channel	
Frequency	Max Value	Limit	
Range	(dBm)	≤ (dBm)	Result
15 GHz - 27 GHz	-16.91	-16	Pass



Report No. KMWC0080 203/203