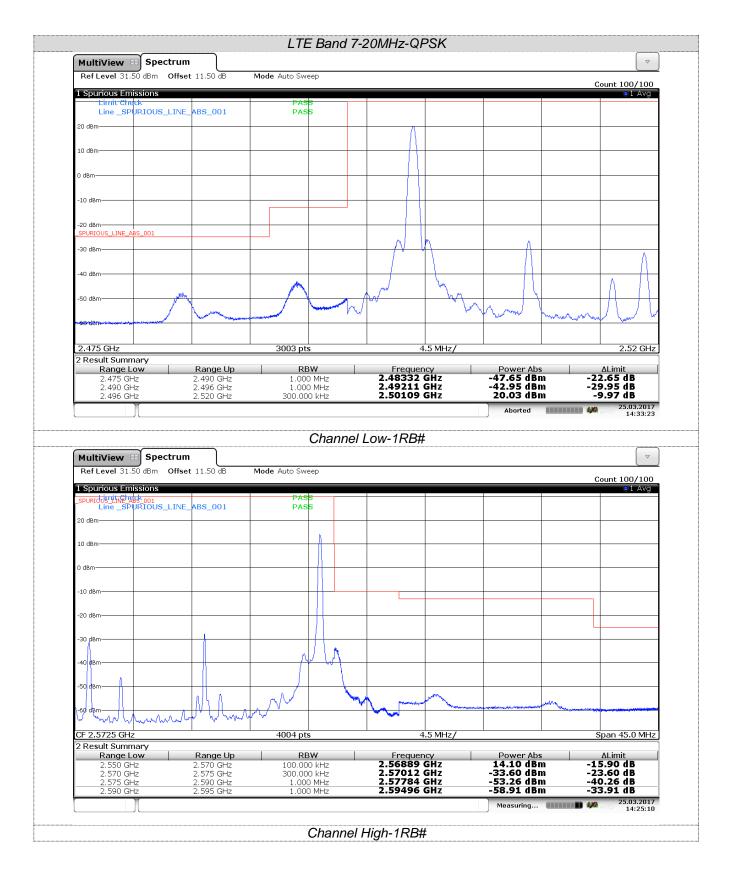
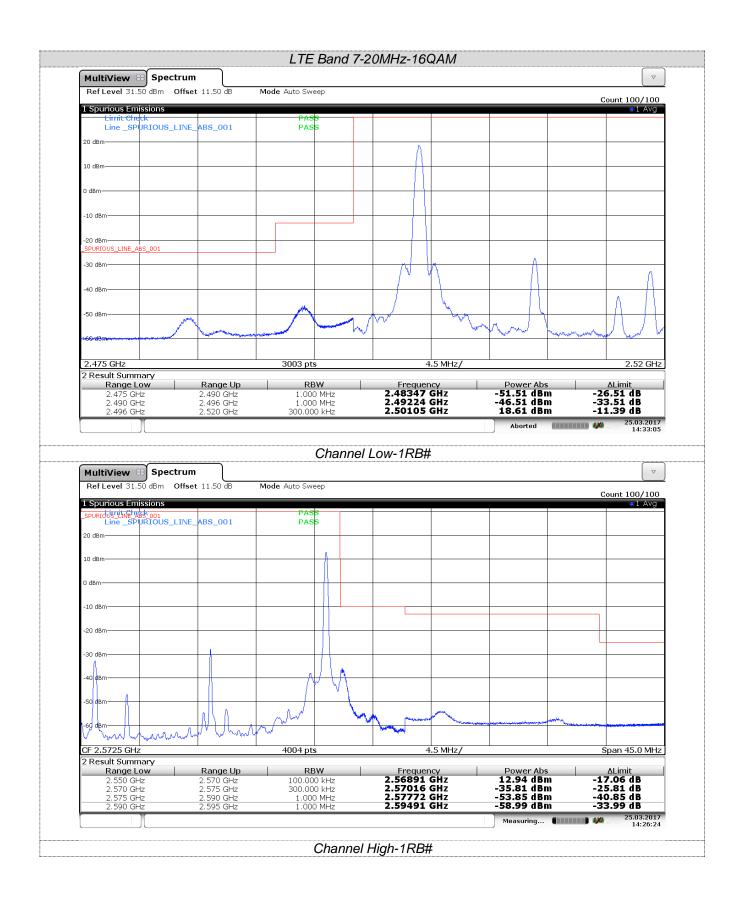


	trum	uta da Anta Con			
Ref Level 31.50 dBm	Offset 11.50 dB M	Mode Auto Sweep			Count 100/100
1 Spurious Emissions Limit Check		PASS			●1 Avg
Line _SPURIOUS_	LINE_ABS_001	PASS			
20 dBm					
10 dBm					
			materianterianterianteria	and a stand of the second s	1
0 dBm					
-10 dBm					
00 40					
-20 dBm SPURIOUS_LINE_ABS_001					
-30 dBm		and the second s	(martin the second second		mandamentary
-40 dBm		A Marked Programmer V			
-ro abii	a long the second data was been and the particular				
-50 dBm	and the second				
-60 dBm					
2.475 GHz	1	3003 pts	4.5 MHz/		2.52 GHz
2 Result Summary Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz 2.490 GHz	2.490 GHz 2.496 GHz	1.000 MHz 1.000 MHz	2.48999 GHz 2.49589 GHz	-34.38 dBm -25.99 dBm	-9.38 dB -12.99 dB
2.496 GHz	2.520 GHz	300.000 kHz	2.50253 GHz	1.65 dBm	-28.35 dB
	trum	Channel I	.ow-Full RB#	Measuring 🕊	25.03.2017 14:38:06
Ref Level 31.50 dBm	trum				Count 100/100
Ref Level 31.50 dBm 1 Spurious Emissions	:trum Offset 11.50 dB M	Channel I Mode Auto Sweep PASB			14:38:06
Ref Level 31.50 dBm 1 Spurious Emissions 	:trum Offset 11.50 dB M	Channel L Mode Auto Sweep			14:38:06
Ref Level 31.50 dBm 1 Spurious Emissions	:trum Offset 11.50 dB M	Channel I Mode Auto Sweep PASB			14:38:06
Ref Level 31.50 dBm 1 Spurious Emissions SPURIOUS THE RES 001 Line _SPURIOUS_	:trum Offset 11.50 dB M	Channel I Mode Auto Sweep PASB			14:38:06
Ref Level 31.50 dBm 1 Spurious Emissions spurious tine task ont Line _SPURIOUS_ 20 dBm-	:trum Offset 11.50 dB M	Channel I Mode Auto Sweep PASB			14:38:06
Ref Level 31.50 dBm 1 Spurious Emissions 	:trum Offset 11.50 dB M	Channel I Mode Auto Sweep PASB			14:38:06
Ref Level 31.50 dBm 1 Spurious Emissions spurious Emissions Line_SPURIOUS_ 20 dBm 10 dBm 0 dBm	:trum Offset 11.50 dB M	Channel I Mode Auto Sweep PASB			14:38:06
Ref Level 31.50 dBm 1 Spurious Emissions 	:trum Offset 11.50 dB M	Channel I Mode Auto Sweep PASB			14:38:06
Ref Level 31.50 dBm 1 Spurious Emissions _spurious Emissions _spurios Emissions _spurio	:trum Offset 11.50 dB M	Channel I Mode Auto Sweep PASB			14:38:06
Ref Level 31.50 dBm I Spurious Emissions SPURIOUS THE RESOUND O dBm 0 dBm -20 dBm -20 dBm -30 dBm	:trum Offset 11.50 dB M	Channel I Mode Auto Sweep PASB			14:38:06
Ref Level 31.50 dBm I Spurious Emissions Spurious the task on Line SPURIOUS 20 dBm 0 dBm -20 dBm -20 dBm	:trum Offset 11.50 dB M	Channel I Mode Auto Sweep PASB			14:38:06
Ref Level 31.50 dBm I Spurious Emissions SPURIOUS THE RESOUND O dBm 0 dBm -20 dBm -20 dBm -30 dBm	:trum Offset 11.50 dB M	Channel I Mode Auto Sweep PASS PASS			14:38:06
Ref Level 31.50 dBm 1 Spurious Emissions	:trum Offset 11.50 dB M	Channel I Mode Auto Sweep PASS PASS			14:38:06
Ref Level 31.50 dBm 1 Spurious Emissions _spurious Emissions _spuri	:trum Offset 11.50 dB M	Channel I Mode Auto Sweep PASS PASS			14:38:06
Ref Level 31.50 dBm 1 Spurious Emissions _spurious fine rest on _Line _SPURIOUS_ 20 dBm 10 dBm -0 dBm -20 dBm -30 dBm -40 dBm -50 dBm -50 dBm -20 dBm -30 dBm -30 dBm -20 dBm -30 dBm -30 dBm -50 dBm -50 dBm -50 dBm -50 dBm -50 dBm	:trum Offset 11.50 dB M	Channel I Mode Auto Sweep PASS PASS			14:38:06
Ref Level 31.50 dBm I Spurious Emissions SPURIOUS Emissions Control of the task of task o	Etrum Offset 11.50 dB	Channel I Mode Auto Sweep PASS PASS 4004 pts RBW	.ow-Full RB#	Measuring	
Ref Level 31.50 dBm I Spurious Emissions _spurious Emissions _spurous Emissions _spurou	:trum Offset 11.50 dB N	Channel L Mode Auto Sweep PASS PASS	.ow-Full RB#	Measuring Power Abs -6.16 dBm	
Ref Level 31.50 dBm 1 Spurious Emissions	Etrum Offset 11.50 dB	Channel I Mode Auto Sweep PASS PASS 4004 pts 4004 pts RBW 100.000 kHz 300.000 kHz 1.000 kHz 1.	.ow-Full RB#	Measuring	
Ref Level 31.50 dBm I Spurious Emissions _spurious Emissions _spurous Emissions _spurou	Etrum Offset 11.50 dB	Channel I Mode Auto Sweep PASS PASS AUTORNAL AUTORN	.ow-Full RB#	Measuring Power Abs -6.16 dBm -39.63 dBm -39.23 dBm	



MultiView 🔠 Spectr					
Ref Level 31.50 dBm Of	fset 11.50 dB	Mode Auto Sweep			Count 100/100
1 Spurious Emissions Limit Check		PASS			●1 Avg
Line _SPURIOUS_LI	NE_ABS_001	PASS			
20 dBm					
10 dBm					
0 dBm				المحسلين والمحمد والمحسومة والمحسور والمح	manana
-10 dBm					
-20 dBm					
_SPURIOUS_LINE_ABS_001					
-30 dBm	مينييونير. مورسيني		avery when and		~
	and the office of the owner of the owner of the				
-40 dBm					
-50 dBm					
and the second state of th					
-60 dBm					
2.475 GHz		3003 pts	4.5 MHz/		2.52 GHz
2 Result Summary					
2.475 GHz	2.490 GHz	1.000 MHz	Erequency 2.48987 GHz	Power Abs -29.72 dBm	∆Limit -4.72 dB
2.490 GHz 2.496 GHz	2.496 GHz 2.520 GHz	1.000 MHz 300.000 kHz	2.49462 GHz 2.51270 GHz	-26.68 dBm 1.44 dBm	-13.68 dB -28.56 dB
			Low-Full RB#	Aborted	25.03.2017 14:31:56
MultiView 😁 Spectri Ref Level 31.50 dBm Of	um			Aborted	14:31:56 ▼ Count 100/100
MultiView 😁 Spectra Ref Level 31.50 dBm Of 1 Spurious Emissions	um fset 11.50 dB	Channel		Aborted	14:31:56
MultiView B Spectra Ref Level 31.50 dBm Of 1 Spurious Emissions SPURIOUS LINE 1485 001 Line _SPURIOUS_LIN	um fset 11.50 dB	Channel Mode Auto Sweep		Aborted	14:31:56 ▼ Count 100/100
MultiView 😁 Spectra Ref Level 31.50 dBm Of 1 Spurious Emissions	um fset 11.50 dB	Channel Mode Auto Sweep PASS		Aborted	14:31:56 ▼ Count 100/100
MultiView B Spectra Ref Level 31.50 dBm Of 1 Spurious Emissions SPURIOUS LINE 1485 001 Line _SPURIOUS_LIN	um fset 11.50 dB	Channel Mode Auto Sweep PASS		Aborted	14:31:56 ▼ Count 100/100
MultiView B Spectri Ref Level 31.50 dBm Of Spurious Emissions Spurious US (Intel 788, 001 Line Spurious_LII 20 dBm 10 dBm	um fset 11.50 dB	Channel Mode Auto Sweep PASS		Aborted	14:31:56 ▼ Count 100/100
MultiView B Spectru Ref Level 31.50 dBm Of Spurious Emissions Spurious Emissions Line SPURIOUS_LIT 20 dBm	um fset 11.50 dB	Channel Mode Auto Sweep PASS		Aborted	14:31:56 ▼ Count 100/100
MultiView B Spectri Ref Level 31.50 dBm Of Spurious Emissions Spurious US (Intel 788, 001 Line Spurious_LII 20 dBm 10 dBm	um fset 11.50 dB NE_ABS_001	Channel Mode Auto Sweep PASS		Aborted	14:31:56 ▼ Count 100/100
MultiView B Spectra Ref Level 31.50 dBm Of 1 Spurious Emissions sPURIOUS LINE SPURIOUS_LIN 20 dBm 10 dBm -10 dBm	um fset 11.50 dB NE_ABS_001	Channel Mode Auto Sweep PASS PASS		Aborted	14:31:56 ▼ Count 100/100
MultiView B Spectra Ref Level 31.50 dBm Of 1 Spurious Emissions SPURICIES THE PASS ON Line_SPURIOUS_LIT 20 dBm 10 dBm 0 dBm	um fset 11.50 dB NE_ABS_001	Channel Mode Auto Sweep PASS PASS		Aborted	14:31:56 ▼ Count 100/100
MultiView B Spectra Ref Level 31.50 dBm Of 1 Spurious Emissions sPURIOUS LINE SPURIOUS_LIN 20 dBm 10 dBm -10 dBm	um fset 11.50 dB NE_ABS_001	Channel Mode Auto Sweep PASS PASS		Aborted	14:31:56 ▼ Count 100/100
MultiView B Spectri Ref Level 31.50 dBm Of 1 Spurious Emissions SPURIOUS UNE VAS 001 Line SPURIOUS_LII 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm	um fset 11.50 dB NE_ABS_001	Channel Mode Auto Sweep PASS PASS		Aborted	14:31:56 ▼ Count 100/100
MultiView B Spectri Ref Level 31.50 dBm Of Spurious Emissions spurious	um fset 11.50 dB NE_ABS_001	Channel Mode Auto Sweep PASS PASS		Aborted	14:31:56 ▼ Count 100/100
MultiView B Spectri Ref Level 31.50 dBm Of 1 Spurious Emissions SPURIOUS UNE VAS 001 Line SPURIOUS_LII 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm	um fset 11.50 dB NE_ABS_001	Channel Mode Auto Sweep PASS PASS		Aborted	14:31:56 ▼ Count 100/100
MultiView B Spectri Ref Level 31.50 dBm Of Spurious Emissions spurious Emissions spurious Emissions spurious Line Spurious_LII 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm	um fset 11.50 dB NE_ABS_001	Channel Mode Auto Sweep PASS PASS		Aborted	14:31:56 ▼ Count 100/100
MultiView Spectri Ref Level 31.50 dBm Of 1 Spurious Emissions SPURIOUS LINE SPURIOUS_LIN 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -40 dBm	um fset 11.50 dB NE_ABS_001	Channel Mode Auto Sweep PASS PASS		Aborted	14:31:56 ▼ Count 100/100
MultiView B Spectri Ref Level 31.50 dBm Of Spurious Emissions spurious Emissions s	um fset 11.50 dB NE_ABS_001	Channel Mode Auto Sweep PASS PASS		Aborted	14:31:56 ▼ Count 100/100
MultiView Spectri Ref Level 31.50 dBm Of 1 Spurious Emissions SPURIOUS LINE SPURIOUS_LINE 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -50 dBm -50 dBm -50 dBm -50 dBm -50 dBm -50 dBm -50 dBm -50 dBm -50 dBm	um fset 11.50 dB	Channel Mode Auto Sweep PASS PASS PASS AUTO	I Low-Full RB#		Count 100/100 Count 100/100 1 Avg
MultiView B Spectri Ref Level 31.50 dBm Of 1 Spurious Emissions SPURIOUS UNE TABLE 001 Line SPURIOUS_LII 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm -50 dBm -60 dBm -50	um fset 11.50 dB NE_ABS_001 	Channel Mode Auto Sweep PASS PASS PASS AUTORNAL AU	/ Low-Full RB#	Power Abs -6.08 dBm	Count 100/100 Count 100/100 1 Avg
MultiView B Spectri Ref Level 31.50 dBm Of 1 Spurious Emissions spuridus fine responses purious Emissions spurious Emissi	um fset 11.50 dB NE_ABS_001 	Channel Mode Auto Sweep PASS PASS AU AU AU AU AU AU AU AU AU AU	Low-Full RB#	Power Abs -6.08 dBm -38.89 dBm -38.92 dBm	Count 100/100 Count 100/100 1 Avg Count 100/100 Count 100/100
MultiView B Spectri Ref Level 31.50 dBm Of Spurious Emissions spurious Emissions s	um fset 11.50 dB NE_ABS_001 	Channel Mode Auto Sweep PASS PASS PASS A A A A A A A A A A A A	I Low-Full RB#	Power Abs -6.08 dBm -38.89 dBm	

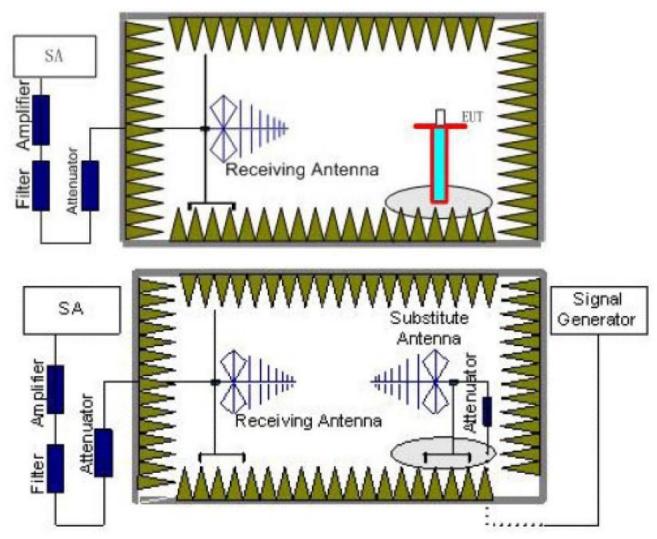


MultiView 😁 Spect		Mada Auto O			
RefLevel 31.50 dBm (Dffset 11.50 dB	Mode Auto Sweep			Count 100/100
1 Spurious Emissions		PASS			●1 Avg
Line _SPURIOUS_L	INE_ABS_001	PASS			
20 dBm					
10 dBm					
0 dBm					
o ubiii				aline for the left of the second s	free failed as a failed and the second failed and the second failed and the second failed and the second failed
-10 dBm					
-20 dBm					
_SPURIOUS_LINE_ABS_001					
-30 dBm		and the second	and malender have made		
-40 dBm	and the second s	PT	Avenue o		
	Server and the				
-50 dBm					
-60 dBm					
2.475 GHz 2 Result Summary		3003 pts	4.5 MHz/		2.52 GHz
Range Low 2.475 GHz	Range Up 2.490 GHz	RBW 1.000 MHz	Frequency 2.48977 GHz	Power Abs -32.84 dBm	∆Limit - 7.84 dB
2.490 GHz 2.496 GHz	2.490 GHz 2.496 GHz 2.520 GHz	1.000 MHz 300.000 kHz	2.49589 GHz 2.51754 GHz	-29.28 dBm 0.35 dBm	-16.28 dB -29.65 dB
2.490 0112	2,520 0112	300,000 KHZ	2102704 0112	0155 4511	05 00 0013
MultiView 😁 Spect	trum	Channel	Low-Full RB#	Aborted	25.03.2017 14:32:27
MultiView 🎛 Spect Ref Level 31.50 dBm (Channel	Low-Full RB#	Aborted	14:32:27
Ref Level 31.50 dBm (Dffset 11.50 dB	Mode Auto Sweep	Low-Full RB#	Aborted	
Ref Level 31.50 dBm (1 Spurious Emissions _spurious The Tass oot _Line _SPURIOUS_L	Dffset 11.50 dB		Low-Full RB#	Aborted	14:32:27
Ref Level 31.50 dBm (Dffset 11.50 dB	Mode Auto Sweep	Low-Full RB#	Aborted	14:32:27
Ref Level 31.50 dBm (1 Spurious Emissions _spurious The Tass oot _Line _SPURIOUS_L	Dffset 11.50 dB	Mode Auto Sweep	Low-Full RB#	Aborted	14:32:27
Ref Level 31.50 dBm (1 Spurious Emissions _spuridus/fine/bas-oo1 Line _SPURIOUS_I 20 dBm 10 dBm	Dffset 11.50 dB	Mode Auto Sweep	Low-Full RB#	Aborted	14:32:27
Ref Level 31.50 dBm 1 1 Spurious Emissions	_INE_ABS_001	Mode Auto Sweep	Low-Full RB#	Aborted	14:32:27
Ref Level 31.50 dBm 1 1 Spurious Emissions	Dffset 11.50 dB	Mode Auto Sweep	Low-Full RB#	Aborted	14:32:27
Ref Level 31.50 dBm 1 1 Spurious Emissions	_INE_ABS_001	Mode Auto Sweep	Low-Full RB#	Aborted	14:32:27
Ref Level 31.50 dBm (1 Spurious Emissions spurious fine data on Line SPURIOUS 1 20 dBm 10 dBm -10 dBm	_INE_ABS_001	Mode Auto Sweep	Low-Full RB#	Aborted	14:32:27
Ref Level 31.50 dBm (Spurious Emissions Spurious Emissions Line_SPURIOUS_1 20 dBm 0 dBm -10 dbm	_INE_ABS_001	Mode Auto Sweep	Low-Full RB#	Aborted	14:32:27
Ref Level 31.50 dBm (1 Spurious Emissions spurious fine data on Line SPURIOUS 1 20 dBm 10 dBm -10 dBm	_INE_ABS_001	Mode Auto Sweep			14:32:27
Ref Level 31.50 dBm (1 Spurious Emissions _spurious Emissions _spurious fine Bab on _spurious 1 20 dBm _ 0 dBm 10 dBm 20 dBm 30 dBm	_INE_ABS_001	Mode Auto Sweep PASS PASS			14:32:27
Ref Level 31.50 dBm 1 Spurious Emissions	_INE_ABS_001	Mode Auto Sweep PASS PASS			14:32:27
Ref Level 31.50 dBm 1 Spurious Emissions	_INE_ABS_001	Mode Auto Sweep PASS PASS			14:32:27
Ref Level 31.50 dBm 1 Spurious Emissions _spurious fine fields on _Line_SPURIOUS_1 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -50 dBm -50 dBm -60 dBm -60 dBm	_INE_ABS_001	Mode Auto Sweep PASS PASS			14:32:27
Ref Level 31.50 dBm (Spurious Emissions Spurious Emissions Line_SPURIOUS_1 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -50 dB	Diffset 11.50 dB	Mode Auto Sweep PASS PASS Auto Sweep Auto Sw	4.5 MHz/	Power Abs	
Ref Level 31.50 dBm 1 Spurious Emissions spurious fine fields on Line _SPURIOUS_I 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -50 dBm -60 dBm -50 dBm -60 dBm -50 dBm -60 dBm -70 dBm	Diffset 11.50 dB	Mode Auto Sweep PASS PASS AUTO SWEEP AUT	4.5 MHz/	Power Abs 6.90 dBm -41.59 dBm	14:32:27 ▼ Count 100/100 ● 1 Avg <
Ref Level 31.50 dBm I Spurious Emissions 10 dBm 0 dBm -10 dbm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm 2 S70 GHz 2 Result Summary Range Low 2.570 GHz 2.570 GHz	Offset 11.50 dB INE_ABS_001 Intervention INE_ABS_001 Intervention Intervention Intervention Interventintervention Intervention	Mode Auto Sweep PASS PASS 4004 pts 4004 pts 100,000 kHz 1.000 MHz	4.5 MHz/	Power Abs -6.90 dBm -41.59 dBm -38.90 dBm	14:32:27
Ref Level 31.50 dBm I Spurious Emissions	Diffset 11.50 dB	Mode Auto Sweep PASS PASS AUTORNAL AUTO	4.5 MHz/	Power Abs 6.90 dBm -41.59 dBm	14:32:27 ▼ Count 100/100 ●1 Avg ●1 Avg ■1 Avg ■25:90 dB -31.28 dB

5.5. ERP AND EIRP

LIMIT

LTE Band 2: EIRP<2W ,LTE Band 4:EIRP<1W,LTE Band 5:ERP<7W,LTE Band 7:EIPR<2W TEST CONFIGURATION



TEST PROCEDURE

- EUT was placed on a 0.8 meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna shall be moved from 1m to 4m. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all transmit frequencies in three channels (High, Middle, Low) were measured with peak detector.
- 2. A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
- 3. The EUT is then put into continuously transmitting mode at its maximum power level during the test.Set Test Receiver or Spectrum RBW=1MHz,VBW=3MHz for above 1GHz and RBW=100kHz,VBW=300kHz for 30MHz to 1GHz,, And the maximum value of the receiver should be recorded as (Pr).
- 4. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest isconnected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the

substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.

- A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (Pcl) ,the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test.
- The measurement results are obtained as described below: Power(EIRP)=PMea- PAg - Pcl + Ga We used SMF100A micowave signal generator which signal level can up to 33dBm,so we not used power Amplifier for substituation test; The measurement results are amend as described below: Power(EIRP)=PMea- Pcl + Ga
- This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.
 ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP-2.15dBi.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

☑ Passed □ Not Applicable

LTE Band 2-1.4MHz								
Modulation	Channel	EIRP	(dBm)	Limit (dBm)	Result			
Modulation	Channel	Vertical	Horizontal		Result			
	Low	20.47	18.52					
QPSK	Mid	20.65	18.44		PASS			
	High	20.58	18.49	33.00				
	Low	21.32	18.37	33.00				
16QAM	Mid	21.28	18.58		PASS			
	High	20.69	18.63					

LTE Band 2-3MHz								
Modulation	Channel	EIRP	EIRP (dBm)		Result			
wouldtion	Channel	Vertical	Horizontal	Limit (dBm)	Result			
	Low	20.52	18.44					
QPSK	Mid	20.69	17.84		PASS			
	High	20.16	17.26	22.00				
	Low	21.14	18.57	33.00				
16QAM	Mid	21.62	18.08		PASS			
	High	20.28	17.29					

	LTE Band 2-5MHz								
Modulation	Channel	EIRP	(dBm)	Limit (dPm)	Result				
wouldtion	Channel	Vertical	Horizontal	Limit (dBm)	Result				
	Low	20.22	18.05						
QPSK	Mid	19.75	17.88		PASS				
	High	19.65	17.84	22.00					
	Low	19.39	18.05	33.00					
16QAM	Mid	18.92	17.88		PASS				
	High	20.31	17.99						

LTE Band 2-10MHz								
Modulation	Channel	EIRP	(dBm)	Limit (dBm)	Result			
wouldtion	Channer	Vertical	Horizontal		Result			
	Low	19.52	17.06					
QPSK	Mid	19.46	17.58		PASS			
	High	19.77	17.43	22.00				
	Low	19.38	16.40	33.00				
16QAM	Mid	19.71	17.72		PASS			
	High	19.55	17.18					

	LTE Band 2-15MHz								
Modulation	Channel	EIRP	(dBm)	Limit (dRm)	Result				
wouldtion	Channel	Vertical	Horizontal	Limit (dBm)	Result				
	Low	19.52	17.58						
QPSK	Mid	19.66	16.85		PASS				
	High	19.43	17.44	22.00					
	Low	19.01	17.58	33.00					
16QAM	Mid	19.66	16.85		PASS				
	High	19.30	17.44						

LTE Band 2-20MHz								
Modulation	Channel	EIRP	EIRP (dBm)		Result			
wooulation	Channel	Vertical	Horizontal	Limit (dBm)	Result			
	Low	19.52	17.32					
QPSK	Mid	19.08	17.43		PASS			
	High	19.43	17.25	33.00				
	Low	19.05	17.22	33.00				
16QAM	Mid	18.38	17.25	-	PASS			
	High	19.50	17.27					

	LTE Band 4-1.4MHz								
Modulation	Channel	EIRP	(dBm)	Limit (dPm)	Result				
wouldtion	Channel	Vertical	Horizontal	Limit (dBm)	Result				
	Low	21.36	19.32						
QPSK	Mid	21.43	19.08		PASS				
	High	21.58	19.45	20.00					
	Low	20.88	19.44	30.00					
16QAM	Mid	20.91	18.97		PASS				
	High	21.40	19.34						

	LTE Band 4-3MHz								
Modulation	Channel	EIRP	(dBm)	Limit (dBm)	Result				
wouldtion	Channel	Vertical	Horizontal		Result				
	Low	20.52	18.43						
QPSK	Mid	20.35	18.43		PASS				
	High	20.67	18.25	20.00					
	Low	20.01	18.32	30.00					
16QAM	Mid	19.58	18.24		PASS				
	High	20.75	18.27						

	LTE Band 4-5MHz								
Modulation	Channel	EIRP	(dBm)	Limit (dBm)	Result				
Modulation	Channel	Vertical	Horizontal		Result				
	Low	20.42	18.22						
QPSK	Mid	20.06	18.32		PASS				
	High	20.12	18.43	20.00					
	Low	19.95	18.12	30.00					
16QAM	Mid	20.53	18.41		PASS				
	High	19.75	18.35						

LTE Band 4-10MHz								
Modulation	Channel	EIRP	(dBm)	Limit (dPm)	Result			
wouldtion	Channel	Vertical	Horizontal	Limit (dBm)	Result			
	Low	20.25	18.06					
QPSK	Mid	20.17	17.49		PASS			
	High	20.32	17.58	20.00				
	Low	20.12	18.07	30.00	PASS			
16QAM	Mid	20.16	17.48					
	High	20.17	17.57					

	LTE Band 4-15MHz								
Modulation	Channel	EIRP	(dBm)	Limit (dPm)	Result				
Modulation	Modulation Channel Vertical Horizontal	Horizontal	Limit (dBm)	Result					
	Low	20.25	18.32						
QPSK	Mid	20.43	17.43		PASS				
	High	20.36	17.52	20.00					
	Low	19.68	18.32	30.00					
16QAM	Mid	20.43	17.43		PASS				
	High	20.21	17.52						

	LTE Band 4-20MHz								
Modulation	Channel	EIRP	(dBm)	Limit (dBm)	Result				
wouldton	Channel	Vertical	Horizontal		Result				
	Low	20.25	17.65						
QPSK	Mid	20.14	17.43		PASS				
	High	19.86	17.52						
	Low	19.72	17.54		PASS				
16QAM	Mid	19.35	17.23						
	High	20.61	17.68						

	LTE Band 5-1.4MHz								
Modulation	Channel	ERP	(dBm)	Limit (dRm)	Desult				
Wodulation	Channel	Vertical	Horizontal	Limit (dBm)	Result				
	Low	20.25	18.52						
QPSK	Mid	20.14	18.42	-	PASS				
	High	20.31	17.63						
	Low	20.22	18.54	38.50					
16QAM	Mid	20.16	18.40	1	PASS				
	High	20.21	17.65						

LTE Band 5-3MHz								
Modulation	Channel	ERP	(dBm)	Limit (dDm)	Decult			
wodulation	Channel	Vertical	Horizontal	Limit (dBm)	Result			
	Low	20.12	18.32					
QPSK	Mid	20.44	18.15		PASS			
	High	20.25	18.43	29.50				
	Low	20.02	18.30	- 38.50				
16QAM	Mid	20.29	18.11		PASS			
	High	20.25	18.43					

	LTE Band 5-5MHz								
Modulation	Channel	ERP	(dBm)	Limit (dPm)	Result				
Modulation	Vertical Horizontal	Limit (dBm)	Result						
	Low	19.85	17.65						
QPSK	Mid	19.46	17.52		PASS				
	High	20.15	18.43	29.50					
	Low	19.61	17.70	- 38.50					
16QAM	Mid	19.65	17.48		PASS				
	High	20.33	18.47						

	LTE Band 5-10MHz								
Modulation	Channel	ERP	(dBm)	Limit (dBm)	Result				
wouldton	Channel	Vertical	Horizontal		Result				
	Low	19.85	17.46						
QPSK	Mid	19.66	17.36	38.50	PASS				
	High	19.74	17.52						
	Low	20.12	17.76		PASS				
16QAM	Mid	19.85	17.44						
	High	20.02	18.51						

	LTE Band 7-5MHz								
Modulation	Channel	EIRP	(dBm)	Limit (dRm)	Result				
Wodulation	Modulation Channel Vertical	Horizontal	Limit (dBm)	Result					
	Low	20.32	18.59						
QPSK	Mid	20.43	18.43		PASS				
	High	20.52	18.27						
	Low	20.21	18.68	- 33.00					
16QAM	Mid	20.51	18.35		PASS				
	High	20.15	18.35						

LTE Band 7-10MHz								
Modulation	Channel	EIRP	(dBm)	Limit (dDm)	Dec. II			
wouldtion	Channel	Vertical	Horizontal	Limit (dBm)	Result			
	Low	19.52	16.44					
QPSK	Mid	19.74	16.75		PASS			
	High	19.85	17.38	22.00				
	Low	19.15	16.36	33.00 				
16QAM	Mid	19.19	16.61		PASS			
	High	19.89	17.39					

	LTE Band 7-15MHz								
Modulation	Channel	EIRP	(dBm)	Limit (dPm)	Result				
wouldtion	Vertical Horizontal	Limit (dBm)	Result						
	Low	19.41	17.06						
QPSK	Mid	19.52	16.52		PASS				
	High	19.36	16.49						
	Low	18.79	17.20	— 33.00 — —					
16QAM	Mid	20.01	16.41		PASS				
	High	19.83	16.59						

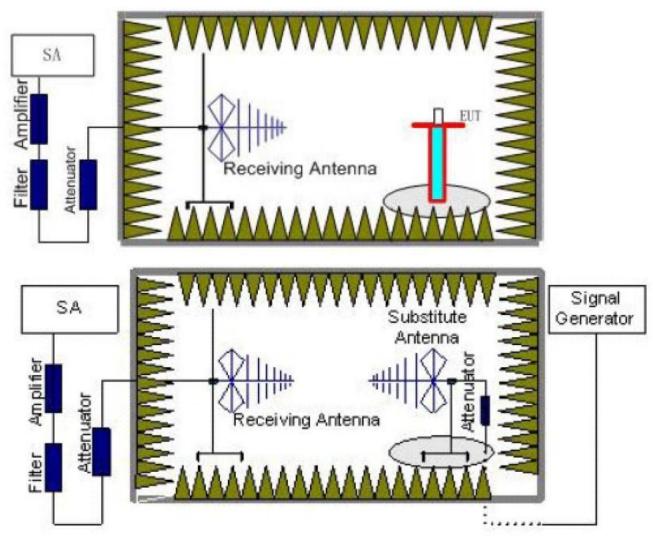
	LTE Band 7-20MHz								
Modulation	Channel	EIRP	(dBm)	Limit (dBm)	Result				
wouldtion	Channel	Vertical	Horizontal		Result				
	Low	19.42	16.85						
QPSK	Mid	19.35	17.42		PASS				
	High	19.66	16.33						
	Low	20.11	17.36	33.00					
16QAM	Mid	19.84	16.30		PASS				
	High	20.39	16.69						

5.6. Radiated Spurious Emssion

<u>LIMIT</u>

LTE Band 2/4/17:<-13dBm;LTE Band 7<-25dBm

TEST CONFIGURATION



TEST RESULTS

- EUT was placed on a 0.8 meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna shall be moved from 1m to 4m. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all transmit frequencies in three channels (High, Middle, Low) were measured with peak detector.
- 2. A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
- 3. The EUT is then put into continuously transmitting mode at its maximum power level during the test.Set Test Receiver or Spectrum RBW=1MHz,VBW=3MHz for above 1GHz and RBW=100kHz,VBW=300kHz for 30MHz to 1GHz, And the maximum value of the receiver should be recorded as (Pr).
- 4. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest isconnected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the

substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.

- A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (PcI), the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test.
- The measurement results are obtained as described below: Power(EIRP)=PMea- PAg - Pcl + Ga We used SMF100A micowave signal generator which signal level can up to 33dBm,so we not used power Amplifier for substituation test; The measurement results are amend as described below: Power(EIRP)=PMea- Pcl + Ga
- This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.
 ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP-2.15dBi.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

☑ Passed □ Not Applicable

LTE Band 2-1.4MHz								
Channel	Frequency	Spurious	Emission	Limit (dPm)	Decult			
Channel	(MHz)	Polarization	Level (dBm)	Limit (dBm)	Result			
	3701.4	Vertical	-37.52					
	5552.1	V	-43.65	-13.00	Pass			
Low	7402.8	V						
LOW	3701.4	Horizontal	-39.85					
	5552.1	Н	-46.74	-13.00	Pass			
	7402.8	Н						
	3760	Vertical	-37.02	-13.00	Pass			
	5640	V	-43.75					
Mid	7520	V						
IVIIU	3760	Horizontal	-39.74					
	5640	Н	-46.63	-13.00	Pass			
	7520	Н						
	3818.6	Vertical	-37.21					
	5727.9	V	-43.92	-13.00	Pass			
High	7637.2	V						
High	3818.6	Horizontal	-39.76					
	5727.9	Н	-46.62	-13.00	Pass			
	7637.2	Н						

Remark"---" means that the emission level is too low to be measured 1.

The emission levels of below 1 GHz are very lower than the limit and not show in test report. 2.

LTE Band 2-3MHz								
Channel	Frequency	Spurious	Emission	Limit (dDm)	Deput			
Channel	(MHz)	Polarization	Level (dBm)	Limit (dBm)	Result			
	3703	Vertical	-37.99					
	5554.5	V	-43.88	-13.00	Pass			
Low	7406	V						
LOW	3703	Horizontal	-36.94					
	5554.5	Н	-44.10	-13.00	Pass			
	7406	Н						
	3760	Vertical	-37.11					
	5640	V	-44.79	-13.00	Pass			
Mid	7520	V						
IVIIU	3760	Horizontal	-37.39					
	5640	Н	-45.81	-13.00	Pass			
	7520	Н						
	3817	Vertical	-35.63					
	5725.5	V	-45.48	-13.00	Pass			
Lliab	7634	V						
High	3817	Horizontal	-36.66					
	5725.5	Н	-45.69	-13.00	Pass			
	7634	Н						

Remark:

1.

Remark"---" means that the emission level is too low to be measured The emission levels of below 1 GHz are very lower than the limit and not show in test report. 2.

LTE Band 2-5MHz								
Channel	Frequency	Spurious	Emission	Limit (dPm)				
Channel	(MHz)	Polarization	Level (dBm)	Limit (dBm)	Result			
	3705	Vertical	-37.25					
	5557.5	V	-44.05	-13.00	Pass			
Low	7410	V						
LOW	3705	Horizontal	-36.46					
	5557.5	Н	-44.22	-13.00	Pass			
	7410	Н						
	3760	Vertical	-36.59		Pass			
	5640	V	-44.74	-13.00				
Mid	7520	V						
IVIIG	3760	Horizontal	-36.06					
	5640	Н	-43.97	-13.00	Pass			
	7520	Н						
	3815	Vertical	-37.39					
	5722.5	V	-44.23	-13.00	Pass			
High	7630	V						
High	3815	Horizontal	-37.95					
	5722.5	Н	-44.34	-13.00	Pass			
	7630	Н						

1. Remark"---" means that the emission level is too low to be measured

2. The emission levels of below 1 GHz are very lower than the limit and not show in test report.

		LTE Ban	d 2-10MHz		
Channel	Frequency	Spurious	Emission	Limit (dPm)	Dec. It
Channel	(MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
	3710	Vertical	-36.69		
	5565	V	-44.35	-13.00	Pass
Low	7420	V			
LOW	3710	Horizontal	-35.34		
	5565	Н	-44.63	-13.00	Pass
	7420	Н			
	3760	Vertical	-35.56		Pass
	5640	V	-45.53	-13.00	
Mid	7520	V			
IVIIU	3760	Horizontal	-34.67		
	5640	Н	-45.70	-13.00	Pass
	7520	Н			
	3810	Vertical	-34.36		
	5715	V	-45.65	-13.00	Pass
High	7620	V			
High	3810	Horizontal	-33.60		
	5715	Н	-45.49	-13.00	Pass
	7620	Н			

Remark:

1. Remark"---" means that the emission level is too low to be measured

LTE Band 2-15MHz							
Channel	Frequency	Spurious	Emission	Limit (dPm)			
Channel	(MHz)	Polarization	Level (dBm)	Limit (dBm)	Result		
	3705	Vertical	-35.74				
	5557.5	V	-44.74	-13.00	Pass		
Low	7410	V					
LOW	3705	Horizontal	-33.96				
	5557.5	Н	-45.11	-13.00	Pass		
	7410	Н					
	3760	Vertical	-34.25		Pass		
	5640	V	-46.29	-13.00			
Mid	7520	V					
Miu	3760	Horizontal	-33.07				
	5640	Н	-46.99	-13.00	Pass		
	7520	Н					
	3815	Vertical	-31.86				
	5722.5	V	-46.76	-13.00	Pass		
High	7630	V					
High	3815	Horizontal	-32.11				
	5722.5	Н	-46.81	-13.00	Pass		
	7630	Н					

1. Remark"---" means that the emission level is too low to be measured

2. The emission levels of below 1 GHz are very lower than the limit and not show in test report.

LTE Band 2-20MHz							
Channel	Frequency	Spurious	Emission	Limit (dDm)	Dec. II		
Channel	(MHz)	Polarization	Level (dBm)	Limit (dBm)	Result		
	3720	Vertical	-34.48				
	5580	V	-45.19	-13.00	Pass		
Low	7440	V					
LOW	3720	Horizontal	-32.47				
	5580	Н	-45.60	-13.00	Pass		
	7440	Н					
	3760	Vertical	-32.80		Pass		
	5640	V	-46.93	-13.00			
Mid	7520	V					
IVIIG	3760	Horizontal	-31.47				
	5640	Н	-46.61	-13.00	Pass		
	7520	Н					
	3800	Vertical	-32.02				
	5700	V	-46.72	-13.00	Pass		
High	7600	V					
High	3800	Horizontal	-33.44				
	5700	Н	-47.01	-13.00	Pass		
	7600	Н					

Remark:

1. Remark"---" means that the emission level is too low to be measured

		LTE Band	d 4-1.4MHz		
Channel	Frequency	Spurious	Emission		Dec. II
Channel	(MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
	3421.4	Vertical	-44.52		
	5132.1	V	-40.69	-13.00	Pass
Low	6842.8	V			
LOW	3421.4	Horizontal	-46.75		
	5132.1	Н	-44.84	-13.00	Pass
	6842.8	Н			
	3465	Vertical	-44.65		Pass
	5197.5	V	-40.56	-13.00	
Mid	6930	V			
IVIIU	3465	Horizontal	-46.59		
	5197.5	Н	-44.71	-13.00	Pass
	6930	Н			
	3508.6	Vertical	-44.86		
	5262.9	V	-40.77	-13.00	Pass
High	7017.2	V			
High	3508.6	Horizontal	-46.61		
	5262.9	5262.9 H -44	-44.73	-13.00	Pass
	7017.2	Н			

1. Remark"---" means that the emission level is too low to be measured

2. The emission levels of below 1 GHz are very lower than the limit and not show in test report.

LTE Band 4-3MHz							
Channel	Frequency	Spurious	Emission	Limit (dDm)			
Channel	(MHz)	Polarization	Level (dBm)	Limit (dBm)	Result		
	3423	Vertical	-45.10				
	5134.5	V	-40.54	-13.00	Pass		
Low	6846	V					
LOW	3423	Horizontal	-46.44				
	5134.5	Н	-44.70	-13.00	Pass		
	6846	Н					
	3465	Vertical	-45.21				
	5197.5	V	-40.65	-13.00	Pass		
Mid	6930	V					
IVIIG	3465	Horizontal	-46.30				
	5197.5	Н	-44.82	-13.00	Pass		
	6930	Н					
	3507	Vertical	-45.41				
	5260.5	V	-40.46	-13.00	Pass		
Lliab	7014	V					
High	3423	Horizontal	-46.16				
	5134.5	Н	-44.95	-13.00	Pass		
	6846	Н					

Remark:

1. Remark"----" means that the emission level is too low to be measured

		LTE Bar	nd 4-5MHz		
Channel	Frequency	Spurious	Emission	Limit (dDm)	
Channel	(MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
	3425	Vertical	-45.57		
	5137.5	V	-40.72	-13.00	Pass
Low	6850	V			
LOW	3425	Horizontal	-46.33		
	5137.5	Н	-45.11	-13.00	Pass
	6850	Н			
	3465	Vertical	-45.44	-13.00	Pass
	5197.5	V	-40.59		
Mid	6930	V	-		
IVIIG	3465	Horizontal	-46.20		
	5197.5	Н	-45.00	-13.00	Pass
	6930	Н			
	3505	Vertical	-45.62		
	5257.5	V	-40.76	-13.00	Pass
High	7010	V	-		
High	3505	Horizontal	-46.32		
	5257.5	Н	-45.12	-13.00	Pass
	7010	Н			

1. Remark"---" means that the emission level is too low to be measured

2. The emission levels of below 1 GHz are very lower than the limit and not show in test report.

LTE Band 4-10MHz							
Channel	Frequency	Spurious	Emission	Limit (dDm)			
Channel	(MHz)	Polarization	Level (dBm)	Limit (dBm)	Result		
	3430	Vertical	-45.01				
	5145	V	-41.01	-13.00	Pass		
Low	6860	V					
LOW	3430	Horizontal	-45.90				
	5145	Н	-44.76	-13.00	Pass		
	6860	Н					
	3465	Vertical	-45.23		Pass		
	5197.5	V	-41.22	-13.00			
Mid	6930	V					
IVIIG	3465	Horizontal	-45.85				
	5197.5	Н	-44.72	-13.00	Pass		
	6930	Н	-				
	3500	Vertical	-45.31				
	5250	V	-41.29	-13.00	Pass		
High	7000	V	-				
High	3500	Horizontal	-45.68				
	5250	Н	-44.56	-13.00	Pass		
	7000	Н					

Remark:

1. Remark"---" means that the emission level is too low to be measured

LTE Band 4-15MHz								
Channel	Frequency	Spurious	Emission	Limit (dPm)	Dec. II			
Channel	(MHz)	Polarization	Level (dBm)	Limit (dBm)	Result			
	3435	Vertical	-44.06					
	5152.5	V	-41.41	-13.00	Pass			
Low	6870	V						
LOW	3435	Horizontal	-46.07					
	5152.5	Н	-44.19	-13.00	Pass			
	6870	Н						
	3465	Vertical	-44.35		Pass			
	5197.5	V	-41.68	-13.00				
Mid	6930	V						
IVIIG	3465	Horizontal	-45.89					
	5197.5	Н	-44.05	-13.00	Pass			
	6930	Н						
	3490	Vertical	-44.60					
	5235	V	-41.91	-13.00	Pass			
High	6980	V						
High	3490	Horizontal	-45.84					
	5235	Н	-44.00	-13.00	Pass			
	6980	Н						

1. Remark"---" means that the emission level is too low to be measured

2. The emission levels of below 1 GHz are very lower than the limit and not show in test report.

		LTE Ban	d 4-20MHz		
Channel	Frequency	Spurious	Emission	Limit (dBm)	Result
Channel	(MHz)	Polarization	Level (dBm)	Liniit (dbin)	Result
	3440	Vertical	-42.80		
	5160	V	-42.35	-13.00	Pass
Low	6880	V			
LOW	3440	Horizontal	-45.42		
	5160	Н	-44.35	-13.00	Pass
	6880	Н			
	3465	Vertical	-42.49		Pass
	5197.5	V	-42.50	-13.00	
Mid	6930	V			
IVIIC	3465	Horizontal	-45.57		
	5197.5	Н	-44.23	-13.00	Pass
	6930	Н			
	3490	Vertical	-42.28		
	5235	V	-44.16	-13.00	Pass
Lliab	6980	V			
High	3490	Horizontal	-45.11		
	5235	Н	-44.06	-13.00	Pass
	6980	Н			

Remark:

1. Remark"---" means that the emission level is too low to be measured

		LTE Band	d 5-1.4MHz		
Channel	Frequency	Spurious I	Emission	Limit (dPm)	Result
Channel	(MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
	1649.4	Vertical	-40.52		
	2474.1	V	-41.48	-13.00	Pass
Low	3298.8	V			
Low	1649.4	Horizontal	-43.58		
	2474.1	Н	-43.69	-13.00	Pass
	3298.8	Н			
	1673	Vertical	-40.34	-13.00	Pass
	2509.5	V	-41.31		
Mid	3346	V			
IVIIC	1673	Horizontal	-43.40		
	2509.5	Н	-43.54	-13.00	Pass
	3346	Н			
	1696.6	Vertical	-40.60		
	2544.9	V	-41.55	-13.00	Pass
Lliab	3393.2	V	-		
High	1696.6	Horizontal	-43.45		
	2544.9	Н	-43.60	-13.00	Pass
	3393.2	Н			

1.

Remark"---" means that the emission level is too low to be measured The emission levels of below 1 GHz are very lower than the limit and not show in test report. 2.

		LTE Bar	nd 5-3MHz		
Channel	Frequency	Spurious	Emission	Limit (dDm)	Deput
Channel	(MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
	1651	Vertical	-40.48		
	2476.5	V	-41.52	-13.00	Pass
Low	3302	V			
Low	1651	Horizontal	-43.40		
	2476.5	Н	-43.65	-13.00	Pass
	3302	Н			
	1673	Vertical	-40.33		
	2509.5	V	-41.40	-13.00	Pass
Mid	3346	V			
Miu	1673	Horizontal	-43.58		
	2509.5	Н	-43.50	-13.00	Pass
	3346	Н			
	1696.6	Vertical	-39.70		
	2544.9	V	-40.34	-13.00	Pass
Lliab	3393.2	V			
High	1696.6	Horizontal	-42.53		
	2544.9	Н	-42.50	-13.00	Pass
	3393.2	Н			

Remark:

Remark"---" means that the emission level is too low to be measured 1.

		LTE Ban	d 5-5MHz		
Channel	Frequency	Spurious	Emission	Limit (dPm)	Result
Channel	(MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
	1653	Vertical	-40.49		
	2479.5	V	-41.51	-13.00	Pass
Low	3306	V			
LOW	1653	Horizontal	-43.45		
	2479.5	Н	-43.66	-13.00	Pass
	3306	Н			
	1673	Vertical	-40.53		
	2509.5	V	-41.54	-13.00	Pass
Mid	3346	V			
IVIIG	1673	Horizontal	-43.40		
	2509.5	Н	-41.71	-13.00	Pass
	3346	Н			
	1695	Vertical	-40.70		
	2542.5	V	-41.82	-13.00	Pass
Lliab	3390	V			
High	1695	Horizontal	-43.42		
	2542.5	Н	-41.73	-13.00	Pass
	3390	Н			

1. Remark"---" means that the emission level is too low to be measured

2. The emission levels of below 1 GHz are very lower than the limit and not show in test report.

		LTE Ban	d 5-10MHz		
Channel	Frequency	Spurious	Emission	Limit (dDm)	Regult
Channel	(MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
	1658	Vertical	-40.49		
	2487	V	-41.51	-13.00	Pass
Low	3316	V			
LOW	1658	Horizontal	-43.47		
	2487	Н	-43.67	-13.00	Pass
	3316	Н			
	1673	Vertical	-40.51		Pass
	2509.5	V	-41.52	-13.00	
Mid	3346	V			
IVIIU	1673	Horizontal	-42.03		
	2509.5	Н	-43.41	-13.00	Pass
	3346	Н			
	1688	Vertical	-40.07		
	2532	V	-41.93	-13.00	Pass
High	3376	V	-		
High	1688	Horizontal	-41.86		
	2532	Н	-43.57	-13.00	Pass
	3376	Н			

Remark:

1. Remark"---" means that the emission level is too low to be measured

	LTE Band 7-5MHz								
Channel	Frequency	Spurious Emission Limit (dBm)			Result				
Channel	(MHz)	Polarization	Level (dBm)		Result				
	5005	Vertical	-37.52						
	7507.5	V	-41.35	-25.00	Pass				
Low	10010	V							
LOW	5005	Horizontal	-40.76						
	7507.5	Н	-45.43	-25.00	Pass				
	10010	Н							
	5070	Vertical	-36.97		Pass				
	7605	V	-40.87	-25.00					
Mid	10140	V							
IVIIG	5070	Horizontal	-40.20						
	7605	Н	-41.30	-25.00	Pass				
	10140	Н							
	5135	Vertical	-37.41						
	7702.5	V	-41.58	-25.00	Pass				
Lliab	10270	V							
High	5135	Horizontal	-40.08						
	7702.5	Н	-41.61	-25.00	Pass				
	10270	Н							

1.

Remark"---" means that the emission level is too low to be measured The emission levels of below 1 GHz are very lower than the limit and not show in test report. 2.

		LTE Ban	d 7-10MHz		
Channel	Frequency	Spurious	Emission	Limit (dDm)	Popult
Channel	(MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
	5010	Vertical	-37.54		
	7515	V	-41.33	-25.00	Pass
Low	10020	V			
Low	5010	Horizontal	-40.83		
	7515	Н	-45.44	-25.00	Pass
	10020	Н			
	5070	Vertical	-37.59		
	7605	V	-41.38	-25.00	Pass
Mid	10140	V			
IVIIG	5070	Horizontal	-40.17		
	7605	Н	-41.89	-25.00	Pass
	10140	Н			
	5130	Vertical	-38.10		
	7695	V	-42.22	-25.00	Pass
Lligh	10260	V			
High	5130	Horizontal	-40.00		
	7695	Н	-42.25	-25.00	Pass
	10260	Н			

Remark:

Remark"---" means that the emission level is too low to be measured 1.

	LTE Band 7-15MHz								
Channel	Frequency	Spurious	Emission	Limit (dPm)	Deput				
Channel	(MHz)	Polarization	Level (dBm)	Limit (dBm)	Result				
	5015	Vertical	-37.57						
	7522.5	V	-41.30	-25.00	Pass				
Low	10030	V							
LOW	5015	Horizontal	-40.99						
	7522.5	Н	-45.48	-25.00	Pass				
	10030	Н							
	5070	Vertical	-37.70						
	7605	V	-41.41	-25.00	Pass				
Mid	10140	V							
IVIIU	5070	Horizontal	-39.83						
	7605	Н	-42.30	-25.00	Pass				
	10140	Н							
	5125	Vertical	-38.60						
	7687.5	V	-42.89	-25.00	Pass				
High	10250	V							
High	5125	Horizontal	-39.32						
	7687.5	Н	-42.99	-25.00	Pass				
	10250	Н							

1. Remark"---" means that the emission level is too low to be measured

2. The emission levels of below 1 GHz are very lower than the limit and not show in test report.

		LTE Ban	d 7-20MHz		
Channel	Frequency	Spurious	Emission	Limit (dDm)	Deput
Channel	(MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
	5015	Vertical	-37.49		
	7522.5	V	-41.38	-25.00	Pass
Low	10030	V			
LOw	5015	Horizontal	-40.64		
	7522.5	Н	-45.40	-25.00	Pass
	10030	Н			
	5070	Vertical	-37.22		
	7605	V	-41.13	-25.00	Pass
Mid	10140	V			
IVIIC	5070	Horizontal	-41.45		
	7605	Н	-40.51	-25.00	Pass
	10140	Н			
	5125	Vertical	-36.59		
	7687.5	V	-40.10	-25.00	Pass
High	10250	V			
High	5125	Horizontal	-41.21		
	7687.5	Н	-40.15	-25.00	Pass
	10250	Н			

Remark:

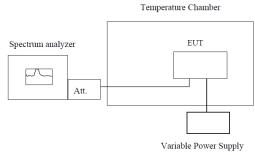
1. Remark"---" means that the emission level is too low to be measured

5.7. Frequency stability V.S. Temperature measurement

LIMIT

2.5ppm

TEST CONFIGURATION



Note: Measurement setup for testing on Antenna connector

TEST PROCEDURE

- 1. The equipment under test was connected to an external DC power supply and input rated voltage.
- 2. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators.
- 3. The EUT was placed inside the temperature chamber.
- 4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency.
- 5. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency.
- 6. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

🛛 Passed

Not Applicable

Re	ference Frequency	/: LTE Band	I 2 Middle ch	annel=188	0MHz,20MHz	Bandwidth	
Deverenzie	Tomoseture		Freque	ncy error		Linet	
Power supplied (Vdc)	Temperature (°C)	QP	SK	16	6QAM	Limit (ppm)	Result
(100)	(0)	Hz	ppm	Hz	ppm	(PPIII)	
	-30	32	0.0170	79	0.0420		
	-20	25	0.0133	56	0.0298		
	-10	21	0.0112	58	0.0309		
	0	23	0.0122	46	0.0245		
3.70	10	23	0.0122	37	0.0197	2.50	Pass
	20	26	0.0138	45	0.0239		
	30	28	0.0149	38	0.0202		
	40	26	0.0138	44	0.0234		
	50	28	0.0149	38	0.0202		
Ref	erence Frequency:	LTE Band	4 Middle cha	annel=1732	2.5MHz,20MHz	Bandwidth	1
Demos emplied	Tamparatura		Freque	ncy error		Lineit	
Power supplied (Vdc)	Temperature (°C)	QP	SK	16	6QAM	Limit (ppm)	Result
(Vuc)	(0)	Hz	ppm	Hz	ppm	(PP)	
	-30	37	0.0214	58	0.0335		Pass
	-20	35	0.0202	49	0.0283		
	-10	34	0.0196	47	0.0271		
	0	38	0.0219	37	0.0214		
3.70	10	28	0.0162	41	0.0237	2.50	
	20	29	0.0167	44	0.0254		
	30	27	0.0156	50	0.0289		
	40	30	0.0173	49	0.0283		
	50	34	0.0196	48	0.0277		
Re	ference Frequency	: LTE Band	5 Middle ch	annel=836	.5MHz,10MHz	Bandwidth	
D	-		Freque	ncy error			
Power supplied (Vdc)	Temperature (°C)	QP	SK	16	6QAM	Limit (ppm)	Result
(vuc)	(0)	Hz	ppm	Hz	ppm	(ppiii)	
	-30	34	0.0406	48	0.0574		
	-20	30	0.0359	45	0.0538		
-	-10	24	0.0287	39	0.0466		
	0	29	0.0347	42	0.0502		
3.70	10	28	0.0335	41	0.0490	2.50 Pass	Pass
	20	25	0.0299	39	0.0466		1 000
	30	27	0.0323	38	0.0454		
	40	26	0.0311	40	0.0478		
	50	24	0.0287	42	0.0502	1	

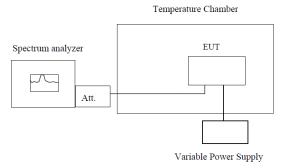
Re	Reference Frequency: LTE Band 7 Middle channel=2535MHz,20MHz Bandwidth								
Devereventied	Tomoreneture		Frequ	ency error		Limit (ppm)			
Power supplied (Vdc)	Temperature (°C)	QP	SK	16	QAM		Result		
(140)	(0)	Hz	ppm	Hz	ppm	(ppiii)			
	-30	36	0.0142	48	0.0189				
	-20	34	0.0134	47	0.0185				
	-10	33	0.0130	46	0.0181				
	0	31	0.0122	43	0.0170				
3.70	10	32	0.0126	38	0.0150	2.50	Pass		
	20	29	0.0114	39	0.0154				
	30	28	0.0110	42	0.0166				
	40	34	0.0134	43	0.0170				
	50	35	0.0138	45	0.0178				

5.8. Frequency stability V.S. Voltagemeasurement

LIMIT

2.5ppm

TEST CONFIGURATION



Note: Measurement setup for testing on Antenna connector

TEST PROCEDURE

- 1. Set chamber temperature to 25°C. Use a variable DC power source topower the EUT and set the voltage to rated voltage.
- 2. Set the spectrum analyzer RBW lowenough to obtain the desired frequency resolution and recorded the frequency.
- 3. Reduce the input voltage to specified extreme voltage variation (+/- 15%) and endpoint, record the maximum frequency change.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

🛛 Passed

Not Applicable

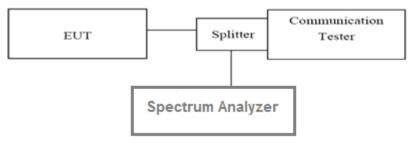
Refe	erence Frequency	y: LTE Ban	d 2 Middle c	hannel=1880)MHz,20MHz B	Bandwidth	
	Power		•	ency error		Limit	
Temperature (°C)	supplied	QF	PSK		QAM	(ppm)	Result
	(Vdc)	Hz	ppm	Hz	ppm		
	4.20	37	0.0197	48	0.0255		
25	3.70	35	0.0186	49	0.0261	2.50	Pass
	3.50	34	0.0181	47	0.0250		
Refer	rence Frequency	: LTE Band	4 Middle ch	annel=1732	.5MHz,20MHz	Bandwidth	
	Power		Freque	ency error		Limit	
Temperature (°C)	supplied	QF	PSK	16	QAM	(ppm)	Result
	(Vdc)	Hz	ppm	Hz	ppm	(PPIII)	
	4.20	32	0.0185	45	0.0260	2.50	
25	3.70	36	0.0208	47	0.0271		Pass
	3.50	34	0.0196	43	0.0248		
Refe	rence Frequency	: LTE Band	5 Middle cl	hannel=836.	5MHz,10MHz	Bandwidth	
	Power	Frequency error				1 : :4	
Temperature (°C)	supplied	QPSK		16QAM		Limit (ppm)	Result
	(Vdc)	Hz	ppm	Hz	ppm	(ppiii)	
	4.20	34	0.0406	43	0.0514		
25	3.70	35	0.0418	44	0.0526	2.50	Pass
	3.50	33	0.0395	45	0.0538		
Refe	erence Frequency	y: LTE Ban	d 7 Middle c	hannel=2538	5MHz,20MHz B	Bandwidth	
	Power		Freque	ency error		Limit	
Temperature (°C)	supplied	QF	PSK	16	QAM	Limit (ppm)	Result
	(Vdc)	Hz	ppm	Hz	ppm	(PPIII)	
	4.20	36	0.0142	46	0.0181	2.50	
25	3.70	31	0.0122	45	0.0177		Pass
	3.50	35	0.0138	47	0.0185		

5.9. Peak-Average Ratio

LIMIT

13dB

TEST CONFIGURATION



TEST PROCEDURE

According with KDB 971168

- 1. The signal analyzer's CCDF measurement profile is enabled
- 2. Frequency = carrier center frequency
- 3. Measurement BW > Emission bandwidth of signal
- 4. The signal analyzer was set to collect one million samples to generate the CCDF curve

5. The measurement interval was set depending on the type of signal analyzed. Forcontinuoussignals(>98% duty cycle), the measurement interval was set to 1ms. For bursttransmissions, the spectrum analyzer is set to use an internal " RF Burst" trigger that issynced with an incoming pulse and the measurement interval is set to less than the duration of the " on time" of one burst to ensure that energy is only captured during a time in which the transmitter is operating at maximum power

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

🛛 Passed

Not Applicable

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LTE Band 2-20MHz								
Modulation	QP	SK	16Q	AM	limit/dD)	Result		
Channel	1RB#	Full RB#	1RB#	Full RB#	Limit(dB)	Result		
Low	4.28	5.56	5.30	6.34	13.00	Pass		
Mid	4.32	5.82	5.46	6.42	13.00	Pass		
High	4.82	5.64	5.52	6.38	13.00	Pass		

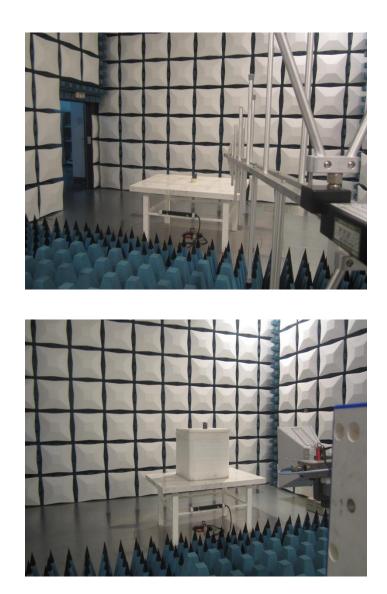
LTE Band 4-20MHz								
Modulation	QPS	SK	16Q	AM	Line (t/alD)	Decult		
Channel	1RB#	Full RB#	1RB#	Full RB#	Limit(dB)	Result		
Low	3.98	5.62	4.92	6.36	13.00	Pass		
Mid	4.14	5.36	4.98	6.08	13.00	Pass		
High	3.78	5.52	4.58	6.12	13.00	Pass		

LTE Band 5-10MHz									
Modulation	QPSK		16QAM		Limit/dD)	Deput			
Channel	1RB#	Full RB#	1RB#	Full RB#	Limit(dB)	Result			
Low	4.06	5.8	5.18	6.44	13.00	Pass			
Mid	4.34	5.96	4.92	6.56	13.00	Pass			
High	4.20	5.26	5.08	6.02	13.00	Pass			

LTE Band 7-20MHz									
Modulation	QPSK		16QAM		Limit(dD)	Popult			
Channel	1RB#	Full RB#	1RB#	Full RB#	Limit(dB)	Result			
Low	2.70	5.06	3.76	5.84	13.00	Pass			
Mid	3.20	5.10	3.82	5.80	13.00	Pass			
High	3.34	5.14	4.26	5.90	13.00	Pass			

6. Test Setup Photos of the EUT

Radiated emission:



7. External and Internal Photos of the EUT

Reference to the test report No.: TRE1703015501.

.....End of Report.....