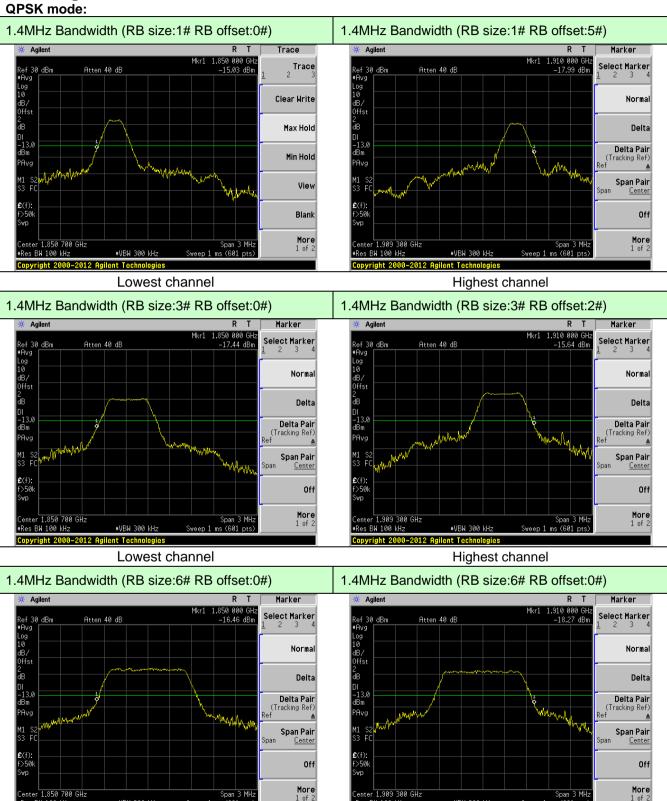


Band Edge:



Lowest channel

#VBW 300 kHz

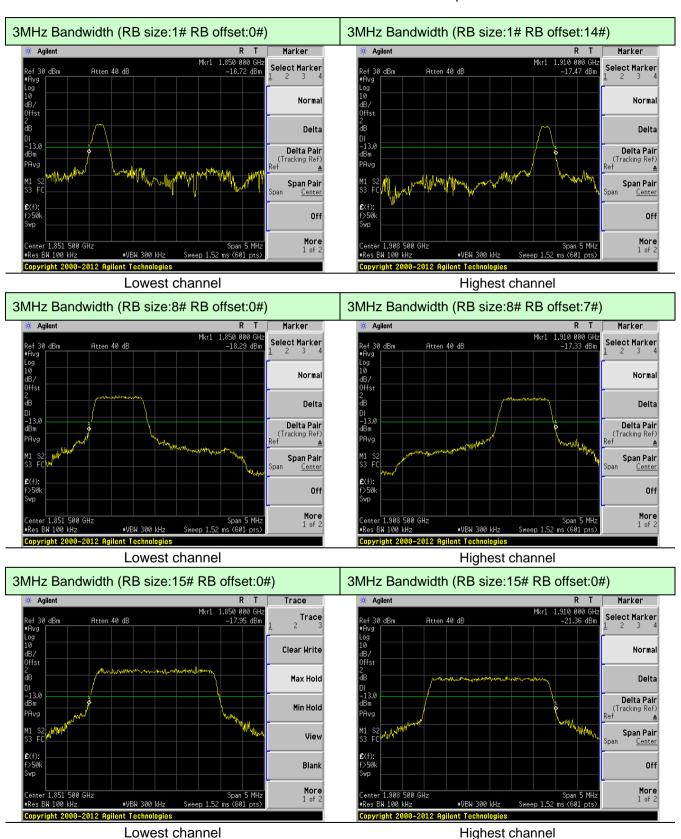
Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960

#VBW 300 kHz

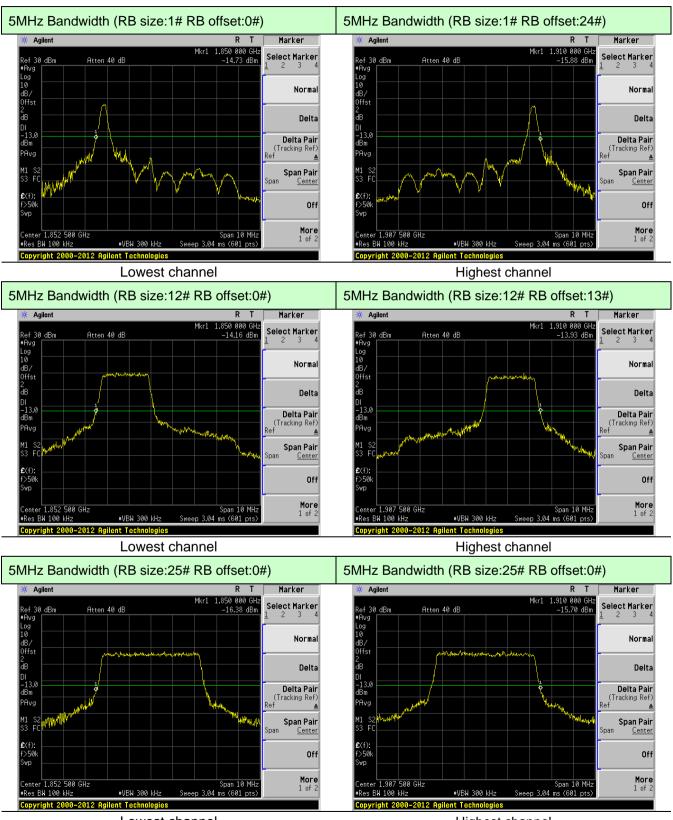
Highest channel

Copyright 2000-2012 Agilent Technologies



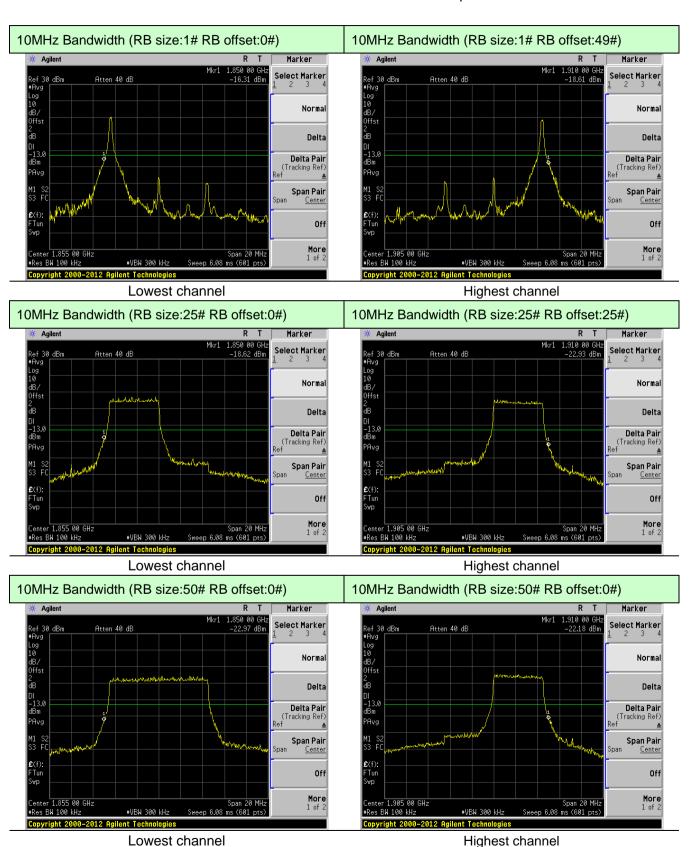




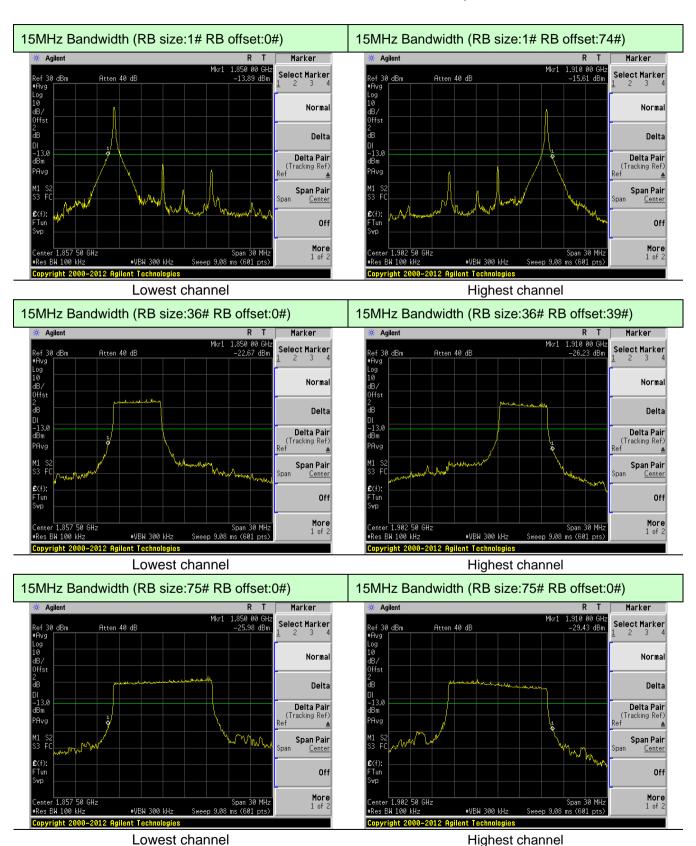


Lowest channel Highest channel







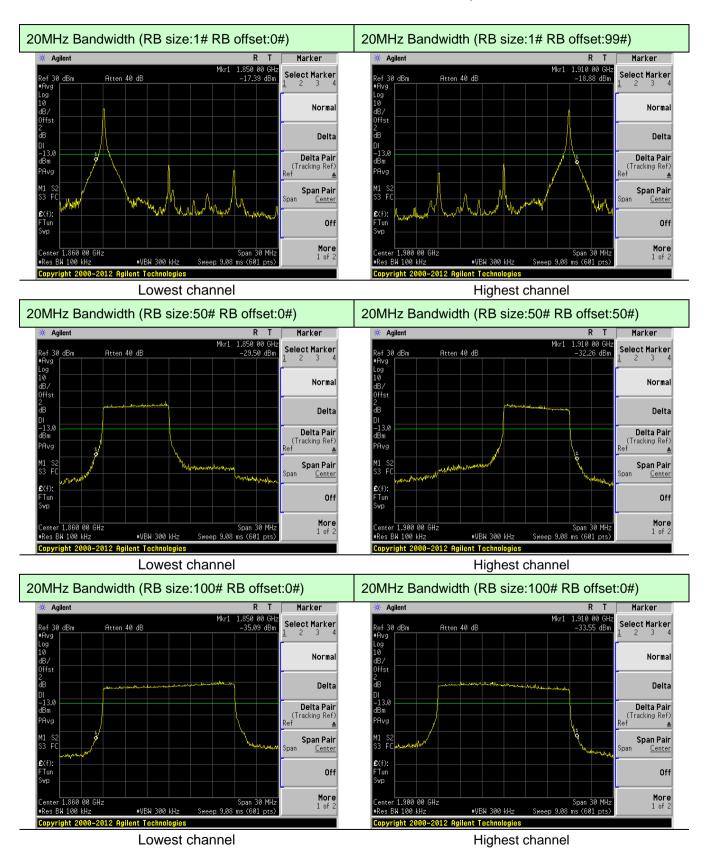


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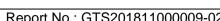


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Report No.: GTS201811000009-02 LTE Band 4 1.4MHz Bandwidth (RB size:1# RB offset:0#) 1.4MHz Bandwidth (RB size:1# RB offset:5#) Marker Marker Select Marker Select Marker Ref 30 dBm •Avg lef 30 dBm Atten 40 dB Atten 40 dB Norma Normal Delta Delta Delta Pair Delta Pair Span Pair Off Off More 1 of 2 1.754 300 GHz Lowest channel Highest channel 1.4MHz Bandwidth (RB size:3# RB offset:0#) 1.4MHz Bandwidth (RB size:3# RB offset:2#) Agilent Select Marker Select Marker Atten 40 dB -14.12 dBm Ref 30 dBm Atten 40 dB Normal Normal Delta **Delta Pair** (Tracking Ref) **Delta Pair** (Tracking Ref) Off Off More 1 of 2 More 1 of 2 #URW 300 kHz #VBW 300 kHz Lowest channel Highest channel 1.4MHz Bandwidth (RB size:6# RB offset:0#) 1.4MHz Bandwidth (RB size:6# RB offset:0#) 🔆 Agilent Marker 🔆 Agilent Select Marker Select Marker Atten 40 dE Atten 40 dE Normal Normal Delta Delta Delta Pair (Tracking Ref) Delta Pair (Tracking Ref) Span Pair Span Pair

Lowest channel Highest channel

1.754 300 GHz

Off

More 1 of 2

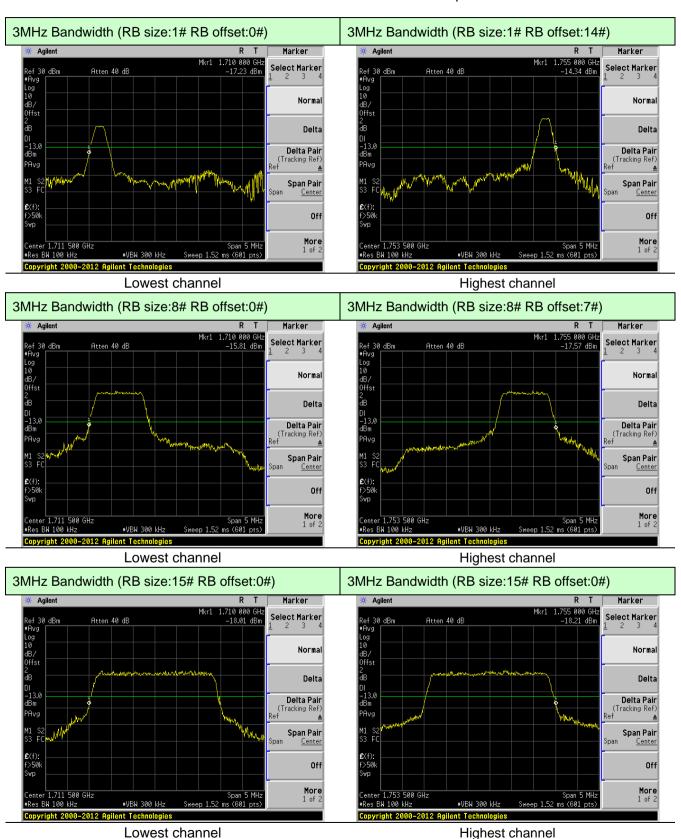
1.710 700 GHz

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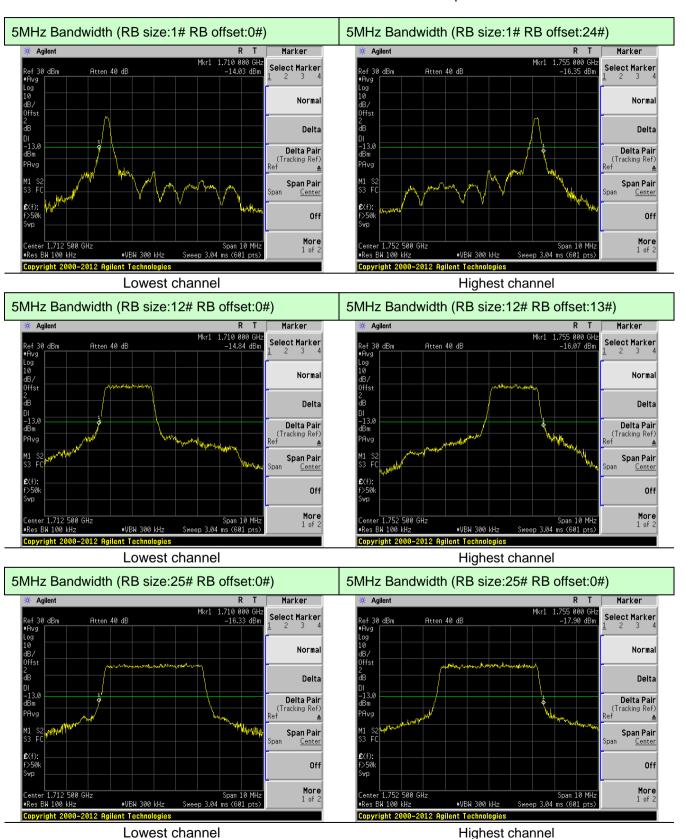
Off

More 1 of 2







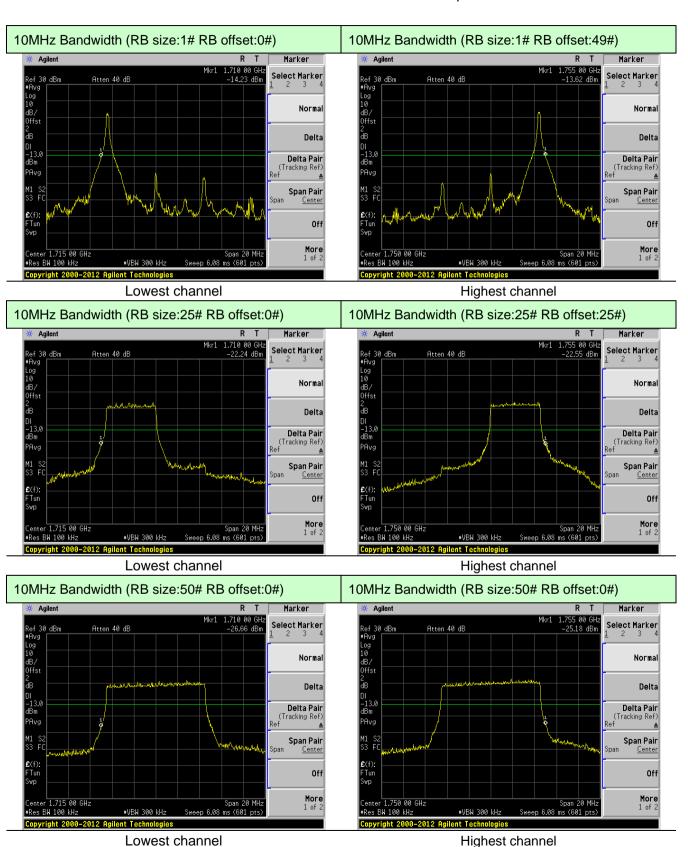


Global United Technology Services Co., Ltd.

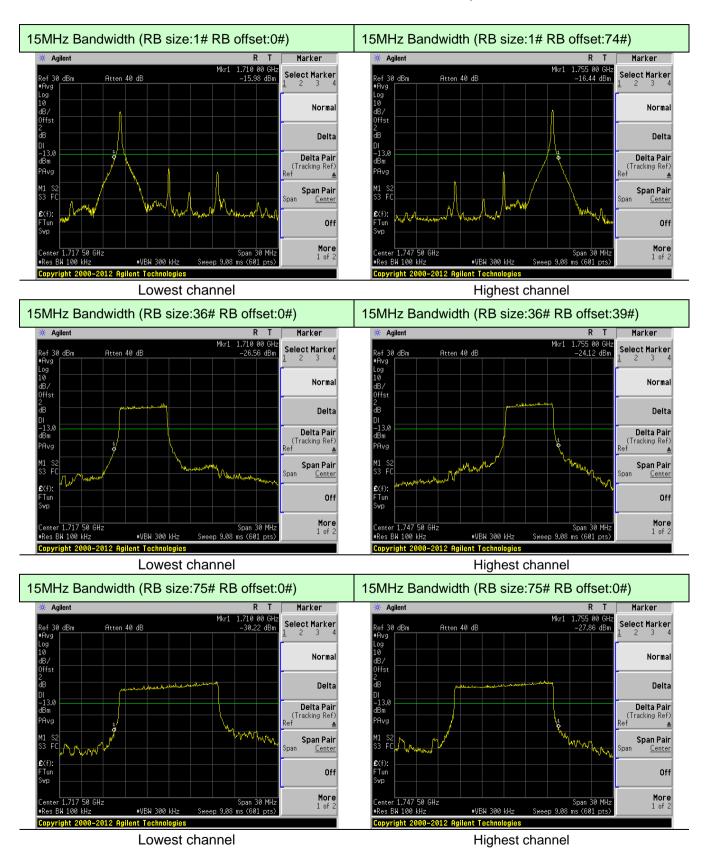
No. 301-309, 3/F., Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102 Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960

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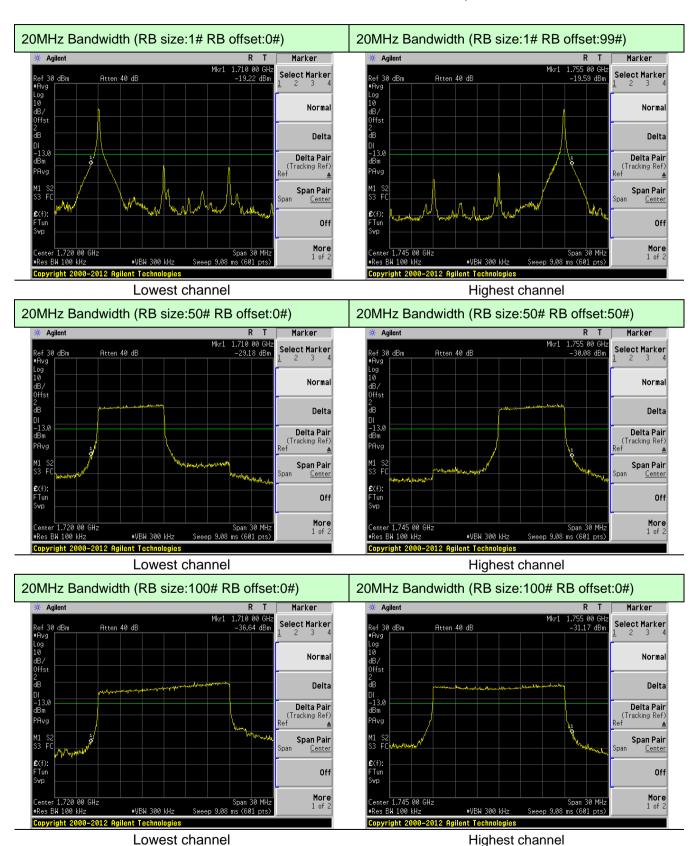


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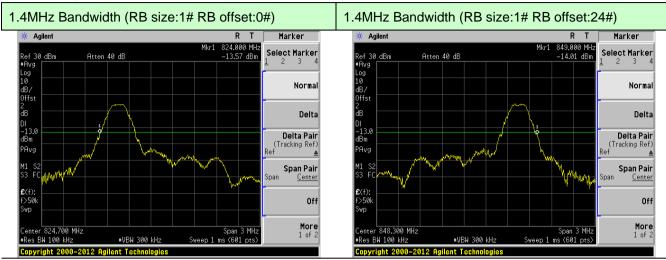
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LTE Band 5:

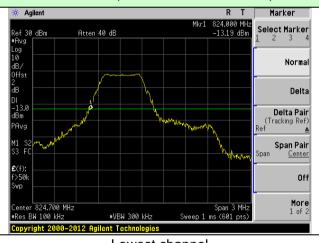


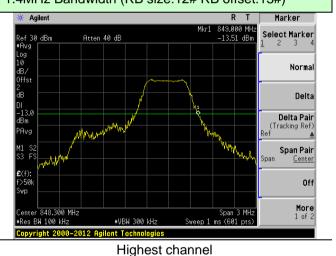
Lowest channel

1.4MHz Bandwidth (RB size:12# RB offset:0#)

1.4MHz Bandwidth (RB size:12# RB offset:13#)

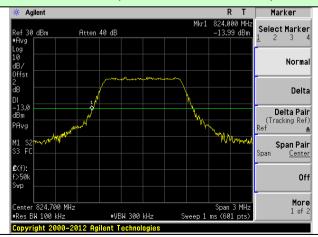
Highest channel

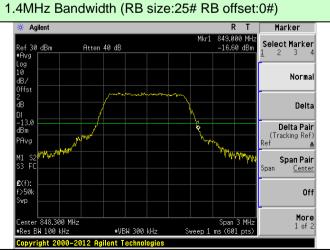




Lowest channel

1.4MHz Bandwidth (RB size:25# RB offset:0#)

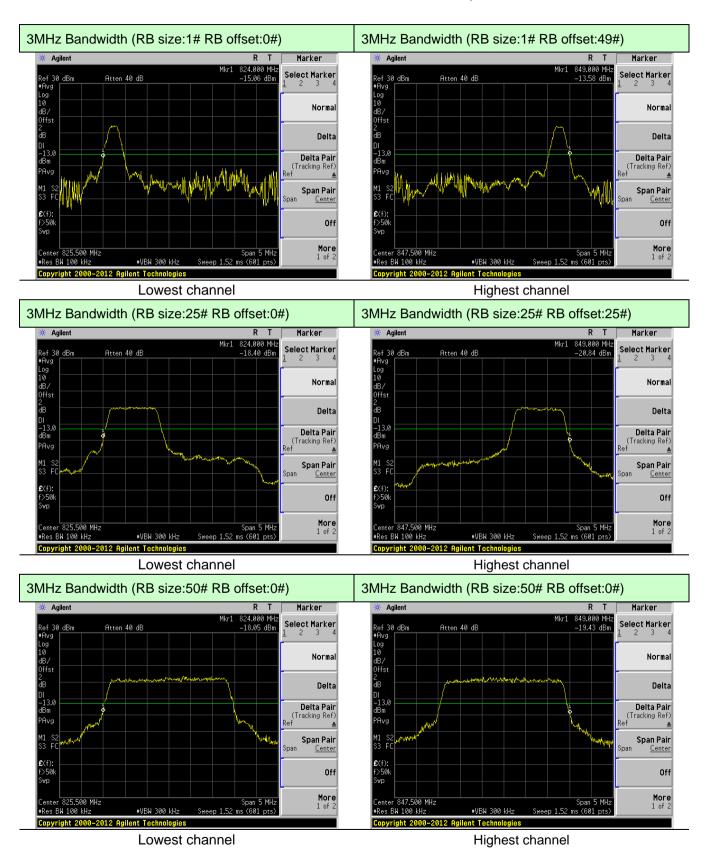




Lowest channel

Highest channel



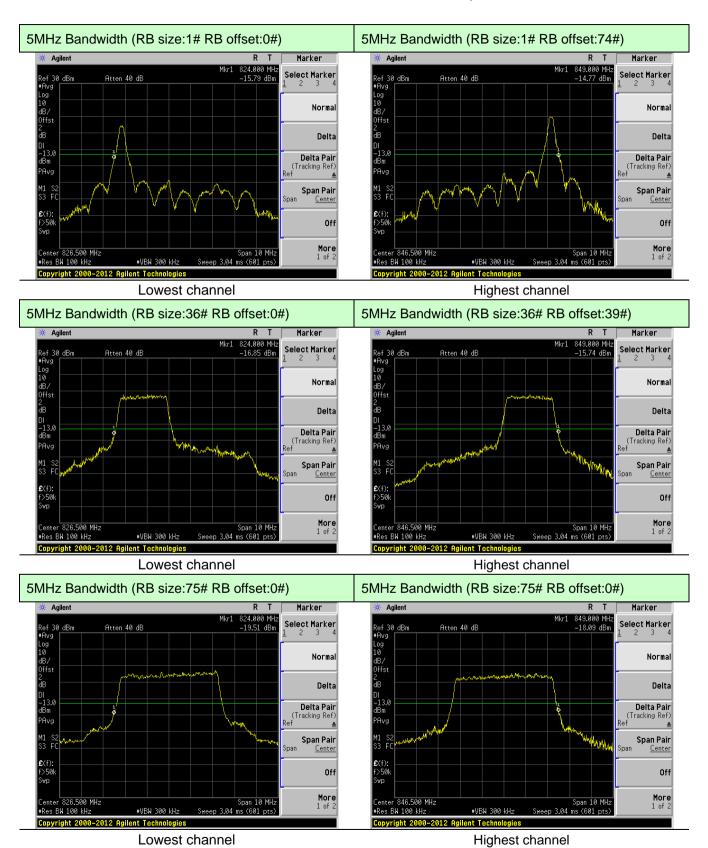


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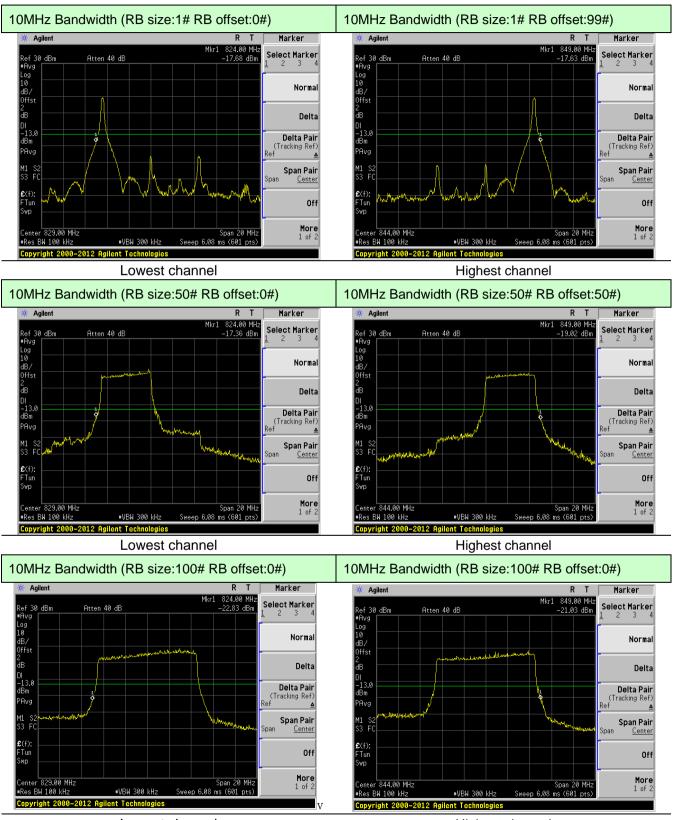


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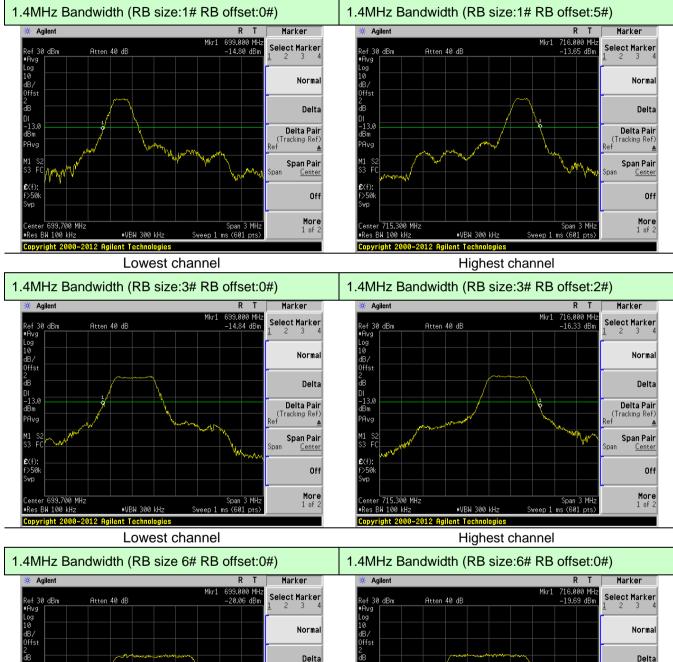


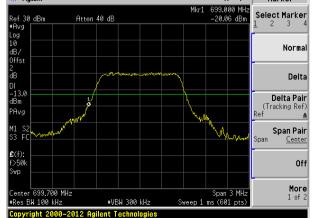


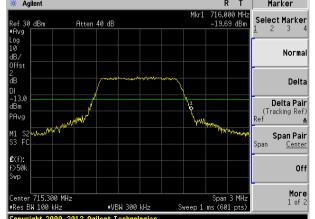
Lowest channel Highest channel



LTE Band 12:





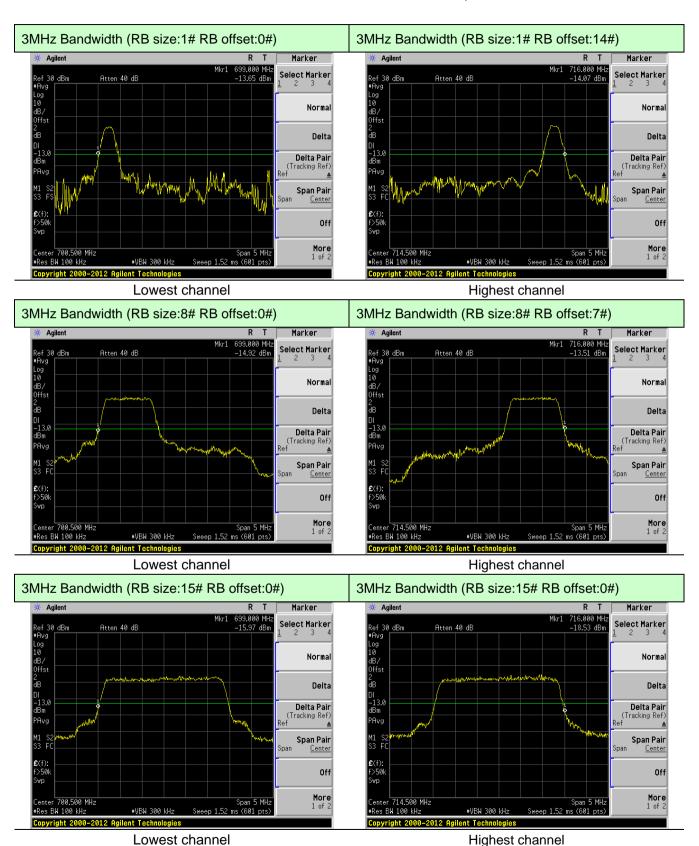


Lowest channel Highest channel

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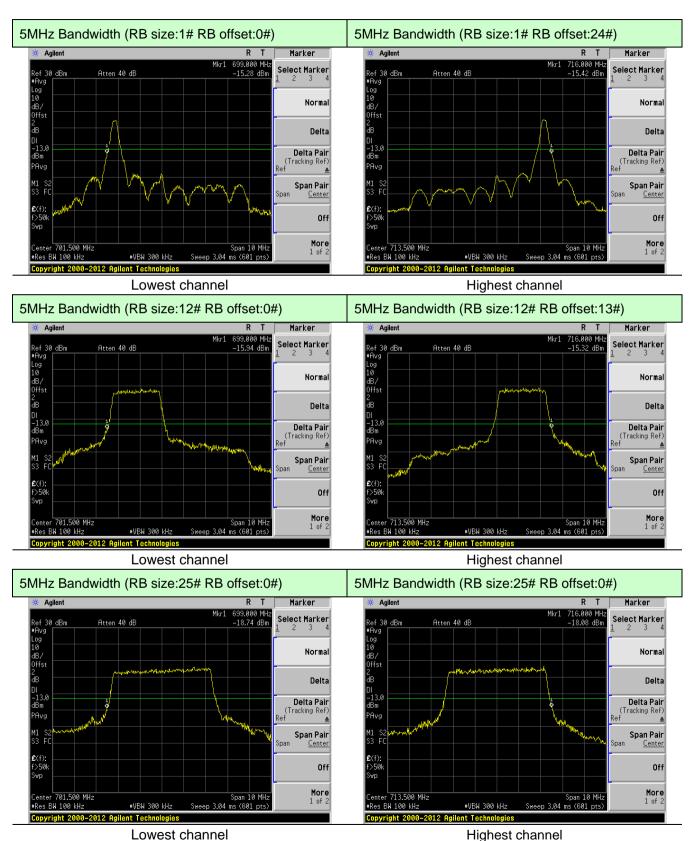


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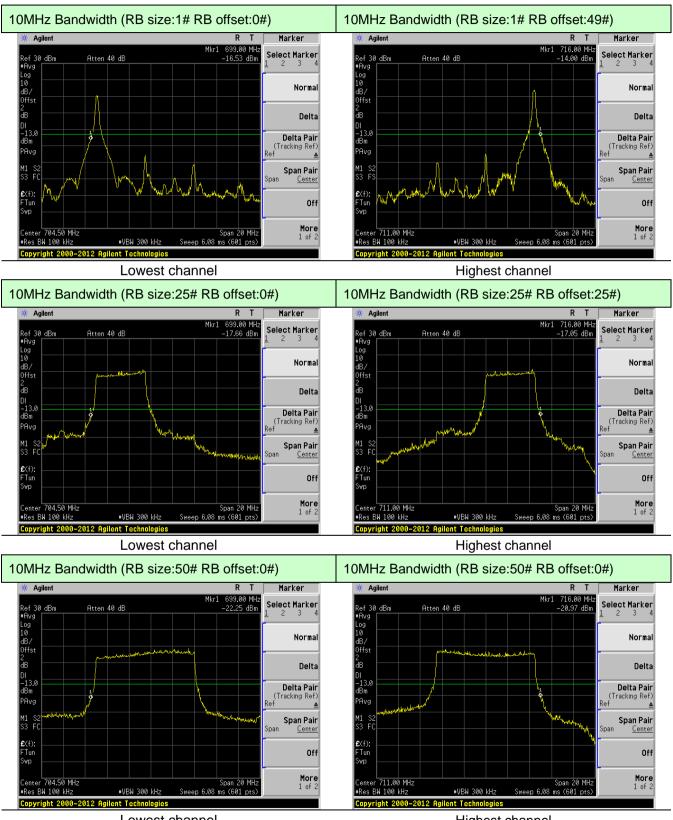
No. 301-309, 3/F., Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102 Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960

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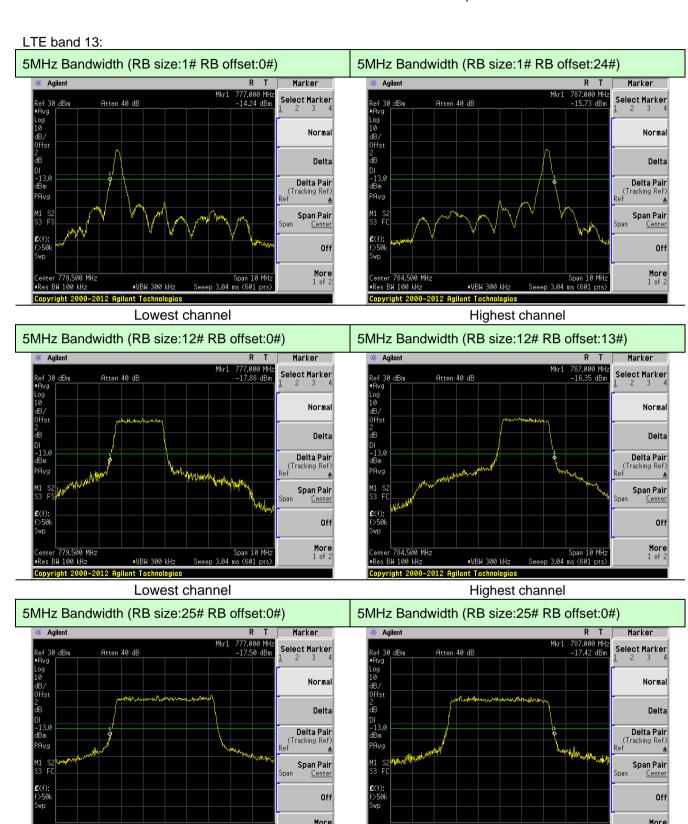






Lowest channel Highest channel





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#VBW 300 kHz

■Res BW 100 kHz

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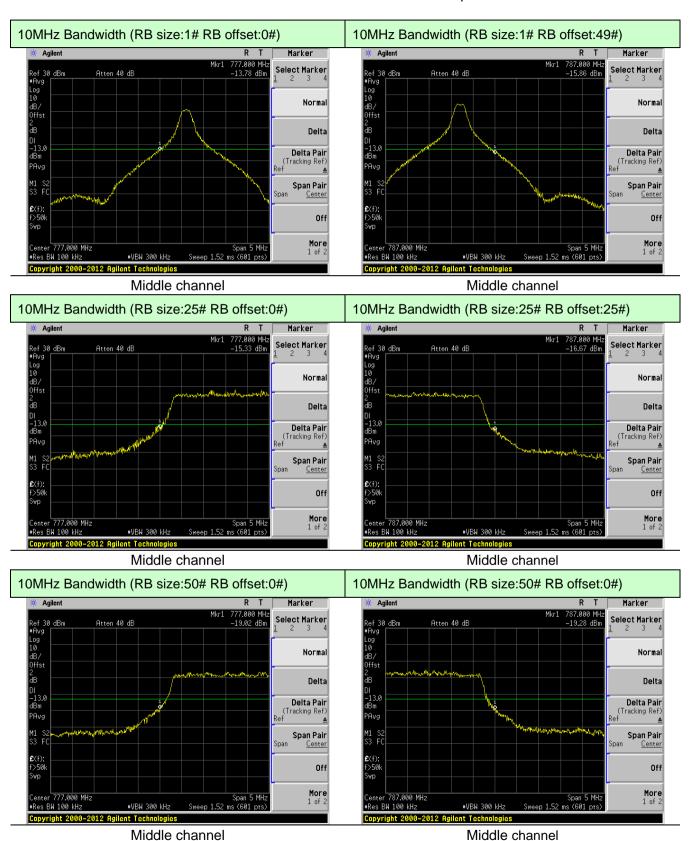
Lowest channel

#VBW 300 kHz

Highest channel

#Res BW 100 kHz





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LTE Band 2 (16QAM mode): 1.4MHz Bandwidth (RB size:1# RB offset:0#) 1.4MHz Bandwidth (RB size:1# RB offset:5#) * Agilent * Agilent Marker 850 000 GHz -14.35 dBm .910 000 GHz -17.39 dBm Select Marker Trace Atten 40 dB Ref 30 dBm Atten 40 dB Clear Write Normal Max Hold Delta **Delta Pair** (Tracking Ref) Min Hold Span Pair View Blank More 1 of 2 #VBW 300 kHz Copyright 2000-2012 Agilent Technologies Copyright 2000-2012 Agilent Technologies Lowest channel Highest channel 1.4MHz Bandwidth (RB size:3# RB offset:0#) 1.4MHz Bandwidth (RB size:3# RB offset:2#) ★ Agilent Marker * Agilent Marker 1.910 000 GH: -16.61 dBm 850 000 GH –19.56 dBm Atten 40 dB Atten 40 dB Normal Normal Delta Delta Span Pair Off Off More 1 of 2 1.909 300 GHz .850 700 GHz #VBW 300 kHz ■Res BW 100 kHz #VBW 300 kHz Lowest channel Highest channel 1.4MHz Bandwidth (RB size:6# RB offset:0#) 1.4MHz Bandwidth (RB size:6# RB offset:0#) Trace Trace Select Marker Atten 40 dE Atten 40 dB Clear Write Normal Max Hold Delta Delta Pair Min Hold Span Pair View Blank Off

Lowest channel Highest channel

1.909 300 GHz

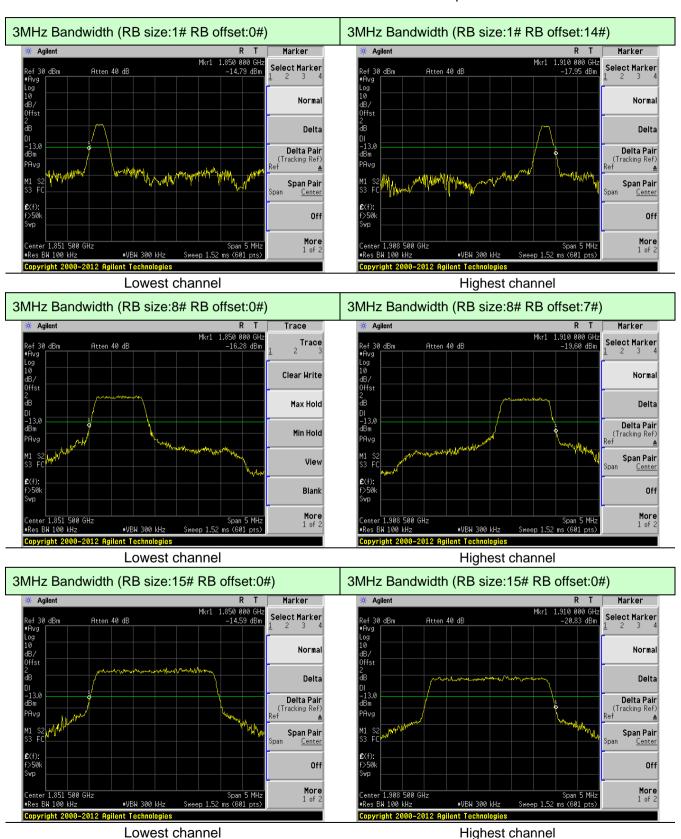
#VBW 300 kHz

More

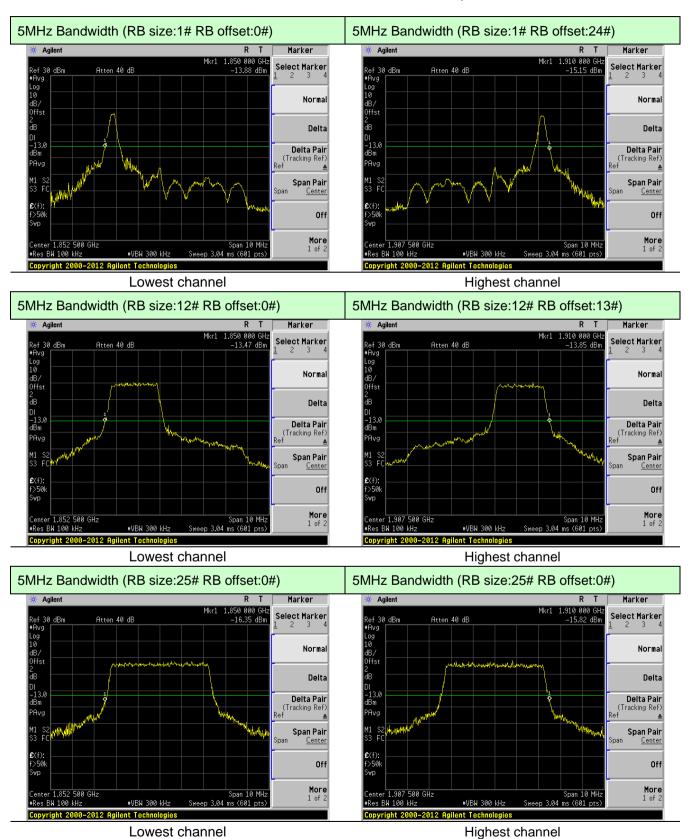
Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960

More 1 of 2







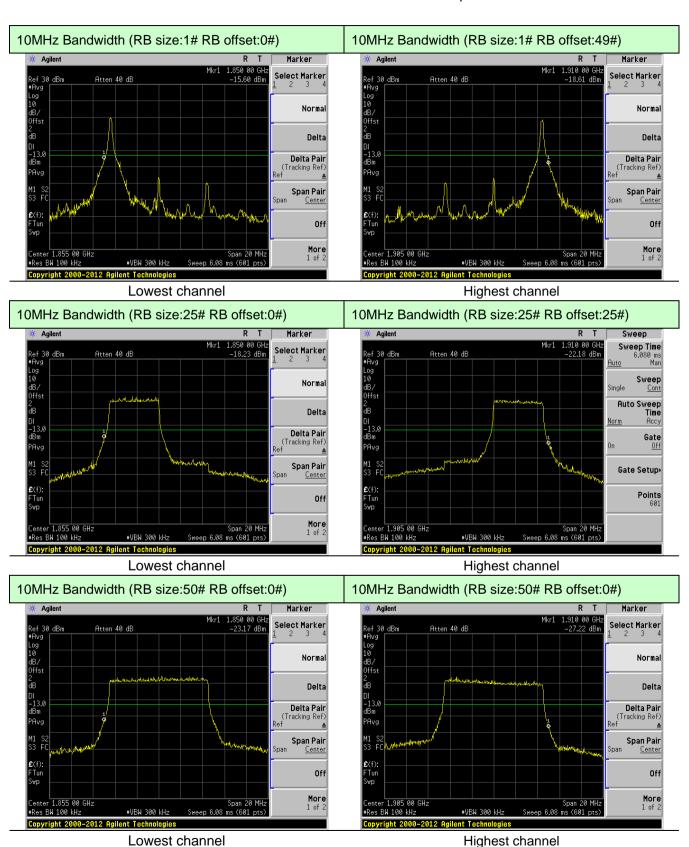


Global United Technology Services Co., Ltd.

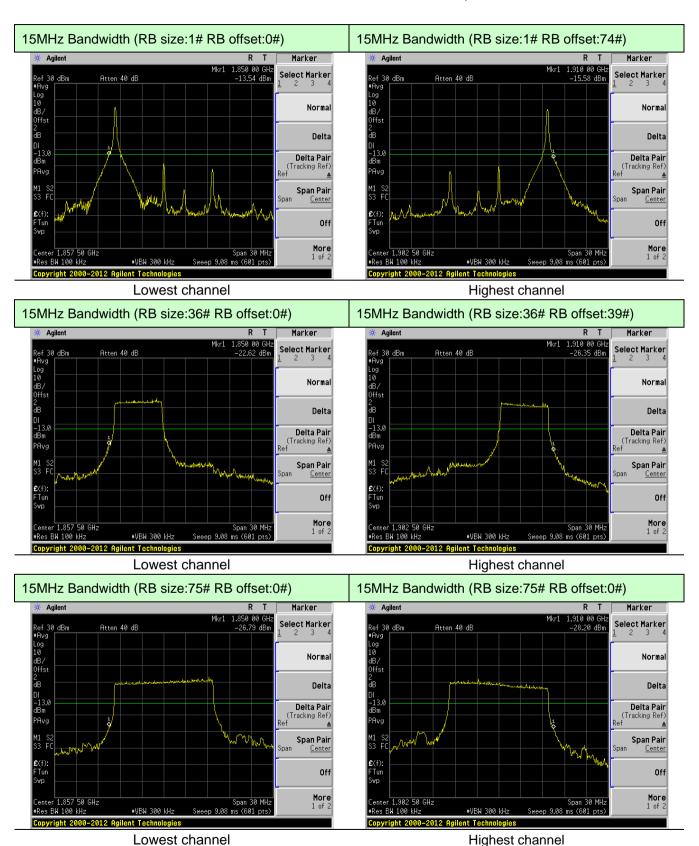
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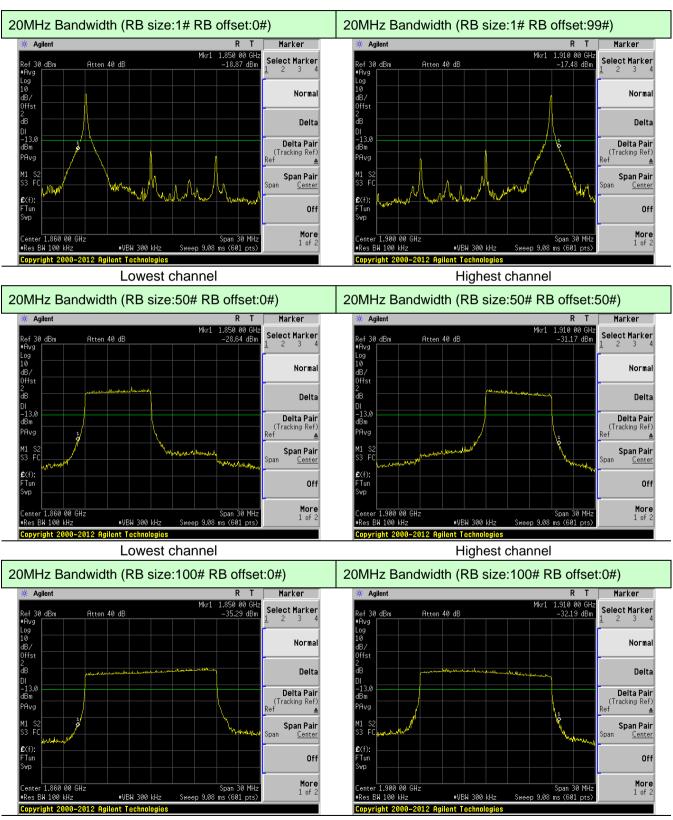


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Lowest channel Highest channel



LTE Band 4 (16QAM mode): 1.4MHz Bandwidth (RB size:1# RB offset:0#) 1.4MHz Bandwidth (RB size:1# RB offset:5#) Select Marker Select Marker Atten 40 dB Atten 40 dB Delta Delta Delta Pair (Tracking Ref) Delta Pair Span Pair Span Pair Off Off More 1 of 2 More 1 of 2 Lowest channel Highest channel 1.4MHz Bandwidth (RB size:3# RB offset:0#) 1.4MHz Bandwidth (RB size:3# RB offset:2#) * Agilent 🔆 Agilent 710 000 GHz -14.93 dBm 755 000 GHz –16.40 dBm Select Marker Select Marker Atten 40 dB Atten 40 dB lef 30 dBm Ref 30 dBm Normal Normal Delta **Delta Pair** (Tracking Ref) **Delta Pair** (Tracking Ref) Span Pair Center Span Pair Off Off Span 3 MHz Sweep 1 ms (601 pts) More More 1.754 300 GHz #VBW 300 kHz #VBW 300 kHz Copyright 2000-2012 Agilent Technologies Copyright 2000-2012 Agilent Technologies Lowest channel Highest channel 1.4MHz Bandwidth (RB size:6# RB offset:0#) 1.4MHz Bandwidth (RB size:6# RB offset:0#) 🔆 Agilent R T Marker 🔆 Agilent R T Marker 1.710 000 GH -14.50 dBm Select Marker Select Marker Atten 40 dE Atten 40 dE Norma Normal Delta Delta **Delta Pair** (Tracking Ref) Delta Pair Span Pair Off Off

Lowest channel Highest channel

1.754 300 GHz

Copyright 2000-2012 Agilent Technologies

#VBW 300 kHz

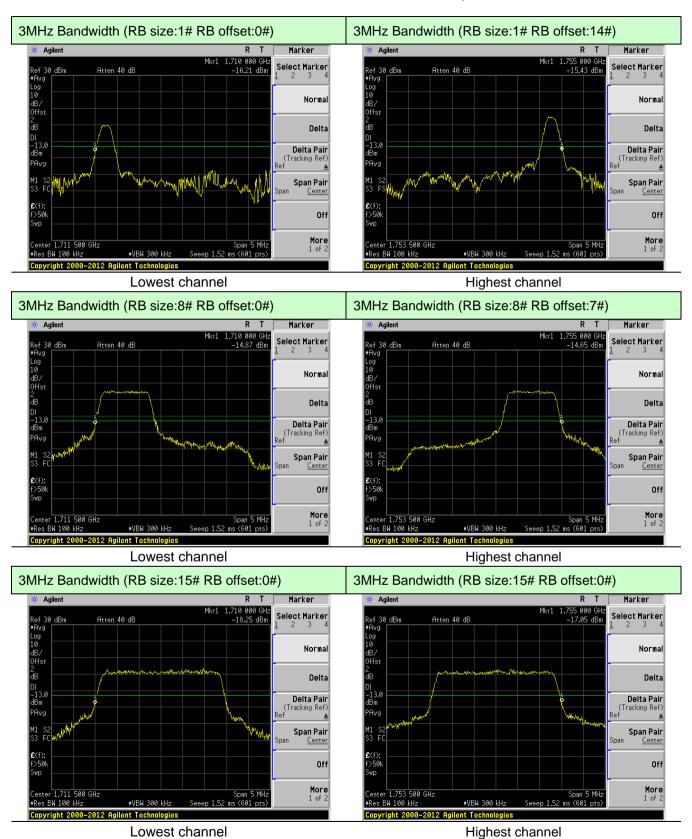
#VBW 300 kHz

1.710 700 GHz

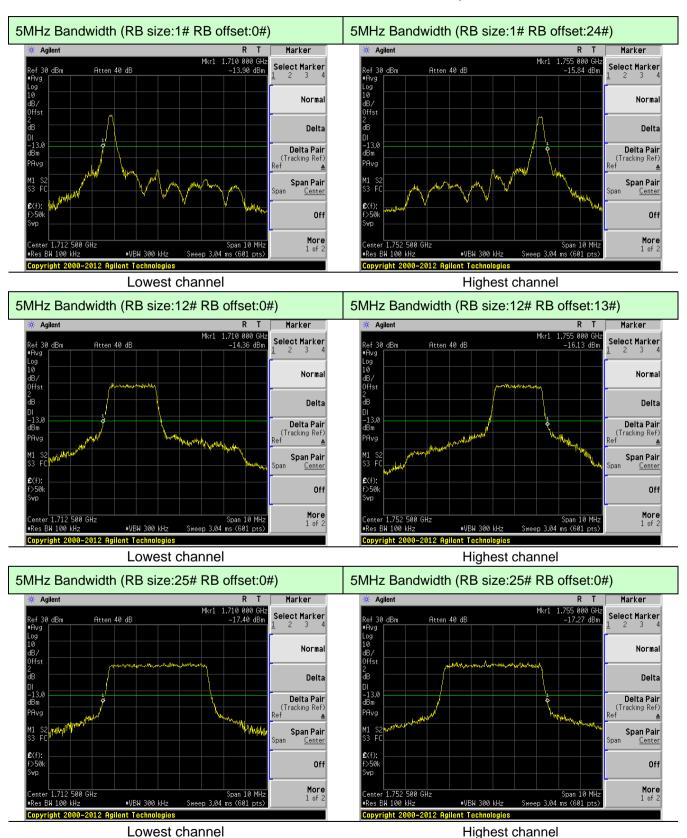
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More 1 of 2







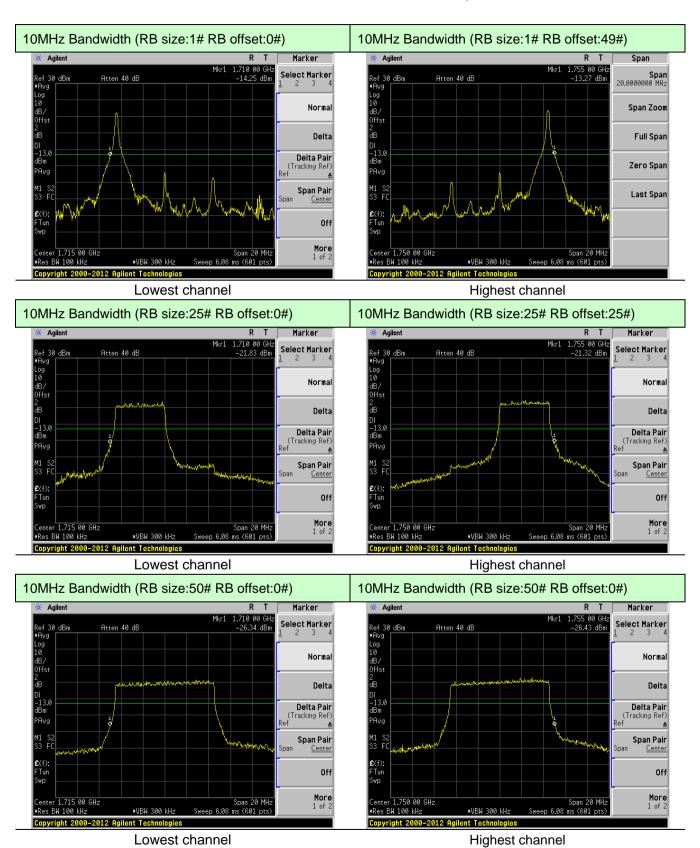


Global United Technology Services Co., Ltd.

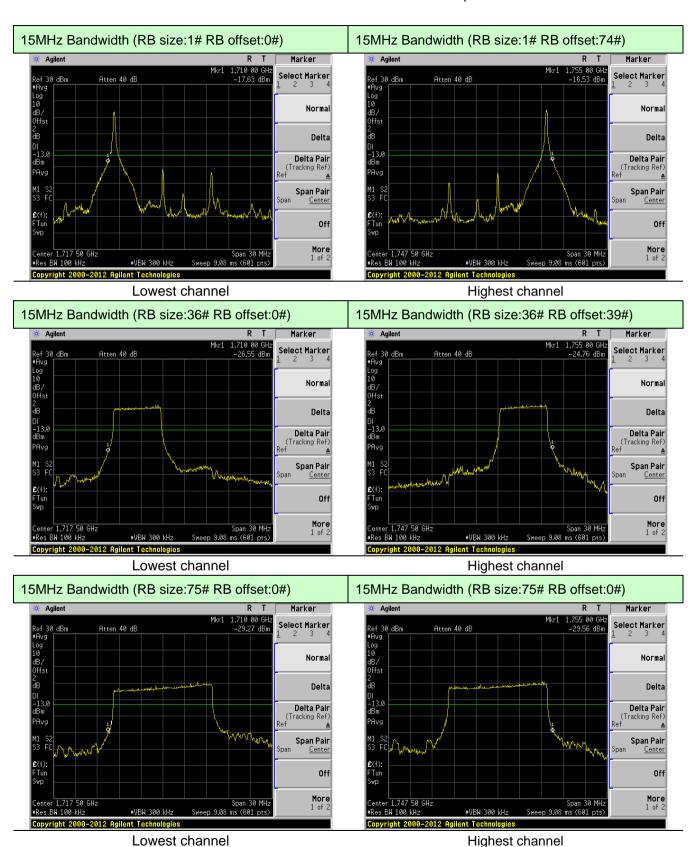
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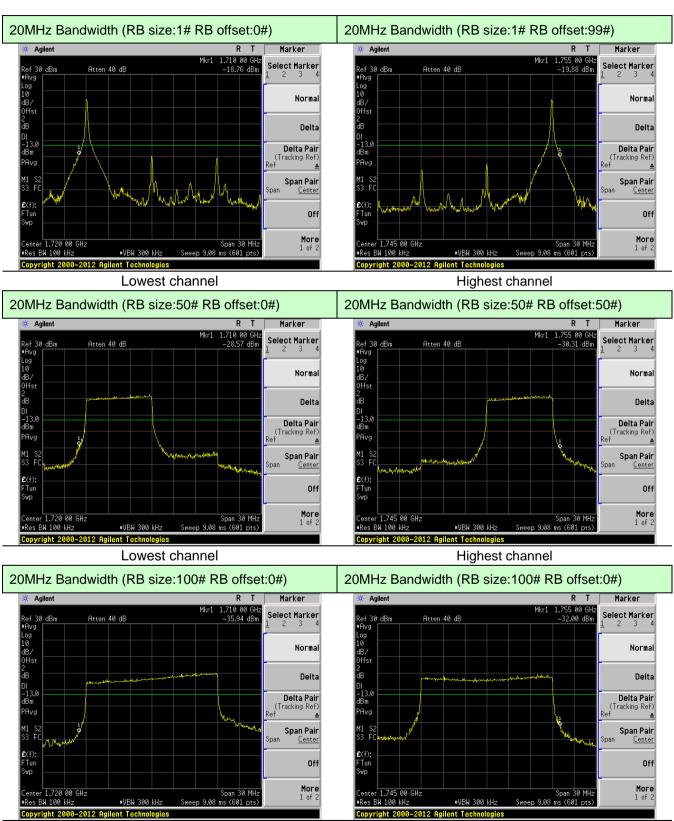












Lowest channel Highest channel

Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102



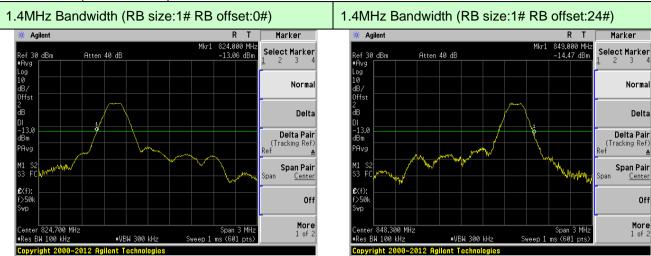
Normal

Delta

Span Pair

More 1 of 2

LTE Band 5 (16QAM mode):



Lowest channel

1.4MHz Bandwidth (RB size:12# RB offset:0#)

1.4MHz Bandwidth (RB size:12# RB offset:13#)

Highest channel

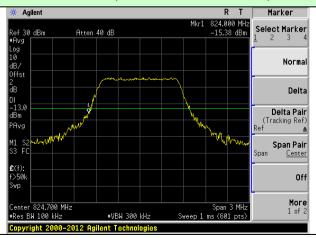


* Agilent Marker 849.000 MH: -13.90 dBm Atten 40 dB Normal Delta Span Pair Off More 1 of 2 #VBW 300 kHz ≢Res BW 100 kHz

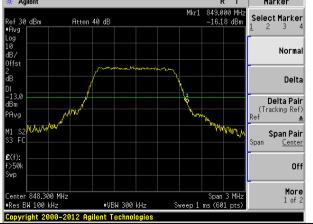
Lowest channel

Highest channel





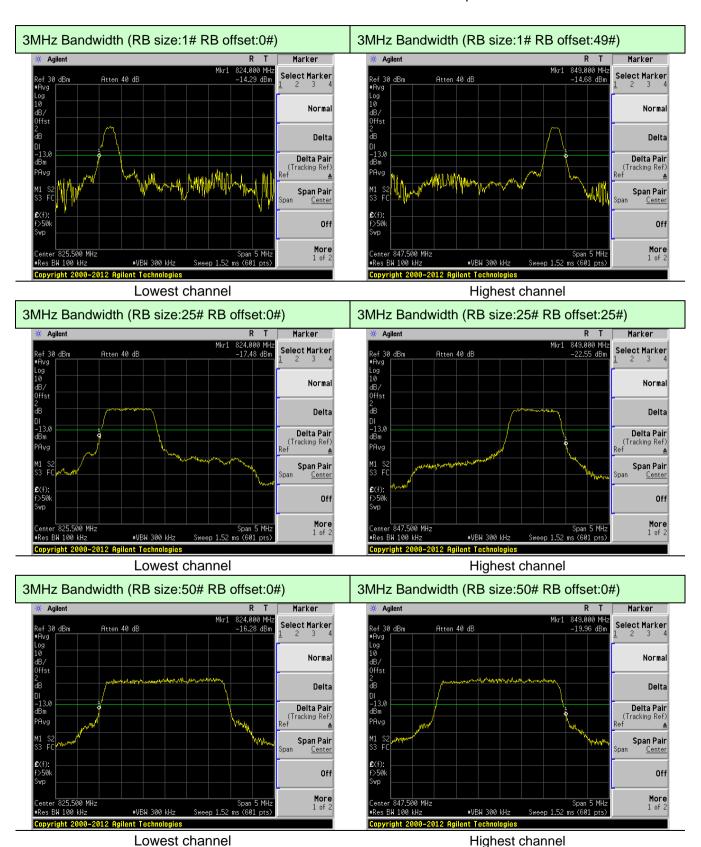
1.4MHz Bandwidth (RB size:25# RB offset:0#)



Lowest channel

Highest channel



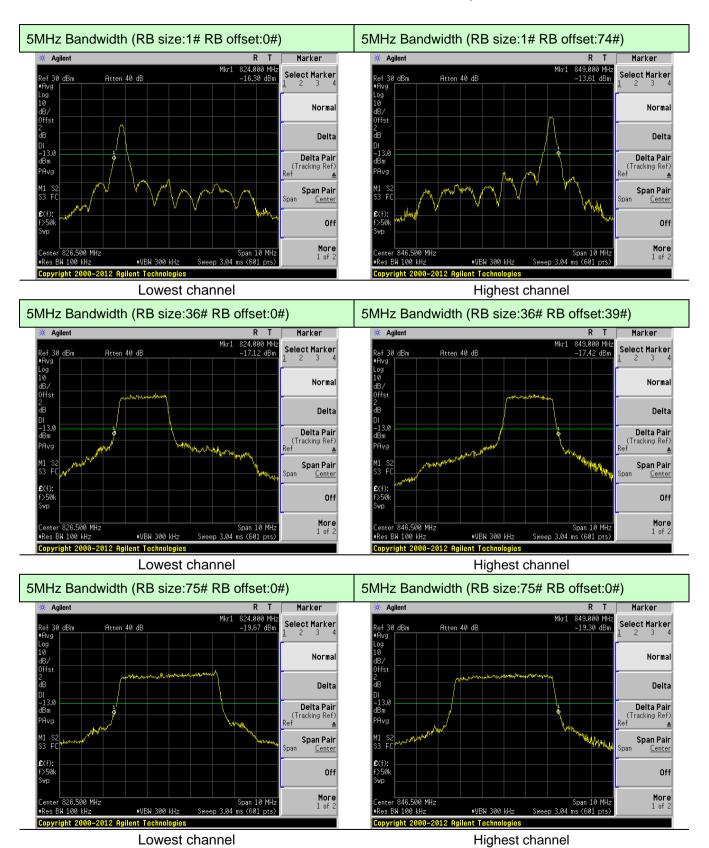


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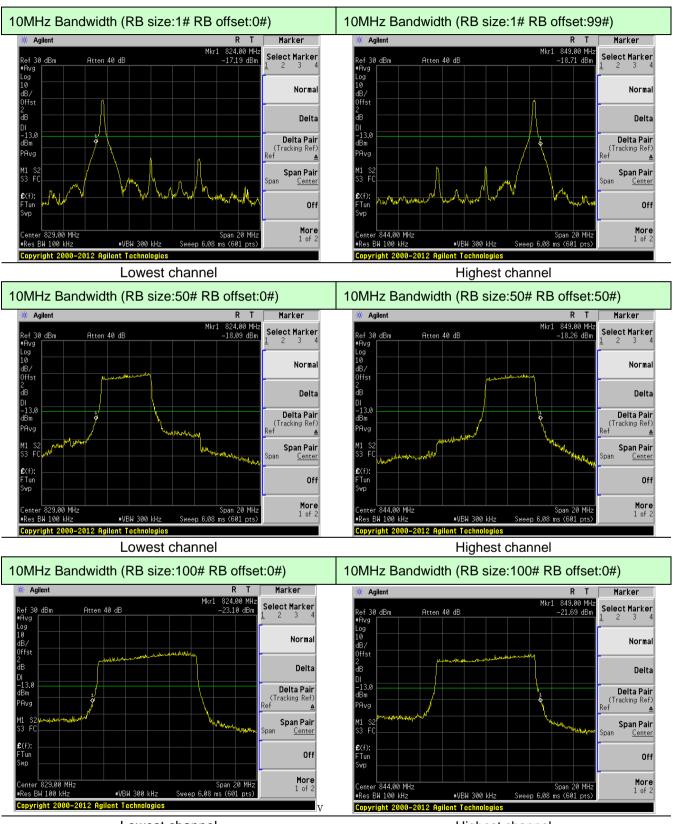


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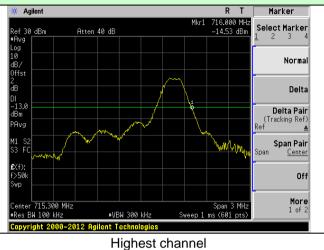


Lowest channel Highest channel



LTE Band 12 (16QAM mode): 1.4MHz Bandwidth (RB size:1# RB offset:0#) * Agilent R T 699.000 MHz -15.26 dBm Select Marker Atten 40 dB Ref 30 dBm Delta **Delta Pair** (Tracking Ref) Span Pair #VBW 300 kHz Copyright 2000-2012 Agilent Technologies

1.4MHz Bandwidth (RB size:1# RB offset:5#)



Lowest channel

1.4MHz Bandwidth (RB size:3# RB offset:0#)

1.4MHz Bandwidth (RB size:3# RB offset:2#)

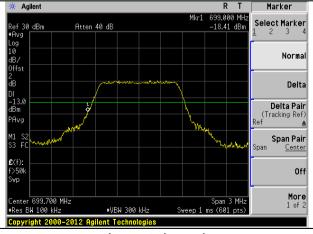


* Agilent Marker 716.000 MH: -16.37 dBm Atten 40 dB Normal Delta Span Pair Off More 1 of 2 #VBW 300 kHz

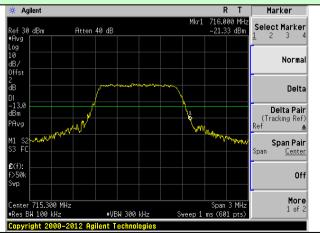
Lowest channel

Highest channel

1.4MHz Bandwidth (RB size 6# RB offset:0#)



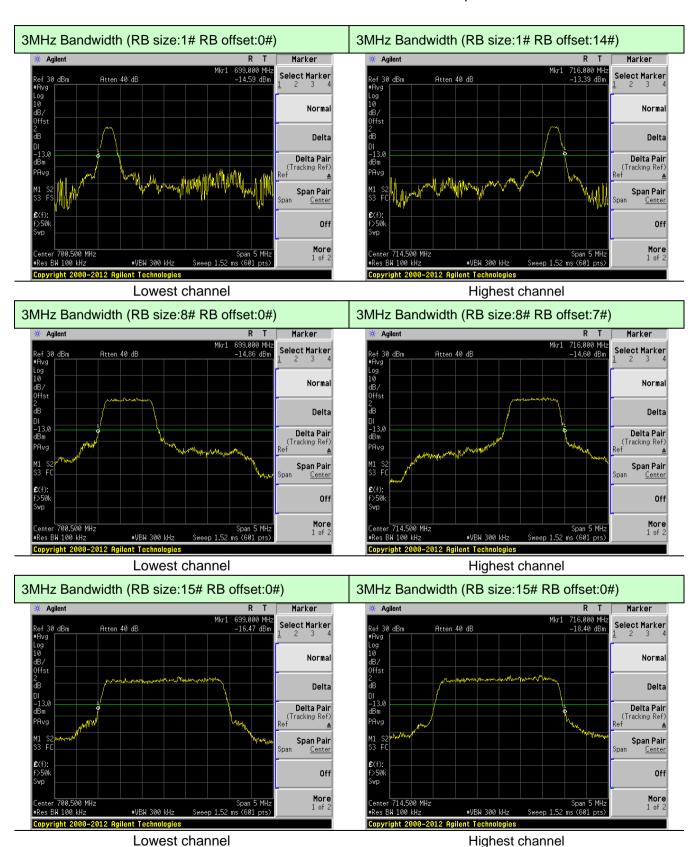
1.4MHz Bandwidth (RB size:6# RB offset:0#)



Highest channel

Lowest channel



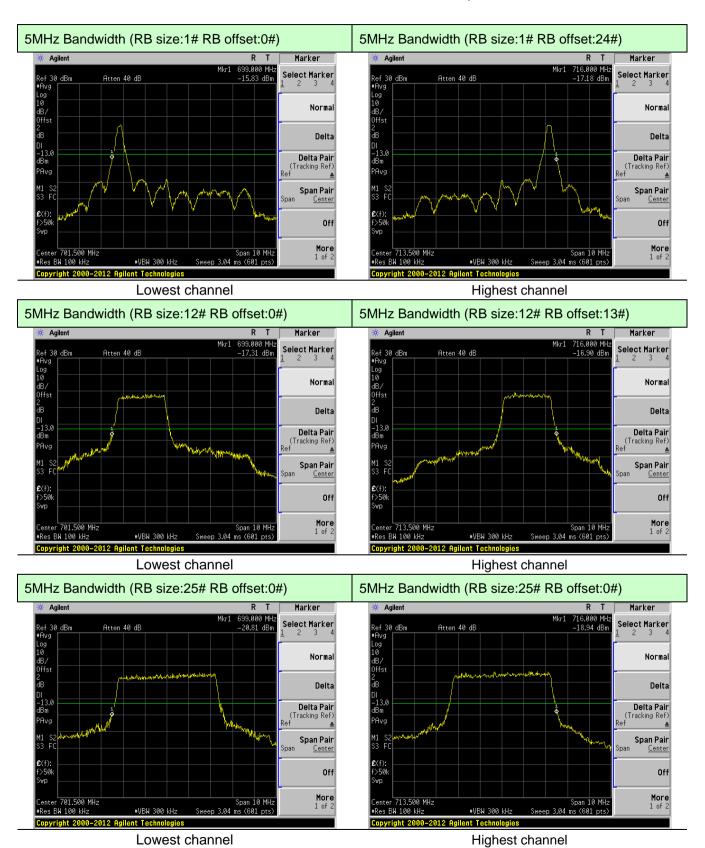


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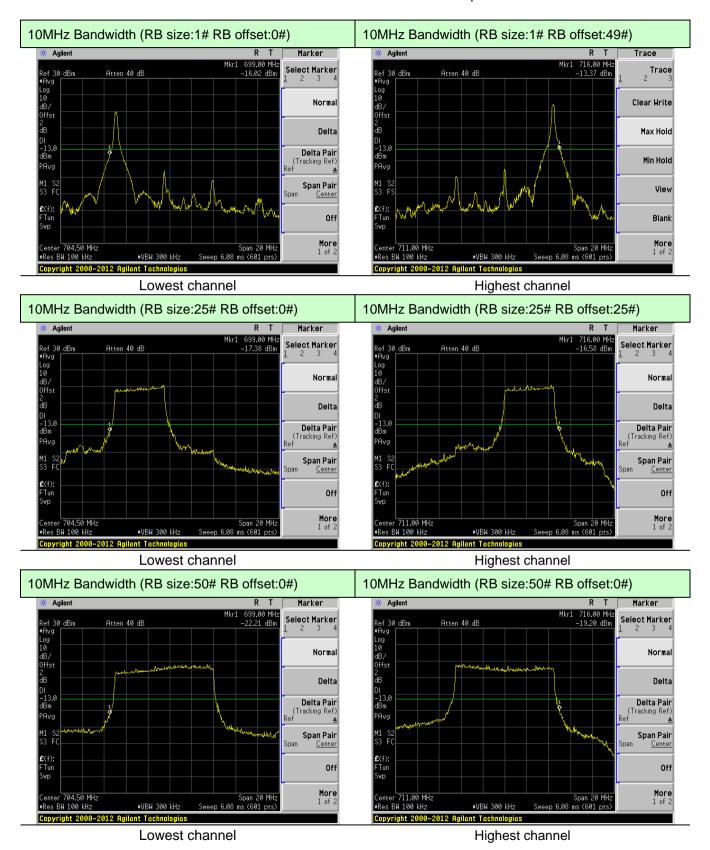


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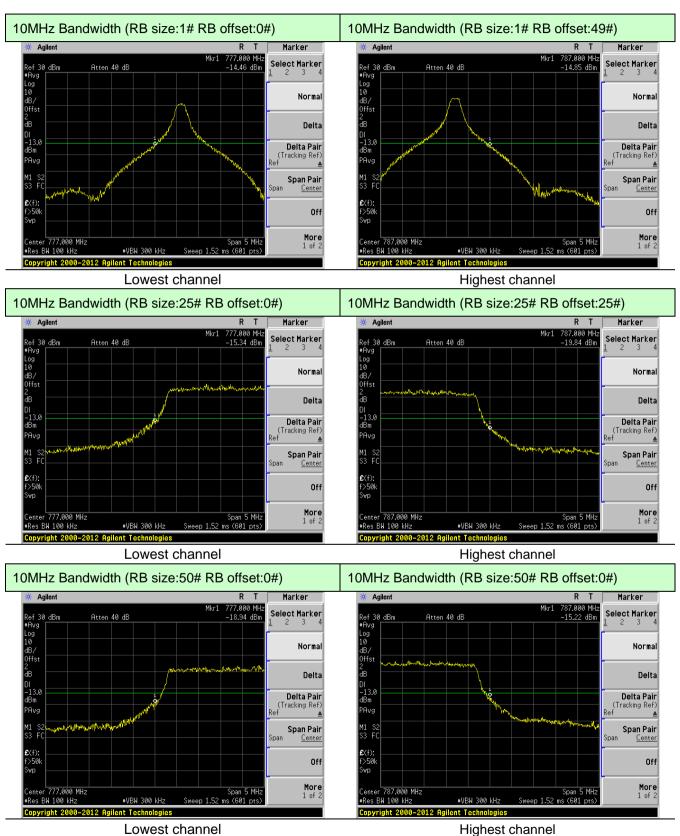
More 1 of 2

LTE Band 13 (16QAM mode): 5MHz Bandwidth (RB size:1# RB offset:0#) 5MHz Bandwidth (RB size:1# RB offset:24#) * Agilent R T Marker Agilent R T Marker 777.000 MHz -14.70 dBm 787.000 MHz –15.74 dBm Select Marker Select Marker Atten 40 dB Ref 30 dBm Atten 40 dB Normal Delta Delta **Delta Pair** (Tracking Ref) **Delta Pair** (Tracking Ref) Span Pair Span Pair More 1 of 2 Span 10 MH Sweep 3.04 ms (601 pts Span 10 MHz Sweep 3.04 ms (601 pts) Copyright 2000-2012 Agilent Technologies Copyright 2000-2012 Agilent Technologies Lowest channel Highest channel 5MHz Bandwidth (RB size:12# RB offset:0#) 5MHz Bandwidth (RB size:12# RB offset:13#) * Agilent Marker * Agilent Marker 787.000 MH -15.49 dBm 777.000 MH: -16.75 dBm Atten 40 dB Atten 40 dB Normal Normal Delta Delta Span Pair Span Pair Off Off Span 10 MHz Sweep 3.04 ms (601 pts) More 1 of 2 More 1 of 2 Sween 3.04 ms (601 pt #VBW 300 kHz ≢Res BW 100 kHz #VBW 300 kHz ≢Res BW 100 kHz Lowest channel Highest channel 5MHz Bandwidth (RB size:25# RB offset:0#) 5MHz Bandwidth (RB size:25# RB offset:0#) Select Marker Select Marker Atten 40 dB Atten 40 dB Normal Normal Delta Delta **Delta Pair** (Tracking Ref) Delta Pair Span Pair Span Pair Off Off

Lowest channel Highest channel

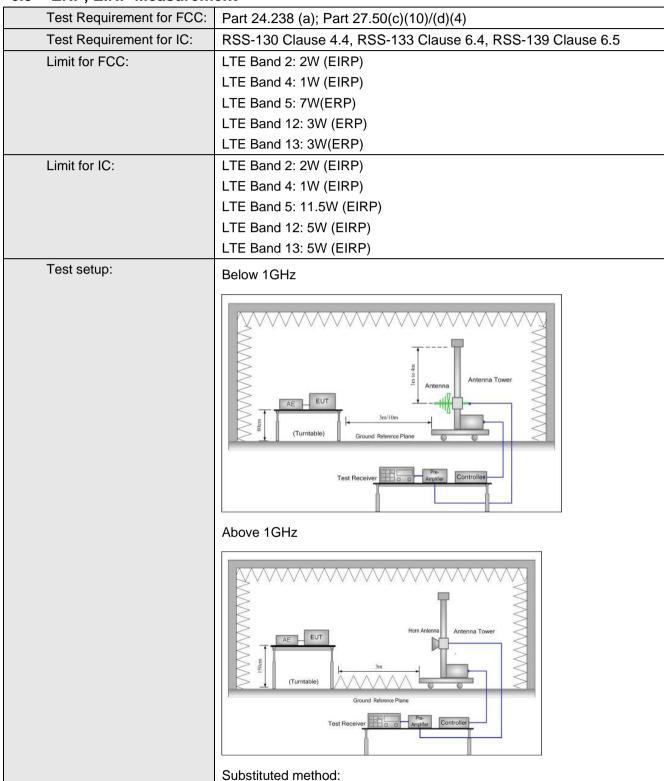
More 1 of 2







6.9 ERP, EIRP Measurement





Report No.: GTS201811000009-02
Ground plane O.8m below 1GHz 1.5m above 1GHz Substituted Dipole or Horn Antenna Bi-Log Antenna or Horn Antenna SPA Substituted Dipole or Horn Antenna
The EUT was placed on an non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer.
2. During the measurement, the EUT was communication with the station. The highest emission was recorded with the rotation of the turntable and the lowering of the test antenna from 4m to 1m. The reading was recorded and the field strength (E in dBuV/m) was calculated.
3. ERP in frequency band 777–787MHz were measured using a substitution method. The EUT was replaced by dipole antenna connected, the S.G. output was recorded and ERP was calculated asfollows: ERP = S.G. output (dBm) + Antenna Gain (dBd) – Cable Loss (dB)
4. EIRP in frequency band 1710–1755MHz were measured using a substitution method. The EUT was replaced by or horn antenna connected, the S.G. output was recorded and EIRP was calculated as follows: EIRP = S.G. output (dBm) + Antenna Gain (dBi) – Cable Loss (dB)
Temp.: 25 °C Humid.: 52% Press.: 1 012mbar
Refer to section 5.0 for details
Refer to section 6.1 for details
Pass



Measurement Data

The maximum value has been record and the tighter limits apply:

EUT	Channel	Modulat	Polari	SGP	Substitution	Cable	EIRP	Limit	Result
mode		ion	zation	[dBm]	Gain[dBi]	loss[dB]	(dBm)	(dBm)	
	Lowest	QPSK	Н	21.33	-1.93	1.13	20.53	33.00	Pass
	Middle	QPSK	Η	21.38	-1.93	1.22	20.67	33.00	Pass
LTE Band 2	Highest	QPSK	Η	21.48	-1.93	1.34	20.89	33.00	Pass
(1.4M)	Lowest	16-QAM	Η	21.39	-1.93	1.13	20.59	33.00	Pass
	Middle	16-QAM	Η	21.27	-1.93	1.22	20.56	33.00	Pass
	Highest	16-QAM	Н	21.03	-1.93	1.34	20.44	33.00	Pass

EUT	Channel	Modulat	Polari	SGP	Substitution	Cable	EIRP	Limit	Result
mode		ion	zation	[dBm]	Gain[dBi]	loss[dB]	(dBm)	(dBm)	
	Lowest	QPSK	Н	21.97	-1.93	1.13	21.17	33.00	Pass
	Middle	QPSK	Н	21.84	-1.93	1.22	21.13	33.00	Pass
LTE Band 2	Highest	QPSK	Η	21.6	-1.93	1.34	21.01	33.00	Pass
(3M)	Lowest	16-QAM	Η	21.87	-1.93	1.13	21.07	33.00	Pass
	Middle	16-QAM	Н	21.99	-1.93	1.22	21.28	33.00	Pass
	Highest	16-QAM	Н	21.11	-1.93	1.34	20.52	33.00	Pass

EUT mode	Channel	Modulat ion	Polari zation	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	EIRP (dBm)	Limit (dBm)	Result
	Lowest	QPSK	Н	21.3	-1.93	1.13	20.5	33.00	Pass
	Middle	QPSK	Н	21.69	-1.93	1.22	20.98	33.00	Pass
LTE Band 2	Highest	QPSK	Н	21.15	-1.93	1.34	20.56	33.00	Pass
(5M)	Lowest	16-QAM	Н	21.58	-1.93	1.13	20.78	33.00	Pass
, ,	Middle	16-QAM	Н	21.93	-1.93	1.22	21.22	33.00	Pass
	Highest	16-QAM	Н	21.12	-1.93	1.34	20.53	33.00	Pass



EUT mode	Channel	Modulat ion	Polari zation	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	EIRP (dBm)	Limit (dBm)	Result
	Lowest	QPSK	Н	21.85	-1.93	1.13	21.05	33.00	Pass
	Middle	QPSK	Н	21.5	-1.93	1.22	20.79	33.00	Pass
LTE Band 2	Highest	QPSK	Н	21.75	-1.93	1.34	21.16	33.00	Pass
(10M)	Lowest	16-QAM	Ι	21.03	-1.93	1.13	20.23	33.00	Pass
	Middle	16-QAM	Н	21.5	-1.93	1.22	20.79	33.00	Pass
	Highest	16-QAM	H	21.44	-1.93	1.34	20.85	33.00	Pass

EUT mode	Channel	Modulat ion	Polari zation	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	EIRP (dBm)	Limit (dBm)	Result
	Lowest	QPSK	Н	21.46	-1.93	1.13	20.66	33.00	Pass
	Middle	QPSK	Н	21.78	-1.93	1.22	21.07	33.00	Pass
LTE Band	Highest	QPSK	Н	21.02	-1.93	1.34	20.43	33.00	Pass
2(15M)	Lowest	16-QAM	Н	21.71	-1.93	1.13	20.91	33.00	Pass
	Middle	16-QAM	Н	21.82	-1.93	1.22	21.11	33.00	Pass
	Highest	16-QAM	Н	21.08	-1.93	1.34	20.49	33.00	Pass

EUT	Channel	Modulat	Polari	SGP	Substitution	Cable	EIRP	Limit	Result
mode		ion	zation	[dBm]	Gain[dBi]	loss[dB]	(dBm)	(dBm)	
	Lowest	QPSK	Н	21.72	-1.93	1.13	20.92	33.00	Pass
	Middle	QPSK	Н	21.09	-1.93	1.22	20.38	33.00	Pass
LTE Band 2	Highest	QPSK	Н	21.33	-1.93	1.34	20.74	33.00	Pass
(20M)	Lowest	16-QAM	Н	21.07	-1.93	1.13	20.27	33.00	Pass
, ,	Middle	16-QAM	Η	21.8	-1.93	1.22	21.09	33.00	Pass
	Highest	16-QAM	Н	21.78	-1.93	1.34	21.19	33.00	Pass



EUT mode	Channel	Modulat ion	Polari zation	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	EIRP (dBm)	Limit (dBm)	Result
	Lowest	QPSK	Н	22.1	-2.74	1.71	21.07	30.00	Pass
	Middle	QPSK	Н	21.58	-2.74	1.73	20.57	30.00	Pass
LTE Band 4	Highest	QPSK	Н	22.66	-2.74	1.81	21.73	30.00	Pass
(1.4M)	Lowest	16-QAM	Н	21.29	-2.74	1.71	20.26	30.00	Pass
	Middle	16-QAM	Ι	22.35	-2.74	1.73	21.34	30.00	Pass
	Highest	16-QAM	Н	22.46	-2.74	1.81	21.53	30.00	Pass

EUT mode	Channel	Modulat ion	Polari zation	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	EIRP (dBm)	Limit (dBm)	Result
	Lowest	QPSK	Н	22.65	-2.74	1.71	21.62	30.00	Pass
	Middle	QPSK	Н	21.89	-2.74	1.73	20.88	30.00	Pass
LTE Band 4	Highest	QPSK	Н	22.13	-2.74	1.81	21.2	30.00	Pass
(3M)	Lowest	16-QAM	Н	21.63	-2.74	1.71	20.6	30.00	Pass
	Middle	16-QAM	Н	22.46	-2.74	1.73	21.45	30.00	Pass
	Highest	16-QAM	Н	21.46	-2.74	1.81	20.53	30.00	Pass

EUT	Channel	Modulat	Polari	SGP	Substitution	Cable	EIRP	Limit	Result
mode		ion	zation	[dBm]	Gain[dBi]	loss[dB]	(dBm)	(dBm)	
	Lowest	QPSK	Н	22.39	-2.74	1.71	21.36	30.00	Pass
	Middle	QPSK	Н	22.65	-2.74	1.73	21.64	30.00	Pass
LTE Band 4	Highest	QPSK	Н	21.43	-2.74	1.81	20.5	30.00	Pass
(5M)	Lowest	16-QAM	Н	21.29	-2.74	1.71	20.26	30.00	Pass
, ,	Middle	16-QAM	Η	21.12	-2.74	1.73	20.11	30.00	Pass
	Highest	16-QAM	Н	22.4	-2.74	1.81	21.47	30.00	Pass



EUT mode	Channel	Modulat ion	Polari zation	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	EIRP (dBm)	Limit (dBm)	Result
	Lowest	QPSK	Н	22.94	-2.74	1.71	21.91	30.00	Pass
	Middle	QPSK	Н	21.64	-2.74	1.73	20.63	30.00	Pass
LTE Band 4	Highest	QPSK	Н	22.71	-2.74	1.81	21.78	30.00	Pass
(10M)	Lowest	16-QAM	Н	22.84	-2.74	1.71	21.81	30.00	Pass
	Middle	16-QAM	Н	21.96	-2.74	1.73	20.95	30.00	Pass
	Highest	16-QAM	Н	22.52	-2.74	1.81	21.59	30.00	Pass

EUT mode	Channel	Modulat ion	Polari zation	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	EIRP (dBm)	Limit (dBm)	Result
	Lowest	QPSK	Н	22.26	-2.74	1.71	21.23	30.00	Pass
	Middle	QPSK	Н	22.45	-2.74	1.73	21.44	30.00	Pass
LTE Band 4	Highest	QPSK	Н	22.47	-2.74	1.81	21.54	30.00	Pass
(15M)	Lowest	16-QAM	Н	21.27	-2.74	1.71	20.24	30.00	Pass
, ,	Middle	16-QAM	Η	21.03	-2.74	1.73	20.02	30.00	Pass
	Highest	16-QAM	Н	21.9	-2.74	1.81	20.97	30.00	Pass

EUT	Channel	Modulat	Polari	SGP	Substitution	Cable	EIRP	Limit	Result
mode		ion	zation	[dBm]	Gain[dBi]	loss[dB]	(dBm)	(dBm)	
	Lowest	QPSK	Н	22.08	-2.74	1.71	21.05	30.00	Pass
	Middle	QPSK	Η	21.91	-2.74	1.73	20.9	30.00	Pass
LTE Band 4	Highest	QPSK	Η	21.15	-2.74	1.81	20.22	30.00	Pass
(20M)	Lowest	16-QAM	Η	21.62	-2.74	1.71	20.59	30.00	Pass
, ,	Middle	16-QAM	Η	22.8	-2.74	1.73	21.79	30.00	Pass
	Highest	16-QAM	Н	22.79	-2.74	1.81	21.86	30.00	Pass



EUT mode	Channe I	Modulat ion	Polari zation	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	ERP (dBm)	Limit (dBm)	Result
	Lowest	QPSK	Н	22.09	-2.08	1.55	21.56	38.45	Pass
	Middle	QPSK	Н	22.76	-2.08	1.6	22.28	38.45	Pass
LTE Band 5	Highest	QPSK	Н	22.85	-2.08	1.65	22.42	38.45	Pass
(1.4M)	Lowest	16-QAM	Н	22.81	-2.08	1.55	22.28	38.45	Pass
,	Middle	16-QAM	Н	21.8	-2.08	1.6	21.32	38.45	Pass
	Highest	16-QAM	Н	21.23	-2.08	1.65	20.8	38.45	Pass

EUT mode	Channe I	Modulat ion	Polari zation	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	ERP (dBm)	Limit (dBm)	Result
	Lowest	QPSK	Н	22.5	-2.08	1.55	21.97	38.45	Pass
	Middle	QPSK	Н	22.79	-2.08	1.6	22.31	38.45	Pass
LTE Band 5	Highest	QPSK	Н	22.97	-2.08	1.65	22.54	38.45	Pass
(3M)	Lowest	16-QAM	Н	21.09	-2.08	1.55	20.56	38.45	Pass
(- /	Middle	16-QAM	Н	21.25	-2.08	1.6	20.77	38.45	Pass
	Highest	16-QAM	Н	22.95	-2.08	1.65	22.52	38.45	Pass



EUT mode	Channe I	Modulat ion	Polari zation	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	ERP (dBm)	Limit (dBm)	Result
	Lowest	QPSK	Н	22.3	-2.08	1.55	21.77	38.45	Pass
	Middle	QPSK	Н	22.4	-2.08	1.6	21.92	38.45	Pass
LTE Band 5	Highest	QPSK	Н	22.36	-2.08	1.65	21.93	38.45	Pass
(5M)	Lowest	16-QAM	Ι	21.16	-2.08	1.55	20.63	38.45	Pass
(- ,	Middle	16-QAM	Н	21.99	-2.08	1.6	21.51	38.45	Pass
	Highest	16-QAM	Н	22.91	-2.08	1.65	22.48	38.45	Pass

EUT	Channe	Modulat	Polari	SGP	Substitution	Cable	ERP	Limit	Result
mode	I	ion	zation	[dBm]	Gain[dBi]	loss[dB]	(dBm)	(dBm)	
	Lowest	QPSK	Н	21.16	-2.08	1.55	20.63	38.45	Pass
	Middle	QPSK	Н	22.62	-2.08	1.6	22.14	38.45	Pass
LTE Band 5	Highest	QPSK	Н	22.52	-2.08	1.65	22.09	38.45	Pass
(10M)	Lowest	16-QAM	Н	21.82	-2.08	1.55	21.29	38.45	Pass
, ,	Middle	16-QAM	Н	21.63	-2.08	1.6	21.15	38.45	Pass
	Highest	16-QAM	Н	21.04	-2.08	1.65	20.61	38.45	Pass



EUT mode	Channel	Modulat ion	Polari zation	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	ERP (dBm)	Limit (dBm)	Result
	Lowest	QPSK	Н	21.72	-2.46	1.55	20.81	34.77	Pass
LTE	Middle	QPSK	Н	22.99	-2.46	1.6	22.13	34.77	Pass
Band	Highest	QPSK	Н	22.33	-2.46	1.65	21.52	34.77	Pass
12	Lowest	16-QAM	Н	22.49	-2.46	1.55	21.58	34.77	Pass
(1.4M)	Middle	16-QAM	Н	21.34	-2.46	1.6	20.48	34.77	Pass
	Highest	16-QAM	Н	21.34	-2.46	1.65	20.53	34.77	Pass

EUT mode	Channe I	Modulat ion	Polari zation	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	ERP (dBm)	Limit (dBm)	Result
	Lowest	QPSK	Η	21.45	-2.46	1.55	20.54	34.77	Pass
	Middle	QPSK	Н	21.5	-2.46	1.6	20.64	34.77	Pass
LTE Band 12	Highest	QPSK	Н	22.13	-2.46	1.65	21.32	34.77	Pass
(5M)	Lowest	16-QAM	Ι	21.03	-2.46	1.55	20.12	34.77	Pass
,	Middle	16-QAM	Ι	21.6	-2.46	1.6	20.74	34.77	Pass
	Highest	16-QAM	Н	22.52	-2.46	1.65	21.71	34.77	Pass



EUT mode	Channel	Modulat ion	Polari zation	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	ERP (dBm)	Limit (dBm)	Result
	Lowest	QPSK	Н	21.9	-2.46	1.55	20.99	34.77	Pass
	Middle	QPSK	Н	21.3	-2.46	1.6	20.44	34.77	Pass
LTE Band	Highest	QPSK	Н	22.51	-2.46	1.65	21.7	34.77	Pass
12 (5M)	Lowest	16-QAM	Н	22.22	-2.46	1.55	21.31	34.77	Pass
	Middle	16-QAM	Н	21.56	-2.46	1.6	20.7	34.77	Pass
	Highest	16-QAM	Н	22.32	-2.46	1.65	21.51	34.77	Pass

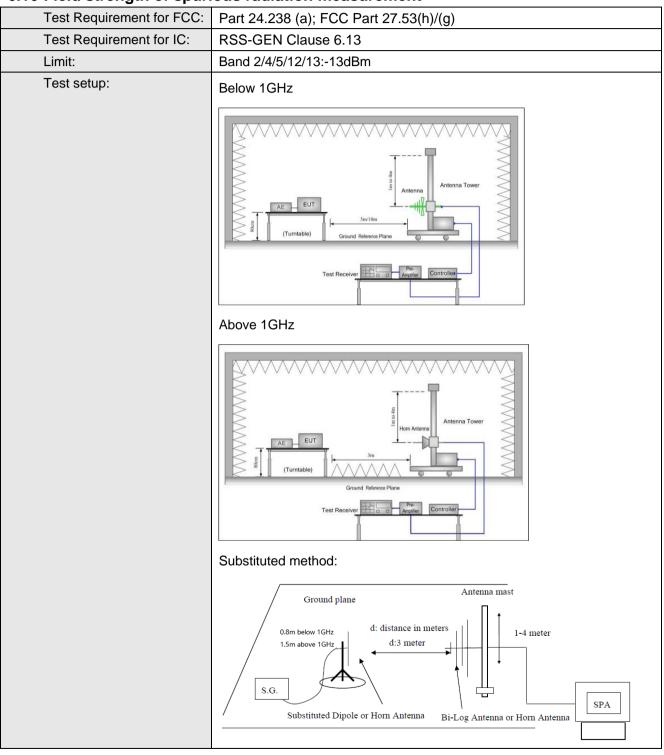
EUT	Channel	Modulat	Polari	SGP	Substitution	Cable	ERP	Limit	Result
mode		ion	zation	[dBm]	Gain[dBi]	loss[dB]	(dBm)	(dBm)	
	Lowest	QPSK	Н	22.13	-2.46	1.55	21.22	34.77	Pass
LTE	Middle	QPSK	Н	21.82	-2.46	1.6	20.96	34.77	Pass
Band	Highest	QPSK	Η	21.17	-2.46	1.65	20.36	34.77	Pass
12	Lowest	16-QAM	Η	22.8	-2.46	1.55	21.89	34.77	Pass
(10M)	Middle	16-QAM	Η	21.09	-2.46	1.6	20.23	34.77	Pass
	Highest	16-QAM	Н	21.41	-2.46	1.65	20.6	34.77	Pass

EUT mode	Channe I	Modulat ion	Polari zation	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	ERP (dBm)	Limit (dBm)	Result
	Lowest	QPSK	Н	21.51	-3.88	1.43	19.06	34.77	Pass
	Middle	QPSK	Н	22.51	-3.88	1.48	20.11	34.77	Pass
LTE Band 13	Highest	QPSK	Н	21.42	-3.88	1.52	19.06	34.77	Pass
(5M)	Lowest	16-QAM	Н	22.09	-3.88	1.43	19.64	34.77	Pass
, ,	Middle	16-QAM	Н	21.81	-3.88	1.48	19.41	34.77	Pass
	Highest	16-QAM	Н	22.6	-3.88	1.52	20.24	34.77	Pass

EUT mode	Channe I	Modulat ion	Polari zation	SGP [dBm]	Substitution Gain[dBi]	Cable loss[dB]	ERP (dBm)	Limit (dBm)	Result
LTE Band 13	Middle	QPSK	Н	22.94	-3.88	1.43	20.49	34.77	Pass
(10M)	Middle	16-QAM	Н	22.46	-3.88	1.48	20.06	34.77	Pass



6.10 Field strength of spurious radiation measurement





Test Procedure:	condu frequ	EUT was place uctive support ency was mea rum analyzer.	. The radiated as ured at 3 m	d emission a	at the funda	mental		
	varied EUT.	g the tests, the din order to id This maximiz oned in each	dentify the ma ation process	aximum level s was repeat	I of emissio ted with the	ns from the		
	 The frequency range up to tenth harmonic was investigated for eac of three fundamental frequency (low, middle and high channels). Once spurious emission was identified, the power of the emission was determined using the substitution method. 							
	betwe spurio	een radiated pous emissions	oower at the foot frequency.	undamental	frequency			
		/ EIRP = S.G e Loss (dB)	i. output (ubii	i) + Ailleille	a Gairi(ub/u	ю) –		
Test environment:	Temp.: 25 °C Humid.: 52% Press.: 1 012mbar							
Test Instruments:	Refer to se	ection 5.0 for	details	L				
Test mode:	Refer to se	ection 6.1 for	details					
Test results:	Pass							



Measurement Data

Remark:

- 1. The emission behavior belongs to narrowband spurious emission.
- 2. The emission levels of below 1 GHz are very lower than the limit and not show in test report.

QPSK mode:

Test mode:	LTE Band	d 2(5MHz)	Test channel:	Lowest
- (A411)	Spurious	Emission	1: :(/ID)	
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
3705.00	Vertical	-47.01		
5557.50	V	-46.27		
7410.00	V	-45.13	-13.00	Pass
9262.50	V	-45.54		
11115.00	V	-43.22		
3705.00	Horizontal	-44.20		
5557.50	Н	-44.64		
7410.00	Н	-46.56	-13.00	Pass
9262.50	Н	-45.89		
11115.00	Н	-44.59		
Test mode:	LTE Band	2(5MHz)	Test channel:	Middle
Farmer (NALL)		Emission	Lind (JD)	D !!
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
3760.00	Vertical	-45.16		
5640.00	V	-47.28		
7520.00	V	-46.35	-13.00	Pass
9400.00	V	-45.02		
11280.00	V	-45.32		
3760.00	Horizontal	-43.09		
5640.00	Н	-44.62		
7520.00	Н	-44.14	-13.00	Pass
9400.00	Н	-46.52		
11280.00	Н	-45.37		
Test mode:	LTE Band	2(5MHz)	Test channel:	Highest
Frequency (MHz)	Spurious	Emission	Limit (dBm)	Result
Frequency (Miriz)	Polarization	Level (dBm)	Limit (dbin)	Keani
3815.00	Vertical	-46.50		
5722.50	V	-45.59		
7630.00	V	-45.03	-13.00	Pass
9537.50	V	-43.31		
11445.00	V	-44.68		
3815.00	Horizontal	-44.39		
5722.50	Н	-46.64		
7630.00	Н	-45.30	-13.00	Pass
9537.50	Н	-44.35		1 400
11445.00	Н	-45.04		



Test mode:	LTE Band	I 2(10MHz)	Test channel:	Lowest	
- (1411)	Spurious	Emission	11. 11. (15.)	. "	
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
3810.00	Vertical	-45.49			
5715.00	V	-47.60			
7620.00	V	-46.89	-13.00	Pass	
9525.00	V	-45.24			
11430.00	V	-45.60			
3810.00	Horizontal	-43.62			
5715.00	Н	-44.49			
7620.00	Н	-44.66	-13.00	Pass	
9525.00	Н	-46.22			
11430.00	H	-45.72			
Test mode:	LTE Band	I 2(10MHz)	Test channel:	Middle	
(__\	Spurious	Emission	Limit (dDay)	5 "	
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
3760.00	Vertical	-46.44			
5640.00	V	-45.74			
7520.00	V	-45.24	-13.00	Pass	
9400.00	V	-43.82			
11280.00	V	-44.24			
3760.00	Horizontal	-44.13			
5640.00	Н	-46.81			
7520.00	Н	-45.13	-13.00	Pass	
9400.00	Н	-44.88			
11280.00	Н	-45.90			
Test mode:	LTE Band	I 2(10MHz)	Test channel:	Highest	
Frequency (MHz)	Spurious	Emission	Limit (dBm)	Result	
Trequency (IVITIZ)	Polarization	Level (dBm)	LIIIII (UDIII)	Vesuit	
3710.00	Vertical	-45.56			
5565.00	V	-47.17			
7420.00	V	-46.33	-13.00	Pass	
9275.00	V	-45.28			
11130.00	V	-45.03			
3710.00	Horizontal	-43.68			
5565.00	Н	-44.30			
7420.00	Н	-44.72	-13.00	Pass	
9275.00	Н	-46.35			
11130.00	Н	-45.65			



Test mode:	I TF Band	2(15MHz)	Test channel:	Lowest
1 oot modo:		Emission	Tool onamion	2011001
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
3805.00	Vertical	-45.09		
5707.50	V	-47.31	-	
7610.00	V	-46.50	-13.00	Pass
9512.50	V	-45.38	10.00	1 455
11415.00	V	-45.92	-	
3805.00	Horizontal	-43.18		
5707.50	Н	-44.73	-	
7610.00	H	-44.23	-13.00	Pass
9512.50	H	-46.49		. 400
11415.00	H	-45.23		
Test mode:	LTE Band	2(15MHz)	Test channel:	Middle
		Emission		
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
3760.00	Vertical	-45.69		
5640.00	V	-47.69		
7520.00	V	-46.89	-13.00	Pass
9400.00	V	-45.24		
11280.00	V	-45.69		
3760.00	Horizontal	-43.54		
5640.00	Н	-44.30		
7520.00	Н	-44.89	-13.00	Pass
9400.00	Н	-46.91		
11280.00	Н	-45.75		
Test mode:	LTE Band	2(15MHz)	Test channel:	Highest
Face (NALL)	Spurious	Emission	L' '(/ JD)	D 11
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
3715.00	Vertical	-45.77		
5572.50	V	-47.45		
7430.00	V	-46.75	-13.00	Pass
9287.50	V	-45.46		
11145.00	V	-45.77	7	
3715.00	Horizontal	-43.49		
5572.50	Н	-44.91		
7430.00	Н	-44.04	-13.00	Pass
9287.50	Н	-46.55		
11145.00	Н	-45.52		



Test mode:	LTE Band	2(20MHz)	Test channel:	Lowest
		Emission		
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
3800.00	Vertical	-44.12		
5700.00	V	-45.83		
7600.00	V	-46.76	-13.00	Pass
9500.00	V	-43.86	-13.00	
11400.00	V	-45.25		
3800.00	Horizontal	-44.63		
5700.00	Н	-43.79		
7600.00	Н	-45.09	-13.00	Pass
9500.00	Н	-44.87		
11400.00	Н	-43.26		
Test mode:	LTE Band	2(20MHz)	Test channel:	Middle
Farmer (MILL)	Spurious	Emission	Line (CAD co)	D 11
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
3760.00	Vertical	-44.68		
5640.00	V	-45.05		
7520.00	V	-46.87	-13.00	Pass
9400.00	V	-43.83		
11280.00	V	-45.12		
3760.00	Horizontal	-44.75		
5640.00	Н	-43.02		
7520.00	Н	-45.71	-13.00	Pass
9400.00	Н	-44.51		
11280.00	Н	-43.53		
Test mode:	LTE Band	2(20MHz)	Test channel:	Highest
Fraguesia (MIII-)	Spurious	Emission	Linnit (dDnn)	Decult
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
3720.00	Vertical	-44.11		
5580.00	V	-45.86		
7440.00	V	-46.09	-13.00	Pass
9300.00	V	-43.42		
11160.00	V	-45.68	7	
3720.00	Horizontal	-44.35		
5580.00	Н	-43.02		
7440.00	Н	-45.35	-13.00	Pass
9300.00	Н	-44.41		
11160.00	Н	-43.20		



Test mode:	LTE Band	d 4(5MHz)	Test channel:	Lowest	
- (A411.)	Spurious	Emission	1: '((15)		
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
3425.00	Vertical	-44.83			
5137.50	V	-45.99			
6850.00	V	-46.50	-13.00	Pass	
8562.50	V	-43.44			
10275.00	V	-45.81			
3425.00	Horizontal	-44.32			
5137.50	Н	-43.29			
6850.00	Н	-45.60	-13.00	Pass	
8562.50	Н	-44.83			
10275.00	H	-43.14			
Test mode:	LTE Band	d 4(5MHz)	Test channel:	Middle	
Fraguera (MIII-)	Spurious	Emission	Limait (alDina)	D ''	
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
3465.00	Vertical	-45.79			
5197.50	V	-47.13			
6930.00	V	-46.89	-13.00	Pass	
8662.50	V	-45.40			
10395.00	V	-45.16			
3465.00	Horizontal	-43.42			
5197.50	Н	-44.75		Pass	
6930.00	Н	-44.99	-13.00		
8662.50	Н	-46.98			
10395.00	H	-45.86			
Test mode:	LTE Band	d 4(5MHz)	Test channel:	Highest	
Fraguesia (MIII-)	Spurious	Emission	Limait (alDina)	Daguilt	
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
3505.00	Vertical	-45.48			
5257.50	V	-47.33			
7010.00	V	-46.72	-13.00	Pass	
8762.50	V	-45.75	7		
10515.00	V	-45.36			
3505.00	Horizontal	-43.06			
5257.50	Н	-44.47			
7010.00	Н	-44.89	-13.00	Pass	
8762.50	Н	-46.08			
10515.00	Н	-45.93			



Test mode:	LTE Band	4(10MHz)	Test channel:	Lowest
		Emission		
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
3430.00	Vertical	-44.80		
5145.00	V	-45.67		
6860.00	V	-46.56	-13.00	Pass
8575.00	V	-43.95		
10290.00	V	-45.27		
3430.00	Horizontal	-44.59		
5145.00	Н	-43.92		
6860.00	Н	-45.84	-13.00	Pass
8575.00	Н	-44.66		
10290.00	Н	-43.36		
Test mode:	LTE Band	4(10MHz)	Test channel:	Middle
Francisco (MILL)	Spurious	Emission	L' '(/ ID)	D It
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
3465.00	Vertical	-45.28		
5197.50	V	-47.72		
6930.00	V	-46.57	-13.00	Pass
8662.50	V	-45.35		
10395.00	V	-45.11		
3465.00	Horizontal	-43.33		
5197.50	Н	-44.35		
6930.00	H	-44.78	-13.00	Pass
8662.50	Н	-46.16		
10395.00	Н	-45.89		
Test mode:	LTE Band	4(10MHz)	Test channel:	Highest
Fragues as (MIII-)	Spurious	Emission	Lineit (dDne)	Daguit
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
3500.00	Vertical	-45.30		
5250.00	V	-47.89		
7000.00	V	-46.02	-13.00	Pass
8750.00	V	-45.52		
10500.00	V	-45.74		
3500.00	Horizontal	-43.94		
5250.00	Н	-44.78		
7000.00	Н	-44.25	-13.00	Pass
8750.00	Н	-46.00		
10500.00	Н	-45.38		

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Test mode:	LTE Band	1(15MHz)	Test channel:	Lowest	
rest mode.		Emission	rest chamile.	LOWEST	
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
3435.00	Vertical	-44.88			
5152.50	Vertical	-44.66 -45.57	+		
6870.00	V	-45.57 -46.05	-13.00	Pass	
8587.50	V	-40.05 -43.15	-13.00	Fd55	
10305.00	V	-45.74	-		
3435.00	V Horizontal	-44.48			
5152.50	Н	-43.92	-		
	<u> </u>	-43.92 -45.20	12.00	Pass	
6870.00			-13.00	Pass	
8587.50	<u>Н</u> Н	-44.91	4		
10305.00		-43.30			
Test mode:	LTE Band	• •	Test channel:	Middle	
Frequency (MHz)	Spurious	Emission	Limit (dBm)	Result	
1 requericy (Wir 12)	Polarization	Level (dBm)	Lillit (dDill)	Nesuit	
3465.00	Vertical	-44.65			
5197.50	V	-45.38			
6930.00	V	-46.20	-13.00	Pass	
8662.50	V	-43.60			
10395.00	V	-45.62			
3465.00	Horizontal	-44.04			
5197.50	Н	-43.14			
6930.00	Н	-45.99	-13.00	Pass	
8662.50	Н	-44.14			
10395.00	Н	-43.90			
Test mode:	LTE Band	4(15MHz)	Test channel:	Highest	
Farmer (NALL)	Spurious	Emission	Lind (JD a)	D 11	
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
3495.00	Vertical	-44.54			
5242.50	V	-45.26			
6990.00	V	-46.23	-13.00	Pass	
8737.50	V	-43.75	7		
10485.00	V	-45.81	7		
3495.00	Horizontal	-44.14			
5242.50	Н	-43.70	7		
6990.00	Н	-45.49	-13.00	Pass	
8737.50	Н	-44.44	7		
10485.00	Н	-43.54			



Test mode:	LTE Band	I 4(20MHz)	Test channel:	Lowest
- (2411)	Spurious	Emission		5 "
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
3440.00	Vertical	-45.72		
5160.00	V	-47.88		
6880.00	V	-46.88	-13.00	Pass
8600.00	V	-45.68		
10320.00	V	-45.33		
3440.00	Horizontal	-43.02		
5160.00	Н	-44.20		
6880.00	Н	-44.86	-13.00	Pass
8600.00	Н	-46.94		
10320.00	Н	-45.13		
Test mode:	LTE Band	I 4(20MHz)	Test channel:	Middle
	Spurious	Emission	Lineit (dDne)	Danult
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
3465.00	Vertical	-45.07		
5197.50	V	-47.28		
6930.00	V	-46.66	-13.00	Pass
8662.50	V	-45.08		
10395.00	V	-45.28		
3465.00	Horizontal	-43.35		
5197.50	Н	-44.56		
6930.00	Н	-44.71	-13.00	Pass
8662.50	Н	-46.37		
10395.00	Н	-45.61		
Test mode:	LTE Band	I 4(20MHz)	Test channel:	Highest
Fraguency (MU=)	Spurious	Emission	Limit (dPm)	Pocult
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
3490.00	Vertical	-45.45		
5235.00	V	-47.22		
6980.00	V	-46.55	-13.00	Pass
8725.00	V	-45.49		
10470.00	V	-45.44		
3490.00	Horizontal	-43.76		
5235.00	Н	-44.30		
6980.00	Н	-44.02	-13.00	Pass
8725.00	Н	-46.46		
10470.00	Н	-45.16		



Test mode:	LTE Band	d 5(5MHz)	Test channel:	Lowest
5 (8411.)	Spurious	Emission	1: :: (15.)	D 1
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
1653.00	Vertical	-45.58		
2479.50	V	-47.60		
3306.00	V	-46.63	-13.00	Pass
4132.50	V	-45.59		
4959.00	V	-45.87		
1653.00	Horizontal	-43.01		
2479.50	Н	-44.09		
3306.00	Н	-44.79	-13.00	Pass
4132.50	Н	-46.06		
4959.00	Н	-45.71		
Test mode:	LTE Band	5(5MHz)	Test channel:	Middle
F (MIL)	Spurious	Emission	1: :: (15.)	D 1
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
1673.00	Vertical	-44.56		
2509.50	V	-44.71		
3346.00	V	-46.37	-13.00	Pass
4182.50	V	-45.61		
5019.00	V	-44.89		
1673.00	Horizontal	-45.66		
2509.50	Н	-46.38		
3346.00	Н	-43.16	-13.00	Pass
4182.50	Н	-45.63		
5019.00	Н	-44.40		
Test mode:	LTE Band	d 5(5MHz)	Test channel:	Highest
(NALL)	Spurious	Emission	L' 't (ID)	D 11
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
1693.00	Vertical	-44.20		
2539.50	V	-44.86		
3386.00	V	-46.94	-13.00	Pass
4232.50	V	-45.13	7	
5079.00	V	-44.64		
1693.00	Horizontal	-45.75		
2539.50	Н	-46.54		
3386.00	Н	-43.64	-13.00	Pass
4232.50	Н	-45.56		
5079.00	Н	-44.74		

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Test mode:	LTE Band	5(10MHz)	Test channel:	Lowest
- (1411)	Spurious	Emission		,
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
1658.00	Vertical	-45.76		
2487.00	V	-47.45		
3316.00	V	-46.08	-13.00	Pass
4145.00	V	-45.12		
4974.00	V	-45.64		
1658.00	Horizontal	-43.76		
2487.00	Н	-44.13		
3316.00	Н	-44.93	-13.00	Pass
4145.00	Н	-46.70		
4974.00	Н	-45.40		
Test mode:	LTE Band	5(10MHz)	Test channel:	Middle
Fragueray (MIII-)	Spurious	Emission	Linnit (dDmn)	Daguit
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
1673.00	Vertical	-45.02		
2509.50	V	-47.58		
3346.00	V	-46.72	-13.00	Pass
4182.50	V	-45.45		
5019.00	V	-45.31		
1673.00	Horizontal	-43.66		
2509.50	Н	-44.45		
3346.00	Н	-44.99	-13.00	Pass
4182.50	Н	-46.56		
5019.00	Н	-45.58		
Test mode:	LTE Band	5(10MHz)	Test channel:	Highest
Fraguency (MUL)	Spurious	Emission	Limit (dDms)	Result
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
1688.00	Vertical	-45.36		
2532.00	V	-47.33		
3376.00	V	-46.40	-13.00	Pass
4220.00	V	-45.40		
5064.00	V	-45.13		
1688.00	Horizontal	-43.07		
2532.00	Н	-44.61		
3376.00	Н	-44.89	-13.00	Pass
4220.00	Н	-46.65		
5064.00	Н	-45.93		



Test mode:	LTE Band	12(5MHz)	Test channel:	Lowest
	Spurious	Spurious Emission		
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
1559.00	Vertical	-46.56		
2338.50	V	-45.58		
3118.00	V	-44.70	-13.00	Pass
3897.50	V	-45.24	-13.00	
4677.00	V	-46.26		
1559.00	Horizontal	-43.75		
2338.50	Н	-45.24		
3118.00	Н	-44.83	-13.00	Pass
3897.50	Н	-43.99		
4677.00	Н	-45.23		
Test mode:	LTE Band	12(5MHz)	Test channel:	Middle
Farmer (NALL)	Spurious	Emission	Lind (JD a)	D !!
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
1764.00	Vertical	-44.61		
2646.00	V	-44.89		
3528.00	V	-46.65	-13.00	Pass
4410.00	V	-45.93		
5292.00	V	-44.41		
1764.00	Horizontal	-45.15		
2646.00	Н	-46.35		
3528.00	Н	-43.82	-13.00	Pass
4410.00	Н	-45.81		
5292.00	Н	-44.01		
Test mode:	LTE Band	12(5MHz)	Test channel:	Highest
(\A)	Spurious	Emission	Limit (dDay)	Danult
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
1569.00	Vertical	-45.10		
2353.50	V	-47.76		
3138.00	V	-46.27	-13.00	Pass
3922.50	V	-45.32		
4707.00	V	-45.12		
1569.00	Horizontal	-43.89		
2353.50	Н	-44.02		
3138.00	Н	-44.15	-13.00	Pass
3922.50	Н	-46.79		
4707.00	Н	-45.91		



Test mode:	LTE Band	12(10MHz)	Test channel:	Lowest
(\A)	Spurious	Emission	Limeit (ADma)	Danult
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
1408.00	Vertical	-47.15		
2112.00	V	-46.17		
2816.00	V	-45.77	-13.00	Pass
3520.00	V	-45.59		
4224.00	V	-43.35		
1408.00	Horizontal	-44.33		
2112.00	Н	-45.00		
2816.00	Н	-46.85	-13.00	Pass
3520.00	Н	-45.07		
4224.00	Н	-44.96		
Test mode:	LTE Band	12(10MHz)	Test channel:	Middle
E (0.411.)	Spurious	Emission	1: :: (15)	D 1
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
1415.00	Vertical	-45.77		
2122.50	V	-47.55		
2830.00	V	-46.22	-13.00	Pass
3537.50	V	-45.61		
4245.00	V	-45.57		
1415.00	Horizontal	-43.84		
2122.50	Н	-44.43		
2830.00	Н	-44.47	-13.00	Pass
3537.50	Н	-46.47		
4245.00	Н	-45.17		
Test mode:	LTE Band	12(10MHz)	Test channel:	Highest
Face (NALL)	Spurious	Emission	Line (CAD an)	D 11
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
1422.00	Vertical	-47.65		
2133.00	V	-46.75		
2844.00	V	-45.92	-13.00	Pass
3555.00	V	-45.58		
4266.00	V	-43.39		
1422.00	Horizontal	-44.63		
2133.00	Н	-44.59		
2844.00	Н	-46.17	-13.00	Pass
3555.00	Н	-45.05		
4266.00	Н	-44.30		



Test mode:	LTE Band 13(5MHz)		Test channel:	Lowest
Frequency (MHz)	Spurious Emission			5 "
	Polarization	Level (dBm)	Limit (dBm)	Result
1559.00	Vertical	-47.66		
2338.50	V	-46.51		Pass
3118.00	V	-45.34	-13.00	
3897.50	V	-45.54		
4677.00	V	-43.78		
1559.00	Horizontal	-44.41		
2338.50	Н	-44.42		Pass
3118.00	Н	-46.82	-13.00	
3897.50	Н	-45.18		
4677.00	Н	-44.44		
Test mode:	LTE Band	13(5MHz)	Test channel:	Middle
Francisco (NALL)	Spurious Emission		Line (CAD an)	.
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
1564.00	Vertical	-46.17		Pass
2346.00	V	-45.05		
3128.00	V	-44.30	-13.00	
3910.00	V	-45.77		
4692.00	V	-46.22		
1564.00	Horizontal	-43.45		Pass
2346.00	Н	-45.05		
3128.00	Н	-44.63	-13.00	
3910.00	Н	-43.80		
4692.00	Н	-45.61		
Test mode:	LTE Band	LTE Band 13(5MHz)		Highest
	Spurious	Emission	Lineit (dDae)	Danult
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
1569.00	Vertical	-43.84		
2353.50	V	-44.43	-13.00	Pass
3138.00	V	-44.47		
3922.50	V	-46.47		
4707.00	V	-45.17		
1569.00	Horizontal	-44.74	-13.00	
2353.50	Н	-45.96		
3138.00	Н	-46.55		Pass
3922.50	Н	-43.38	7	
4707.00	Н	-45.75		



Test mode:	LTE Band 13(10MHz)		Test channel:	Middle
Frequency (MHz)	Spurious Emission		Limit (dDm)	Decult
	Polarization	Level (dBm)	Limit (dBm)	Result
1564.00	Vertical	-44.42		Pass
2346.00	V	-46.82	-13.00	
3128.00	V	-45.18		
3910.00	V	-44.44		
4692.00	V	-45.32		
1564.00	Horizontal	-46.15		Pass
2346.00	Н	-43.85	-13.00	
3128.00	Н	-45.55		
3910.00	Н	-44.32		
4692.00	Н	-43.90		



16QAM mode:

16QAM mode: Test mode:	LTE Band 2(5MHz)		Test channel:	Lowest
rest moue.	Spurious Emission		rest criainiei.	FOMESI
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
3705.00	Vertical	-44.78		
5557.50	V	-45.13		Pass
7410.00	V	-46.30	-13.00	
9262.50	V	-43.34		
11115.00	V	-45.16		
3705.00	Horizontal	-44.28		Pass
5557.50	Н	-43.72		
7410.00	Н	-45.56	-13.00	
9262.50	Н	-44.15		
11115.00	Н	-43.69		
Test mode:	LTE Ban	d 2(5MHz)	Test channel:	Middle
[Spurious Emission		Limit (dDm)	D 1
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
3760.00	Vertical	-44.59		
5640.00	V	-45.86		Pass
7520.00	V	-46.24	-13.00	
9400.00	V	-43.20		
11280.00	V	-45.59		
3760.00	Horizontal	-44.74		Pass
5640.00	Н	-43.50		
7520.00	Н	-45.64	-13.00	
9400.00	Η	-44.99		
11280.00	Н	-43.01		
Test mode:	LTE Ban	d 2(5MHz)	Test channel:	Highest
Frequency (MHz)	Spurious	Emission	Limit (dBm)	Result
r requericy (IVII IZ)	Polarization	Level (dBm)	Lillit (ubili)	Nesult
3815.00	Vertical	-44.03		
5722.50	V	-45.17		Pass
7630.00	V	-46.38	-13.00	
9537.50	V	-43.39		
11445.00	V	-45.52		
3815.00	Horizontal	-44.97	-13.00	Pass
5722.50	Н	-43.03		
7630.00	Н	-45.57		
9537.50	Н	-44.75	_	
11445.00	Н	-43.01		



Test mode:	LTE Band	l 2(10MHz)	Test channel:	Lowest
Frequency (MHz)	Spurious Emission		11. 14. (15.)	
	Polarization	Level (dBm)	Limit (dBm)	Result
3810.00	Vertical	-45.13		
5715.00	V	-47.57		Pass
7620.00	V	-46.22	-13.00	
9525.00	V	-45.11		
11430.00	V	-45.27		
3810.00	Horizontal	-43.39		Pass
5715.00	Н	-44.89		
7620.00	Н	-44.92	-13.00	
9525.00	Н	-46.12		
11430.00	H	-45.01		
Test mode:	LTE Band	l 2(10MHz)	Test channel:	Middle
Erocuson ov. (MIII-)	Spurious	Spurious Emission		D "
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
3760.00	Vertical	-44.09		Pass
5640.00	V	-45.02		
7520.00	V	-46.39	-13.00	
9400.00	V	-43.74		
11280.00	V	-45.42		
3760.00	Horizontal	-44.16		Pass
5640.00	H	-43.88		
7520.00	Н	-45.59	-13.00	
9400.00	H	-44.02		
11280.00	H	-43.64		
Test mode:	LTE Band	LTE Band 2(10MHz)		Highest
Fragues ov (MHz)	Spurious	Emission	Limit (dDm)	Result
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
3710.00	Vertical	-44.34		
5565.00	V	-45.32		Pass
7420.00	V	-46.31	-13.00	
9275.00	V	-43.94		
11130.00	V	-45.83		
3710.00	Horizontal	-44.65	-13.00	Pass
5565.00	Н	-43.84		
7420.00	Н	-45.21		
9275.00	Н	-44.67		
11130.00	Н	-43.99		



Test mode:	LTE Band	I 2(15MHz)	Test channel:	Lowest	
- (A411.)	Spurious	Spurious Emission			
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
3805.00	Vertical	-44.98			
5707.50	V	-45.94			
7610.00	V	-46.11	-13.00	Pass	
9512.50	V	-43.72			
11415.00	V	-45.87			
3805.00	Horizontal	-44.65			
5707.50	Н	-43.02			
7610.00	Н	-45.65	-13.00	Pass	
9512.50	Н	-44.68			
11415.00	Н	-43.29			
Test mode:	LTE Band	I 2(15MHz)	Test channel:	Middle	
Erocuson ov. (MIII-)	Spurious	Emission	Limsit (alDura)	D !!	
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
3760.00	Vertical	-44.89			
5640.00	V	-45.76			
7520.00	V	-46.95	-13.00	Pass	
9400.00	V	-43.75			
11280.00	V	-45.11			
3760.00	Horizontal	-44.43			
5640.00	Н	-43.22		Pass	
7520.00	Н	-45.86	-13.00		
9400.00	Н	-44.22			
11280.00	Н	-43.25			
Test mode:	LTE Band	I 2(15MHz)	Test channel:	Highest	
Frequency (MHz)	Spurious	Emission	Limit (dBm)	Result	
Frequency (Miriz)	Polarization	Level (dBm)	Limit (dbin)	Nesuit	
3715.00	Vertical	-45.74			
5572.50	V	-47.98			
7430.00	V	-46.95	-13.00	Pass	
9287.50	V	-45.04			
11145.00	V	-45.09			
3715.00	Horizontal	-43.14			
5572.50	Н	-44.50			
7430.00	Н	-44.22	-13.00	Pass	
9287.50	Н	-46.31			
11145.00	Н	-45.24			



Test mode:	LTE Band	2(20MHz)	Test channel:	Lowest	
	Spurious	Spurious Emission .			
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
3800.00	Vertical	-45.75			
5700.00	V	-47.52			
7600.00	V	-46.95	-13.00	Pass	
9500.00	V	-45.40	13.00		
11400.00	V	-45.10			
3800.00	Horizontal	-43.83			
5700.00	Н	-44.51			
7600.00	Н	-44.92	-13.00	Pass	
9500.00	Н	-46.63			
11400.00	Н	-45.33			
Test mode:	LTE Band	2(20MHz)	Test channel:	Middle	
Francisco (MILL)	Spurious	Emission	Lind (JD a)	D	
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
3760.00	Vertical	-45.41			
5640.00	V	-47.55			
7520.00	V	-46.37	-13.00	Pass	
9400.00	V	-45.31			
11280.00	V	-45.08			
3760.00	Horizontal	-43.50			
5640.00	Н	-44.01			
7520.00	Н	-44.39	-13.00	Pass	
9400.00	Н	-46.70			
11280.00	Н	-45.15			
Test mode:	LTE Band	2(20MHz)	Test channel:	Highest	
(\A)	Spurious	Emission	Limit (dDay)	Danult	
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
3720.00	Vertical	-45.02			
5580.00	V	-47.14			
7440.00	V	-46.03	-13.00	Pass	
9300.00	V	-45.46	7		
11160.00	V	-45.39			
3720.00	Horizontal	-43.30			
5580.00	Н	-44.60			
7440.00	Н	-44.80	-13.00	Pass	
9300.00	Н	-46.62			
11160.00	Н	-45.89			



Test mode:	LTE Band	d 4(5MHz)	Test channel:	Lowest
- (A411)	Spurious	Emission	1: '((15)	
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
3425.00	Vertical	-44.67		
5137.50	V	-45.79	-13.00	
6850.00	V	-46.55		Pass
8562.50	V	-43.40		
10275.00	V	-45.77		
3425.00	Horizontal	-44.06		
5137.50	H	-43.89		
6850.00	Н	-45.44	-13.00	Pass
8562.50	Н	-44.05		
10275.00	Н	-43.27		
Test mode:	LTE Band	d 4(5MHz)	Test channel:	Middle
Fraguesia (MIII-)	Spurious	Emission	Limait (alDina)	Dooult
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
3465.00	Vertical	-45.66		
5197.50	V	-47.82		
6930.00	V	-46.22	-13.00	Pass
8662.50	V	-45.39		
10395.00	V	-45.37		
3465.00	Horizontal	-43.48		
5197.50	Н	-44.81		Pass
6930.00	Н	-44.41	-13.00	
8662.50	Н	-46.22		
10395.00	Н	-45.78		
Test mode:	LTE Band	d 4(5MHz)	Test channel:	Highest
Fraguesov (MU=)	Spurious	Emission	Limit (dDm)	Dogult
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
3505.00	Vertical	-45.65		
5257.50	V	-47.56		
7010.00	V	-46.05	-13.00	Pass
8762.50	V	-45.87		
10515.00	V	-45.67		
3505.00	Horizontal	-43.65		
5257.50	Н	-44.16		
7010.00	Н	-44.73	-13.00	Pass
8762.50	Н	-46.54		. 400
10515.00	Н	-45.24		



Test mode:	LTE Band	4(10MHz)	Test channel:	Lowest
- (A411.)	Spurious	Spurious Emission		D 1
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
3430.00	Vertical	-45.43		
5145.00	V	-47.50		
6860.00	V	-46.97	-13.00	Pass
8575.00	V	-45.46		
10290.00	V	-45.63		
3430.00	Horizontal	-43.26		
5145.00	Н	-44.26		
6860.00	Н	-44.70	-13.00	Pass
8575.00	Н	-46.79		
10290.00	Н	-45.14		
Test mode:	LTE Band	4(10MHz)	Test channel:	Middle
(__\	Spurious	Emission	Limit (dDms)	Danult
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
3465.00	Vertical	-45.49		
5197.50	V	-47.81		
6930.00	V	-46.59	-13.00	Pass
8662.50	V	-45.71		
10395.00	V	-45.97		
3465.00	Horizontal	-43.16		
5197.50	Н	-44.43		Pass
6930.00	Н	-44.41	-13.00	
8662.50	Н	-46.04		
10395.00	Н	-45.23		
Test mode:	LTE Band	4(10MHz)	Test channel:	Highest
Fragues ov (MHz)	Spurious	Emission	Limit (dDm)	Dogult
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
3500.00	Vertical	-44.89		
5250.00	V	-45.51		
7000.00	V	-46.02	-13.00	Pass
8750.00	V	-43.39		
10500.00	V	-45.97		
3500.00	Horizontal	-44.75		
5250.00	Н	-43.33		
7000.00	Н	-45.95	-13.00	Pass
8750.00	Н	-44.94		
10500.00	Н	-43.68		



Test mode:	LTE Band	4(15MHz)	Test channel:	Lowest	
		Emission			
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
3435.00	Vertical	-44.19			
5152.50	V	-45.98			
6870.00	V	-46.29	-13.00	Pass	
8587.50	V	-43.57			
10305.00	V	-45.39			
3435.00	Horizontal	-44.52			
5152.50	Н	-43.63			
6870.00	Н	-45.43	-13.00	Pass	
8587.50	Н	-44.40			
10305.00	Н	-43.24			
Test mode:	LTE Band	4(15MHz)	Test channel:	Middle	
(NALL_)	Spurious	Emission	Limit (dDay)		
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
3465.00	Vertical	-44.51			
5197.50	V	-45.54			
6930.00	V	-46.48	-13.00	Pass	
8662.50	V	-43.09			
10395.00	V	-45.65			
3465.00	Horizontal	-44.81			
5197.50	Н	-43.84			
6930.00	Н	-45.02	-13.00	Pass	
8662.50	Н	-44.18			
10395.00	Н	-43.33			
Test mode:	LTE Band	4(15MHz)	Test channel:	Highest	
Fragues as (MIII-)	Spurious	Emission	Limait (alDina)	Dagult	
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
3495.00	Vertical	-44.68			
5242.50	V	-45.07			
6990.00	V	-46.77	-13.00	Pass	
8737.50	V	-43.75			
10485.00	V	-45.29			
3495.00	Horizontal	-44.43			
5242.50	Н	-43.67			
6990.00	Н	-45.37	-13.00	Pass	
8737.50	Н	-44.83			
10485.00	Н	-43.82			



Test mode:	I TF Band	4(20MHz)	Test channel:	Lowest
Tool mode.		Emission	Test onamier.	Lowest
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
3440.00	Vertical	-45.79		
5160.00	V	-47.97	-	
6880.00	V	-46.03	-13.00	Pass
8600.00	V	-44.80		1 400
10320.00	V	-43.27	7	
3440.00	Horizontal	-44.65		
5160.00	Н	-45.49		
6880.00	Н	-44.22	-13.00	Pass
8600.00	Н	-46.93		
10320.00	Н	-43.16		
Test mode:	LTE Band	4(20MHz)	Test channel:	Middle
_	Spurious	Spurious Emission		
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
3465.00	Vertical	-45.92		
5197.50	V	-47.56		
6930.00	V	-46.62	-13.00	Pass
8662.50	V	-44.62		
10395.00	V	-43.83		
3465.00	Horizontal	-44.55		
5197.50	Н	-45.15		
6930.00	Н	-44.01	-13.00	Pass
8662.50	Н	-46.95		
10395.00	Н	-43.23		
Test mode:	LTE Band	4(20MHz)	Test channel:	Highest
	Spurious	Emission	Lineit (dDne)	Danult
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
3490.00	Vertical	-45.27		
5235.00	V	-47.07		
6980.00	V	-46.68	-13.00	Pass
8725.00	V	-44.28	7	
10470.00	V	-43.40	7	
3490.00	Horizontal	-44.62		
5235.00	Н	-45.68		
6980.00	Н	-44.08	-13.00	Pass
8725.00	Н	-46.89		
10470.00	Н	-43.51		

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Test mode:	LTE Band	d 5(5MHz)	Test channel:	Lowest
		Emission		
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
1653.00	Vertical	-45.48		
2479.50	V	-47.18	 	
3306.00	V	-46.93	-13.00	Pass
4132.50	V	-44.31		1 400
4959.00	V	-43.18		
1653.00	Horizontal	-44.47		
2479.50	Н	-45.22	7	
3306.00	H	-44.91	-13.00	Pass
4132.50	Н	-46.88		. 400
4959.00	H	-43.22	-	
Test mode:		d 5(5MHz)	Test channel:	Middle
		Emission		
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
1673.00	Vertical	-44.17		
2509.50	V	-45.83		
3346.00	V	-46.84	-13.00	Pass
4182.50	V	-43.54		
5019.00	V	-45.41		
1673.00	Horizontal	-44.74		
2509.50	Н	-43.67		
3346.00	Н	-45.10	-13.00	Pass
4182.50	Н	-44.37		
5019.00	Н	-43.25		
Test mode:	LTE Band	d 5(5MHz)	Test channel:	Highest
Face (NALL)	Spurious	Emission	L' '(/ JD)	D 11
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
1693.00	Vertical	-44.24		
2539.50	V	-45.79		
3386.00	V	-46.78	-13.00	Pass
4232.50	V	-43.45		
5079.00	V	-45.15		
1693.00	Horizontal	-44.46		
2539.50	Н	-43.16		
3386.00	Н	-45.77	-13.00	Pass
4232.50	Н	-44.45		
5079.00	Н	-43.51		

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Test mode:	LTE Band	5(10MHz)	Test channel:	Lowest	
1 oot modo:		Emission	Tool Gridinion	2011001	
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
1658.00	Vertical	-44.15			
2487.00	V	-45.96			
3316.00	V	-46.72	-13.00	Pass	
4145.00	V	-43.48			
4974.00	V	-45.31			
1658.00	Horizontal	-44.34			
2487.00	Н	-43.63			
3316.00	Н	-45.01	-13.00	Pass	
4145.00	Н	-44.43			
4974.00	Н	-43.56			
Test mode:	LTE Band	5(10MHz)	Test channel:	Middle	
Francis (MILL)	Spurious	Emission	L''(/ ID)	5	
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
1673.00	Vertical	-44.11			
2509.50	V	-45.66		Pass	
3346.00	V	-46.07	-13.00		
4182.50	V	-43.23			
5019.00	V	-45.78			
1673.00	Horizontal	-44.36			
2509.50	Н	-43.34			
3346.00	Н	-45.34	-13.00	Pass	
4182.50	Н	-44.78			
5019.00	Н	-43.19			
Test mode:	LTE Band	5(10MHz)	Test channel:	Highest	
[[] [] [] [] [] [] [] [] [] [Spurious	Emission	Lineit (dDas)	Desult	
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
1688.00	Vertical	-45.47			
2532.00	V	-47.64			
3376.00	V	-46.51	-13.00	Pass	
4220.00	V	-44.11			
5064.00	V	-43.41			
1688.00	Horizontal	-44.85			
2532.00	Н	-45.53			
3376.00	Н	-44.90	-13.00	Pass	
4220.00	Н	-46.35			
5064.00	Н	-43.02			



Test mode:	LTE Band	l 12(5MHz)	Test channel:	Lowest
- (1411)	Spurious	Spurious Emission		D ''
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
1559.00	Vertical	-45.40		
2338.50	V	-47.92		
3118.00	V	-46.78	-13.00	Pass
3897.50	V	-44.36		
4677.00	V	-43.80		
1559.00	Horizontal	-44.18		
2338.50	Н	-45.59		
3118.00	Н	-44.57	-13.00	Pass
3897.50	Н	-46.32		
4677.00	Н	-43.08		
Test mode:	LTE Band	l 12(5MHz)	Test channel:	Middle
Fragues ov (MHz)	Spurious	Emission	Limit (dDm)	Dooult
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
1764.00	Vertical	-45.71		
2646.00	V	-47.27		
3528.00	V	-46.06	-13.00	Pass
4410.00	V	-44.14		
5292.00	V	-43.31		
1764.00	Horizontal	-44.65		
2646.00	Н	-45.58		Pass
3528.00	Н	-44.52	-13.00	
4410.00	Н	-47.00		
5292.00	Н	-43.47		
Test mode:	LTE Band	l 12(5MHz)	Test channel:	Highest
Fraguency (MH=)	Spurious	Emission	Limit (dDm)	Pocult
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
1569.00	Vertical	-45.77		
2353.50	V	-47.07		
3138.00	V	-46.42	-13.00	Pass
3922.50	V	-44.74		
4707.00	V	-43.16		
1569.00	Horizontal	-44.31		
2353.50	Н	-45.54		
3138.00	Н	-44.44	-13.00	Pass
3922.50	Н	-46.13		
4707.00	Н	-43.93		



Test mode:	LTE Band	12(10MHz)	Test channel:	Lowest
- (1411)	Spurious	Emission	11.11.(15.)	
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
1408.00	Vertical	-44.17		
2112.00	V	-45.37	-13.00	
2816.00	V	-46.26		Pass
3520.00	V	-43.66		
4224.00	V	-45.73		
1408.00	Horizontal	-44.51		
2112.00	Н	-43.55		
2816.00	Н	-45.92	-13.00	Pass
3520.00	Н	-44.85		
4224.00	Н	-43.97		
Test mode:	LTE Band	12(10MHz)	Test channel:	Middle
Fraguera, (MIII-)	Spurious	Emission	Limait (alDuna)	Dooult
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
1415.00	Vertical	-44.71		
2122.50	V	-45.13		
2830.00	V	-46.11	-13.00	Pass
3537.50	V	-43.16		
4245.00	V	-45.98		
1415.00	Horizontal	-44.98		
2122.50	H	-43.29		Pass
2830.00	Н	-45.30	-13.00	
3537.50	Н	-44.12		
4245.00	Н	-43.41		
Test mode:	LTE Band	12(10MHz)	Test channel:	Highest
Fraguesa (MIII-)	Spurious	Emission	Lineit (dDne)	Result
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
1422.00	Vertical	-44.72		
2133.00	V	-45.52		
2844.00	V	-46.48	-13.00	Pass
3555.00	V	-43.22		
4266.00	V	-45.14		
1422.00	Horizontal	-44.95		
2133.00	Н	-43.36		
2844.00	Н	-45.09	-13.00	Pass
3555.00	Н	-44.86		
4266.00	Н	-43.58		



Test mode:	LTE Band	13(5MHz)	Test channel:	Lowest	
10011110001		Emission		20001	
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
1559.00	Vertical	-45.04			
2338.50	V	-47.18			
3118.00	V	-46.22	-13.00	Pass	
3897.50	V	-44.76			
4677.00	V	-43.24			
1559.00	Horizontal	-44.50			
2338.50	Н	-45.09			
3118.00	Н	-44.86	-13.00	Pass	
3897.50	Н	-46.59			
4677.00	Н	-43.73			
Test mode:	LTE Band	13(5MHz)	Test channel:	Middle	
- (A411.)	Spurious	Emission	1: ::/ID \		
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
1564.00	Vertical	-45.85			
2346.00	V	-47.21		Pass	
3128.00	V	-46.81	-13.00		
3910.00	V	-44.81			
4692.00	V	-43.76			
1564.00	Horizontal	-44.78			
2346.00	Н	-45.87			
3128.00	Н	-44.62	-13.00	Pass	
3910.00	Н	-46.71			
4692.00	Н	-43.98			
Test mode:	LTE Band	13(5MHz)	Test channel:	Highest	
(\A)	Spurious	Emission	Lineit (dDas)	Desult	
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result	
1569.00	Vertical	-45.46			
2353.50	V	-47.66			
3138.00	V	-46.92	-13.00	Pass	
3922.50	V	-44.12			
4707.00	V	-43.17	7		
1569.00	Horizontal	-44.70			
2353.50	Н	-45.45			
3138.00	Н	-44.38	-13.00	Pass	
3922.50	Н	-46.51			
4707.00	Н	-43.77			



Test mode:	LTE Band 13(10MHz)		Test channel:	Middle
Fragues and (MILIT)	Spurious	Emission	Limait (alDina)	Decult
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)	Result
1564.00	Vertical	-45.02		
2346.00	V	-47.93		Pass
3128.00	V	-46.97	-13.00	
3910.00	V	-44.35		
4692.00	V	-43.02		
1564.00	Horizontal	-44.69		
2346.00	Н	-45.76		Pass
3128.00	Н	-44.88	-13.00	
3910.00	Н	-46.78		
4692.00	Н	-43.30		



6.11 Frequency stability V.S. Temperature measurement

Test Requirement for FCC:	FCC Part2.1055(a)(1)(b)			
Test Requirement for IC:	RSS-130 Clause 4.3, RSS-132 Cluase 5.3			
	RSS-133 Clause 6.3, RSS-139 Clause 6.4			
Limit:	2.5ppm			
Test setup:	Spectrum analyzer EUT Att.			
Test procedure:	Variable Power Supply Note: Measurement setup for testing on Antenna connector 1. The equipment under test was connected to an external DC power supply and input rated voltage.			
	 RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to -20°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C increased per stage until the 			
	highest temperature of +50°C reached.			
Test Instruments:	Refer to section 5.0 for details			
Test mode:	Refer to section 6.1 for details			
Test results:	Pass			



Measurement Data

QPSK mode:

QPSK mode:					
Referen	ce Frequency: LTE	Band 2 Middle cl	hannel=18900 ch	nannel=1880MH	Z
Power supplied	Temperature (°C)	Frequency error		Limit (nnm)	Result
(Vdc)	remperature (C)	Hz	ppm	Limit (ppm)	Result
	-30	110	0.1317		
	-20	125	0.1493		
	-10	105	0.1259		
	0	86	0.1025		
12.0	10	100	0.1201	2.5	Pass
	20	86	0.1025		
	30	144	0.1726		
	40	130	0.1551		
	50	125	0.1493]	i .
Reference	ce Frequency: LTE B	and 4 Middle ch	annel=20175 ch	annel=1732.5Ml	-lz
Power supplied	Temperature (°C)	Frequer	ency error Limit (ppm)		Result
(Vdc)	Temperature (C)	Hz	ppm	Limit (ppm)	Result
	-30	38	0.0449		
	-20	41	0.0494		
	-10	36	0.0427		
	0	32	0.0382		
12.0	10	34	0.0404	2.5	Pass
	20	30	0.0359		
	30	51	0.0606		
	40	43	0.0516		
	50	41	0.0494		



Reference	ce Frequency: LTE I	Band 5 Middle ch	nannel=20525 ch	annel=836.5MH	lz
D " 10/1)	T (00)	Frequency error			5
Power supplied (Vdc)	Temperature (°C)	Hz	ppm		Result
	-30	151	0.1806		
	-20	174	0.2085	2.5	
	-10	146	0.1748		
	0	127	0.1522		
12.0	10	142	0.1703		Pass
	20	124	0.1485		
	30	209	0.2497		
	40	182	0.2176		
	50	172	0.2061	1	
Referenc	e Frequency: LTE E	and 12 Middle c	hannel=23095 cl	nannel=707.5Ml	-lz
Dower cumplied (\/da)	Tomporature (°C)	Frequer	ncy error		Result
Power supplied (Vdc)	Temperature (°C)	Hz	ppm		Result
	-30	91	0.0486	2.5	Pass
	-20	108	0.0575		
	-10	91	0.0486		
	0	78	0.0412		
12.0	10	91	0.0486		
	20	80	0.0427		
	30	128	0.0678		
	40	111	0.0590		
	50	105	0.0560		
Referen	ce Frequency: LTE	Band 13 Middle	channel=23230 c	hannel=782MH	z
Power supplied (Vdc)	Temperature (°C)	Frequency error			Result
1 ower supplied (vdc)	remperature (0)	Hz	ppm		rvesuit
	-30	92	0.0491		
	-20	107	0.0568		
	-10	87	0.0461		
	0	72	0.0384		
12.0	10	90	0.0476	2.5 F	Pass
	20	72	0.0384		
	30	121	0.0645		
	40	101	0.0537		
	50	107	0.0568		



16QAM mode:

16QAM mode:		D101211			
Referen	ce Frequency: LTE			nannel=1880MH T	Z
Power supplied	Temperature (°C)	Frequency error		Limit (ppm)	Result
(Vdc)		Hz	ppm	Σ (ββ)	rtoodit
	-30	102	0.0542		1
	-20	120	0.0637		
	-10	98	0.0521		l
	0	81	0.0431		
12.0	10	99	0.0527	2.5	Pass
	20	83	0.0443		
	30	134	0.0714		
	40	113	0.0599		
	50	118	0.0629		
Reference	ce Frequency: LTE B	Band 4 Middle ch	annel=20175 ch	annel=1732.5Ml	-lz
Power supplied	Townsereture (9C)	Frequer	ncy error	Limit (mmm)	Result
(Vdc)	Temperature (°C)	Hz	ppm	Limit (ppm)	Result
	-30	168	0.0896		
	-20	150	0.0800		
	-10	130	0.0693]	
	0	122	0.0650		
12.0	10	112	0.0597	2.5	Pass
	20	98	0.0522		
	30	122	0.0650	-	
	40	136	0.0725		
	50	130	0.0693		



Reference	ce Frequency: LTE I	Band 5 Middle ch	nannel=20525 ch	nannel=836.5MH	z
Power supplied (Vdc)	Tomporatura (°C)	Frequency error			Result
rowei supplied (vdc)	Temperature (°C)	Hz	ppm		Result
	-30	50	0.0594		
	-20	70	0.0841		
	-10	80	0.0953		
	0	36	0.0436		Pass
12.0	10	55	0.0661	2.5	
	20	61	0.0728		
	30	91	0.1088		
	40	85	0.1020		
	50	102	0.1223	1	
Referenc	e Frequency: LTE B	and 12 Middle c	hannel=23095 c	hannel=707.5Ml	łz
Dower cumplied (\/da)	Tomporoture (°C)	Frequer	ncy error		Result
Power supplied (Vdc)	Temperature (°C)	Hz	ppm		
	-30	179	0.1035		Pass
	-20	162	0.0936		
	-10	133	0.0766	2.5	
	0	116	0.0667		
12.0	10	96	0.0554		
	20	113	0.0653		
	30	145	0.0837		
	40	155	0.0893		
	50	191	0.1105		
Referen	ce Frequency: LTE	Band 13 Middle	channel=23230	channel=782MH	z
Device constant (A.A.)	Tomporoture (°C)	Frequer	ncy error		Result
Power supplied (Vdc)	remperature (C)	Hz	ppm		Result
	-30	65	0.0780		
	-20	93	0.1106		
	-10	105	0.1254]	
	0	48	0.0573		
12.0	10	73	0.0869	2.5	Pass
	20	80	0.0958		
	30	120	0.1432		
	40	112	0.1343		
	50	135	0.1609		



6.12 Frequency stability V.S. Voltage measurement

Test Requirement for FCC:	FCC Part2.1055(d)(1)(2)			
Test Requirement for IC:	RSS-130 Clause 4.3, RSS-132 Cluase 5.3			
	RSS-133 Clause 6.3, RSS-139 Clause 6.4			
Limit:	2.5ppm			
Test setup:	Temperature Chamber			
	Spectrum analyzer EUT Att. Variable Power Supply Note: Measurement setup for testing on Antenna connector			
Test procedure:	 Set chamber temperature to 25°C. Use a variable DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency. Reduce the input voltage to specified extreme voltage variation (+/- 15%) and endpoint, record the maximum frequency change. 			
Test Instruments:	Refer to section 5.0 for details			
Test mode:	Refer to section 6.1 for details			
Test results:	Pass			



Measurement Data QPSK mode:

QPSK mode:	ce Frequency: LTE	Band 2 Middle ch	nannel=18900 cl	hannel=1880MH	7
TO TO TO TO		Frequency error			
Temperature (°C)	Power supplied (Vdc)	Hz	ppm	Limit (ppm)	Result
	15.0	55	0.0656		
25	12.0	64	0.0759	2.5	Pass
25					
Defenses	9.0	72	0.0863		1_
Referenc	e Frequency: LTE B			annei=1732.5WF	1Z
Temperature (°C)	Power supplied (Vdc)	· .	ncy error	Limit (ppm)	Result
	` '	Hz	ppm		
	15.0	116	0.1392	2.5	
25	12.0	84	0.1003		Pass
	9.0	95	0.1133		
Reference	e Frequency: LTE I	Band 5 Middle ch	nannel=20525 ch	nannel=836.5MH	z
Temperature (°C)	Power supplied	Frequency error		Limit (ppm)	Result
remperature (0)	(Vdc)	Hz	ppm	Ентис (рргіт)	rtoodit
	15.0	112	0.1343	2.5	
25	12.0	128	0.1533		Pass
	9.0	144	0.1719		
Referenc	e Frequency: LTE B	and 12 Middle c	hannel=23095 c	hannel=707.5MF	lz
Tamananatura (9C)	Power supplied	Frequency error			
Temperature (°C)	(Vdc)	Hz	ppm	Limit (ppm)	Result
	15.0	67	0.0358		
25	12.0	82	0.0438	2.5	Pass
	9.0	82	0.0438		
Reference	ce Frequency: LTE	Band 13 Middle o	channel=23230	channel=782MH	Z
T (00)	Power supplied	Freque	ncy error		D
Temperature (°C)	(Vdc)	Hz	ppm		Result
	15.0	187	0.0994		
25	12.0	138	0.0734	2.5	Pass
	9.0	148	0.0786	1	



16QAM mode:

Referenc	e Frequency: LTE	Band 2 Middle cl	nannel=18900 ch	nannel=1880MH	z
Towns areturn (90)	Power supplied	Frequency error		1: '()	D 1
Temperature (°C)	(Vdc)	Hz	ppm	Limit (ppm)	Result
	15.0	110	0.0583		Pass
25	12.0	126	0.0669	2.5	
	9.0	126	0.0672		
Reference	Frequency: LTE B	and 4 Middle ch	annel=20175 cha	annel=1732.5MF	łz
Tomporatura (°C)	Power supplied	Freque	ncy error	Limit (nnm)	Popult
Temperature (°C)	(Vdc)	Hz	ppm	Limit (ppm)	Result
	15.0	131	0.0699	2.5	
25	12.0	151	0.0802		Pass
	9.0	152	0.0807		
Referenc	e Frequency: LTE I	Band 5 Middle ch	annel=20525 ch	annel=836.5MH	Z
Temperature (°C)	Power supplied	Frequency error		Limit (nnm)	Popult
remperature (C)	(Vdc)	Hz	ppm	Limit (ppm)	Result
	15.0	101	0.1210	2.5	Pass
25	12.0	115	0.1377		
	9.0	129	0.1540		
Reference	Frequency: LTE B	Band 12 Middle c	hannel=23095 cl	nannel=707.5MF	łz
Temperature (°C)	Power supplied	Frequency error		Limit (ppm)	Dogult
remperature (C)	(Vdc)	Hz	ppm	- штік (рріп)	Result
	15.0	95	0.0507		
25	12.0	116	0.0616	2.5	Pass
				-	
	9.0	116	0.0616		
Referenc	9.0 e Frequency: LTE			:hannel=782MH	z
	e Frequency: LTE	Band 13 Middle			
Reference Temperature (°C)	e Frequency: LTE	Band 13 Middle	channel=23230 c	channel=782MH	z Result
	e Frequency: LTE	Band 13 Middle o	channel=23230 c		
	Power supplied (Vdc)	Band 13 Middle of Freque	channel=23230 c ncy error ppm		



7 Test Setup Photo

Radiated Emission





8 EUT Constructional Details

Reference to the test report No.: GTS201811000009-01

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