Page: 1 of 30

Appendix B

E-UTRA BAND 5



2 of 30 Page:

CONTENT

1.	EFFECTIVE (ISOTROPIC) RADIATED POWER	3
	1.1. Test Result	3
2.	Peak-to-Average Ratio(CCDF)	6
	2.1. Test Result	6
	2.2. Test Plots	6
3.	Modulation Characteristics	8
	3.1. Test BAND = LTE BAND5	8
	3.1.1. Test Mode = LTE /TM1 10MHz	8
	3.1.1.1. Test Channel = MCH	8
4.	26dB Bandwidth and Occupied Bandwidth	9
	4.1. Test Result	9
	4.2. Test Plots	10
5.	BAND EDGE COMPLIANCE	16
	5.1. Test Plots	16
6.	Spurious Emission at Antenna Terminal	24
	6.1. Test Plots	24
7.	Field Strength of Spurious Radiation	27
	7.1. Test BAND = LTE BAND 5	27
	7.1.1. Test Mode =LTE/TM1 10MHz	27
	7.1.1.1. Test Channel = LCH	27
	7.1.1.2. Test Channel = MCH	27
	7.1.1.3. Test Channel = HCH	28
8.	Frequency Stability	29
	8.1. Frequency Vs Voltage	29
	8.2. Frequency Vs Temperature	29



Page: 3 of 30

1. Effective (Isotropic) Radiated Power

1.1. Test Result

					Conducted	ERP	Limit	
BAND	Bandwidth	Modulation	Channel	RB Configuration	Power	(dBm)	(dBm)	Verdict
					(dBm)			
Band5	1.4MHz	QPSK	20407	1RB#0	22.78	16.63	38.45	PASS
Band5	1.4MHz	QPSK	20407	1RB#2	23.24	17.09	38.45	PASS
Band5	1.4MHz	QPSK	20407	1RB#5	23.21	17.06	38.45	PASS
Band5	1.4MHz	QPSK	20407	3RB#0	23.23	17.08	38.45	PASS
Band5	1.4MHz	QPSK	20407	3RB#1	23.20	17.05	38.45	PASS
Band5	1.4MHz	QPSK	20407	3RB#3	23.23	17.08	38.45	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	22.20	16.05	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#0	22.92	16.77	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#2	22.92	16.77	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#5	22.96	16.81	38.45	PASS
Band5	1.4MHz	QPSK	20525	3RB#0	22.98	16.83	38.45	PASS
Band5	1.4MHz	QPSK	20525	3RB#1	22.98	16.83	38.45	PASS
Band5	1.4MHz	QPSK	20525	3RB#3 23.03 16.88		38.45	PASS	
Band5	1.4MHz	QPSK	20525	6RB#0	21.97	15.82	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#0	23.00	16.85	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#2	22.98	16.83	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#5	23.01	16.86	38.45	PASS
Band5	1.4MHz	QPSK	20643	3RB#0	23.02	16.87	38.45	PASS
Band5	1.4MHz	QPSK	20643	3RB#1	22.98	16.83	38.45	PASS
Band5	1.4MHz	QPSK	20643	3RB#3	22.99	16.84	38.45	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	21.97	15.82	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#0	23.16	17.01	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#8	23.12	16.97	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#14	23.06	16.91	38.45	PASS
Band5	3MHz	QPSK	20415	8RB#0	22.23	16.08	38.45	PASS
Band5	3MHz	QPSK	20415	8RB#4	22.19	16.04	38.45	PASS
Band5	3MHz	QPSK	20415	8RB#7	22.17	16.02	38.45	PASS
Band5	3MHz	QPSK	20415	15RB#0	22.17	16.02	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#0	22.96	16.81	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#8	22.96	16.81	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#14	22.89	16.74	38.45	PASS



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issue defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, **Certificate**.

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Report No.: ZR/2019/1003001

Page: 4 of 30

Band5 3MHz OPSK 20525 8RB#0 22.01 15.86 38.45 PASS Band5 3MHz OPSK 20525 8RB#4 21.97 15.82 38.45 PASS Band5 3MHz OPSK 20525 8RB#7 21.98 15.83 38.45 PASS Band5 3MHz OPSK 20635 1RB#0 22.95 16.80 38.45 PASS Band5 3MHz OPSK 20635 1RB#8 22.91 16.76 38.45 PASS Band5 3MHz OPSK 20635 1RB#14 22.95 16.80 38.45 PASS Band5 3MHz OPSK 20635 8RB#0 22.00 15.85 38.45 PASS Band5 3MHz OPSK 20635 8RB#0 22.00 15.89 38.45 PASS Band5 3MHz OPSK 20635 8RB#0 22.00 15.89 38.45 PASS Band5	1		I	T	I	T			Γ
Band5 3MHz OPSK 20525 8RB#7 21.94 15.79 38.45 PASS Band5 3MHz OPSK 20525 15RB#0 21.98 15.83 38.45 PASS Band5 3MHz OPSK 20635 1RB#0 22.95 16.80 38.45 PASS Band5 3MHz OPSK 20635 1RB#14 22.95 16.80 38.45 PASS Band5 3MHz OPSK 20635 8RB#0 22.00 15.85 38.45 PASS Band5 3MHz OPSK 20635 8RB#0 22.00 15.84 38.45 PASS Band5 3MHz OPSK 20635 8RB#7 21.99 15.83 38.45 PASS Band5 3MHz OPSK 20635 18RB#0 21.99 15.84 38.45 PASS Band5 3MHz OPSK 20635 18RB#0 21.99 15.84 38.45 PASS Band5	Band5	3MHz	QPSK	20525	8RB#0	22.01	15.86	38.45	PASS
Band6 3MHz QPSK 20525 15RB#0 21.98 15.83 38.45 PASS Band5 3MHz QPSK 20635 1RB#0 22.95 16.80 38.45 PASS Band5 3MHz QPSK 20635 1RB#14 22.95 16.80 38.45 PASS Band5 3MHz QPSK 20635 8RB#0 22.00 15.85 38.45 PASS Band5 3MHz QPSK 20635 8RB#0 22.00 15.84 38.45 PASS Band5 3MHz QPSK 20635 8RB#7 21.98 15.83 38.45 PASS Band5 3MHz QPSK 20635 15RB#0 21.99 15.84 38.45 PASS Band5 3MHz QPSK 20635 15RB#0 21.99 15.84 38.45 PASS Band5 5MHz QPSK 20425 1RB#0 23.21 17.06 38.45 PASS Band5	Band5	3MHz	QPSK	20525	8RB#4	21.97	15.82	38.45	PASS
Band5 3MHz QPSK 20635 1RB#0 22.95 16.80 38.45 PASS Band5 3MHz QPSK 20635 1RB#8 22.91 16.76 38.45 PASS Band5 3MHz QPSK 20635 1RB#14 22.95 16.80 38.45 PASS Band5 3MHz QPSK 20635 8RB#4 22.00 15.85 38.45 PASS Band5 3MHz QPSK 20635 8RB#4 21.99 15.84 38.45 PASS Band5 3MHz QPSK 20635 15RB#0 21.99 15.84 38.45 PASS Band5 5MHz QPSK 20425 1RB#0 23.21 17.06 38.45 PASS Band5 5MHz QPSK 20425 1RB#0 23.17 17.02 38.45 PASS Band5 5MHz QPSK 20425 12RB#0 22.24 16.09 38.45 PASS Band5	Band5	3MHz	QPSK	20525	8RB#7	21.94	15.79	38.45	PASS
Band5 3MHz QPSK 20635 1RB#8 22.91 16.76 38.45 PASS Band5 3MHz QPSK 20635 1RB#14 22.95 16.80 38.45 PASS Band5 3MHz QPSK 20635 8RB#0 22.00 15.85 38.45 PASS Band5 3MHz QPSK 20635 8RB#7 21.99 15.84 38.45 PASS Band5 3MHz QPSK 20635 18RB#0 21.99 15.84 38.45 PASS Band5 3MHz QPSK 20635 15RB#0 21.99 15.84 38.45 PASS Band5 5MHz QPSK 20425 1RB#0 23.21 17.06 38.45 PASS Band5 5MHz QPSK 20425 1RB#12 23.17 17.02 38.45 PASS Band5 5MHz QPSK 20425 12RB#0 23.21 16.00 38.45 PASS Band5	Band5	3MHz	QPSK	20525	15RB#0	21.98	15.83	38.45	PASS
Band5 3MHz QPSK 20635 1RB#14 22.95 16.80 38.45 PASS Band5 3MHz QPSK 20635 8RB#0 22.00 15.85 38.45 PASS Band5 3MHz QPSK 20635 8RB#4 21.99 15.84 38.45 PASS Band5 3MHz QPSK 20635 8RB#7 21.98 15.83 38.45 PASS Band5 3MHz QPSK 20635 15RB#0 21.99 15.84 38.45 PASS Band5 3MHz QPSK 20635 15RB#0 21.99 15.84 38.45 PASS Band5 5MHz QPSK 20425 1RB#0 23.21 17.00 38.45 PASS Band5 5MHz QPSK 20425 1RB#0 22.24 16.09 38.45 PASS Band5 5MHz QPSK 20425 12RB#0 22.18 16.03 38.45 PASS Band5	Band5	3MHz	QPSK	20635	1RB#0	22.95	16.80	38.45	PASS
Band5 3MHz QPSK 20635 8RB#0 22.00 15.85 38.45 PASS Band5 3MHz QPSK 20635 8RB#4 21.99 15.84 38.45 PASS Band5 3MHz QPSK 20635 8RB#7 21.98 15.83 38.45 PASS Band5 3MHz QPSK 20635 15RB#0 21.99 15.84 38.45 PASS Band5 5MHz QPSK 20425 1RB#0 23.21 17.06 38.45 PASS Band5 5MHz QPSK 20425 1RB#12 23.17 17.02 38.45 PASS Band5 5MHz QPSK 20425 1RB#24 23.01 16.66 38.45 PASS Band5 5MHz QPSK 20425 12RB#0 22.24 16.09 38.45 PASS Band5 5MHz QPSK 20425 12RB#0 22.14 15.99 38.45 PASS Band5	Band5	3MHz	QPSK	20635	1RB#8	22.91	16.76	38.45	PASS
Band5 3MHz QPSK 20635 8RB#4 21.99 15.84 38.45 PASS Band5 3MHz QPSK 20635 8RB#7 21.98 15.83 38.45 PASS Band5 3MHz QPSK 20635 15RB#0 21.99 15.84 38.45 PASS Band5 5MHz QPSK 20425 1RB#0 23.21 17.06 38.45 PASS Band5 5MHz QPSK 20425 1RB#12 23.17 17.02 38.45 PASS Band5 5MHz QPSK 20425 1RB#24 23.01 16.68 38.45 PASS Band5 5MHz QPSK 20425 12RB#0 22.24 16.09 38.45 PASS Band5 5MHz QPSK 20425 12RB#0 22.14 16.99 38.45 PASS Band5 5MHz QPSK 20425 12RB#0 22.14 16.93 38.45 PASS Band5	Band5	3MHz	QPSK	20635	1RB#14	22.95	16.80	38.45	PASS
Band5 3MHz QPSK 20635 8RB#7 21.98 15.83 38.45 PASS Band5 3MHz QPSK 20635 15RB#0 21.99 15.84 38.45 PASS Band5 5MHz QPSK 20425 1RB#0 23.21 17.06 38.45 PASS Band5 5MHz QPSK 20425 1RB#12 23.17 17.02 38.45 PASS Band5 5MHz QPSK 20425 1RB#24 23.01 16.68 38.45 PASS Band5 5MHz QPSK 20425 12RB#0 22.24 16.09 38.45 PASS Band5 5MHz QPSK 20425 12RB#0 22.18 16.03 38.45 PASS Band5 5MHz QPSK 20425 12RB#13 22.14 16.01 38.45 PASS Band5 5MHz QPSK 20525 1RB#0 22.93 16.78 38.45 PASS Band5 <td>Band5</td> <td>3MHz</td> <td>QPSK</td> <td>20635</td> <td>8RB#0</td> <td>22.00</td> <td>15.85</td> <td>38.45</td> <td>PASS</td>	Band5	3MHz	QPSK	20635	8RB#0	22.00	15.85	38.45	PASS
Band5 3MHz QPSK 20635 15RB#0 21.99 15.84 38.45 PASS Band5 5MHz QPSK 20425 1RB#0 23.21 17.06 38.45 PASS Band5 5MHz QPSK 20425 1RB#12 23.17 17.02 38.45 PASS Band5 5MHz QPSK 20425 1RB#24 23.01 16.86 38.45 PASS Band5 5MHz QPSK 20425 12RB#0 22.24 16.09 38.45 PASS Band5 5MHz QPSK 20425 12RB#0 22.18 16.03 38.45 PASS Band5 5MHz QPSK 20425 12RB#0 22.14 15.99 38.45 PASS Band5 5MHz QPSK 20425 12RB#0 22.14 15.99 38.45 PASS Band5 5MHz QPSK 20525 1RB#0 22.16 16.71 38.45 PASS Band5 <td>Band5</td> <td>3MHz</td> <td>QPSK</td> <td>20635</td> <td colspan="2">5 8RB#4 21.99 15.84 38.45</td> <td>38.45</td> <td>PASS</td>	Band5	3MHz	QPSK	20635	5 8RB#4 21.99 15.84 38.45		38.45	PASS	
Band5 5MHz QPSK 20425 1RB#0 23.21 17.06 38.45 PASS Band5 5MHz QPSK 20425 1RB#12 23.17 17.02 38.45 PASS Band5 5MHz QPSK 20425 1RB#24 23.01 16.66 38.45 PASS Band5 5MHz QPSK 20425 12RB#0 22.24 16.09 38.45 PASS Band5 5MHz QPSK 20425 12RB#6 22.18 16.03 38.45 PASS Band5 5MHz QPSK 20425 12RB#13 22.14 15.99 38.45 PASS Band5 5MHz QPSK 20425 25RB#0 22.16 16.01 38.45 PASS Band5 5MHz QPSK 20525 1RB#0 22.93 16.76 38.45 PASS Band5 5MHz QPSK 20525 1RB#12 22.90 16.75 38.45 PASS Band5 <td>Band5</td> <td>3MHz</td> <td>QPSK</td> <td>20635</td> <td>8RB#7</td> <td>21.98</td> <td>15.83</td> <td>38.45</td> <td>PASS</td>	Band5	3MHz	QPSK	20635	8RB#7	21.98	15.83	38.45	PASS
Band5 5MHz QPSK 20425 1RB#12 23.17 17.02 38.45 PASS Band5 5MHz QPSK 20425 1RB#24 23.01 16.86 38.45 PASS Band5 5MHz QPSK 20425 12RB#0 22.24 16.09 38.45 PASS Band5 5MHz QPSK 20425 12RB#6 22.18 16.03 38.45 PASS Band5 5MHz QPSK 20425 12RB#13 22.14 15.99 38.45 PASS Band5 5MHz QPSK 20425 25RB#0 22.16 16.01 38.45 PASS Band5 5MHz QPSK 20525 1RB#0 22.93 16.78 38.45 PASS Band5 5MHz QPSK 20525 1RB#12 22.90 16.75 38.45 PASS Band5 5MHz QPSK 20525 12RB#0 21.99 15.84 38.45 PASS Band5 </td <td>Band5</td> <td>3MHz</td> <td>QPSK</td> <td>20635</td> <td>15RB#0</td> <td>21.99</td> <td>15.84</td> <td>38.45</td> <td>PASS</td>	Band5	3MHz	QPSK	20635	15RB#0	21.99	15.84	38.45	PASS
Band5 5MHz QPSK 20425 1RB#24 23.01 16.86 38.45 PASS Band5 5MHz QPSK 20425 12RB#0 22.24 16.09 38.45 PASS Band5 5MHz QPSK 20425 12RB#6 22.18 16.03 38.45 PASS Band5 5MHz QPSK 20425 12RB#13 22.14 15.99 38.45 PASS Band5 5MHz QPSK 20425 25RB#0 22.16 16.01 38.45 PASS Band5 5MHz QPSK 20525 1RB#0 22.93 16.78 38.45 PASS Band5 5MHz QPSK 20525 1RB#12 22.90 16.75 38.45 PASS Band5 5MHz QPSK 20525 1RB#12 22.90 16.75 38.45 PASS Band5 5MHz QPSK 20525 12RB#0 21.99 15.84 38.45 PASS Band5 </td <td>Band5</td> <td>5MHz</td> <td>QPSK</td> <td>20425</td> <td>1RB#0</td> <td>23.21</td> <td>17.06</td> <td>38.45</td> <td>PASS</td>	Band5	5MHz	QPSK	20425	1RB#0	23.21	17.06	38.45	PASS
Band5 5MHz QPSK 20425 12RB#0 22.24 16.09 38.45 PASS Band5 5MHz QPSK 20425 12RB#6 22.18 16.03 38.45 PASS Band5 5MHz QPSK 20425 12RB#13 22.14 15.99 38.45 PASS Band5 5MHz QPSK 20425 25RB#0 22.16 16.01 38.45 PASS Band5 5MHz QPSK 20525 1RB#0 22.93 16.78 38.45 PASS Band5 5MHz QPSK 20525 1RB#12 22.90 16.75 38.45 PASS Band5 5MHz QPSK 20525 1RB#02 21.99 15.84 38.45 PASS Band5 5MHz QPSK 20525 12RB#0 21.99 15.84 38.45 PASS Band5 5MHz QPSK 20525 12RB#0 21.99 15.81 38.45 PASS Band5 </td <td>Band5</td> <td>5MHz</td> <td>QPSK</td> <td>20425</td> <td>1RB#12</td> <td>23.17</td> <td>17.02</td> <td>38.45</td> <td>PASS</td>	Band5	5MHz	QPSK	20425	1RB#12	23.17	17.02	38.45	PASS
Band5 5MHz QPSK 20425 12RB#6 22.18 16.03 38.45 PASS Band5 5MHz QPSK 20425 12RB#13 22.14 15.99 38.45 PASS Band5 5MHz QPSK 20425 25RB#0 22.16 16.01 38.45 PASS Band5 5MHz QPSK 20525 1RB#0 22.93 16.78 38.45 PASS Band5 5MHz QPSK 20525 1RB#12 22.90 16.75 38.45 PASS Band5 5MHz QPSK 20525 1RB#12 22.90 16.75 38.45 PASS Band5 5MHz QPSK 20525 12RB#0 21.99 15.84 38.45 PASS Band5 5MHz QPSK 20525 12RB#0 21.99 15.84 38.45 PASS Band5 5MHz QPSK 20525 12RB#13 21.96 15.81 38.45 PASS Band5<	Band5	5MHz	QPSK	20425	1RB#24	23.01	16.86	38.45	PASS
Band5 5MHz QPSK 20425 12RB#13 22.14 15.99 38.45 PASS Band6 5MHz QPSK 20425 25RB#0 22.16 16.01 38.45 PASS Band6 5MHz QPSK 20525 1RB#0 22.93 16.78 38.45 PASS Band5 5MHz QPSK 20525 1RB#12 22.90 16.75 38.45 PASS Band5 5MHz QPSK 20525 1RB#24 22.84 16.69 38.45 PASS Band5 5MHz QPSK 20525 12RB#0 21.99 15.84 38.45 PASS Band5 5MHz QPSK 20525 12RB#0 21.99 15.84 38.45 PASS Band5 5MHz QPSK 20525 12RB#0 21.95 15.80 38.45 PASS Band5 5MHz QPSK 20525 25RB#0 21.98 15.83 38.45 PASS Band5 </td <td>Band5</td> <td>5MHz</td> <td>QPSK</td> <td>20425</td> <td>12RB#0</td> <td>22.24</td> <td>16.09</td> <td>38.45</td> <td>PASS</td>	Band5	5MHz	QPSK	20425	12RB#0	22.24	16.09	38.45	PASS
Band5 5MHz QPSK 20425 25RB#0 22.16 16.01 38.45 PASS Band5 5MHz QPSK 20525 1RB#0 22.93 16.78 38.45 PASS Band5 5MHz QPSK 20525 1RB#12 22.90 16.75 38.45 PASS Band5 5MHz QPSK 20525 1RB#24 22.84 16.69 38.45 PASS Band5 5MHz QPSK 20525 12RB#0 21.99 15.84 38.45 PASS Band5 5MHz QPSK 20525 12RB#0 21.99 15.80 38.45 PASS Band5 5MHz QPSK 20525 12RB#13 21.96 15.81 38.45 PASS Band5 5MHz QPSK 20525 25RB#0 21.98 15.83 38.45 PASS Band5 5MHz QPSK 20625 1RB#0 22.98 16.83 38.45 PASS Band5 <td>Band5</td> <td>5MHz</td> <td>QPSK</td> <td>20425</td> <td>12RB#6</td> <td>22.18</td> <td>16.03</td> <td>38.45</td> <td>PASS</td>	Band5	5MHz	QPSK	20425	12RB#6	22.18	16.03	38.45	PASS
Band5 5MHz QPSK 20525 1RB#0 22.93 16.78 38.45 PASS Band5 5MHz QPSK 20525 1RB#12 22.90 16.75 38.45 PASS Band5 5MHz QPSK 20525 1RB#24 22.84 16.69 38.45 PASS Band5 5MHz QPSK 20525 12RB#0 21.99 15.84 38.45 PASS Band5 5MHz QPSK 20525 12RB#6 21.95 15.80 38.45 PASS Band5 5MHz QPSK 20525 12RB#13 21.96 15.81 38.45 PASS Band5 5MHz QPSK 20525 25RB#0 21.98 15.83 38.45 PASS Band5 5MHz QPSK 20625 1RB#0 22.98 16.83 38.45 PASS Band5 5MHz QPSK 20625 1RB#12 23.02 16.87 38.45 PASS Band5 <td>Band5</td> <td>5MHz</td> <td>QPSK</td> <td>20425</td> <td>12RB#13</td> <td>22.14</td> <td>15.99</td> <td>38.45</td> <td>PASS</td>	Band5	5MHz	QPSK	20425	12RB#13	22.14	15.99	38.45	PASS
Band5 5MHz QPSK 20525 1RB#12 22.90 16.75 38.45 PASS Band5 5MHz QPSK 20525 1RB#24 22.84 16.69 38.45 PASS Band5 5MHz QPSK 20525 12RB#0 21.99 15.84 38.45 PASS Band5 5MHz QPSK 20525 12RB#6 21.95 15.80 38.45 PASS Band5 5MHz QPSK 20525 12RB#13 21.96 15.81 38.45 PASS Band5 5MHz QPSK 20525 25RB#0 21.98 15.83 38.45 PASS Band5 5MHz QPSK 20625 1RB#0 22.98 16.83 38.45 PASS Band5 5MHz QPSK 20625 1RB#24 22.98 16.87 38.45 PASS Band5 5MHz QPSK 20625 12RB#0 21.95 15.80 38.45 PASS Band5 </td <td>Band5</td> <td>5MHz</td> <td>QPSK</td> <td>20425</td> <td>25RB#0</td> <td>22.16</td> <td>16.01</td> <td>38.45</td> <td>PASS</td>	Band5	5MHz	QPSK	20425	25RB#0	22.16	16.01	38.45	PASS
Band5 5MHz QPSK 20525 1RB#24 22.84 16.69 38.45 PASS Band5 5MHz QPSK 20525 12RB#0 21.99 15.84 38.45 PASS Band5 5MHz QPSK 20525 12RB#6 21.95 15.80 38.45 PASS Band5 5MHz QPSK 20525 25RB#0 21.98 15.81 38.45 PASS Band5 5MHz QPSK 20525 25RB#0 21.98 15.83 38.45 PASS Band5 5MHz QPSK 20625 1RB#0 22.98 16.83 38.45 PASS Band5 5MHz QPSK 20625 1RB#24 22.98 16.83 38.45 PASS Band5 5MHz QPSK 20625 1RB#24 22.98 16.83 38.45 PASS Band5 5MHz QPSK 20625 12RB#0 21.95 15.80 38.45 PASS Band5 <td>Band5</td> <td>5MHz</td> <td>QPSK</td> <td>20525</td> <td>1RB#0</td> <td>22.93</td> <td>16.78</td> <td>38.45</td> <td>PASS</td>	Band5	5MHz	QPSK	20525	1RB#0	22.93	16.78	38.45	PASS
Band5 5MHz QPSK 20525 12RB#0 21.99 15.84 38.45 PASS Band5 5MHz QPSK 20525 12RB#6 21.95 15.80 38.45 PASS Band5 5MHz QPSK 20525 12RB#13 21.96 15.81 38.45 PASS Band5 5MHz QPSK 20525 25RB#0 21.98 15.83 38.45 PASS Band5 5MHz QPSK 20625 1RB#0 22.98 16.83 38.45 PASS Band5 5MHz QPSK 20625 1RB#12 23.02 16.87 38.45 PASS Band5 5MHz QPSK 20625 1RB#24 22.98 16.83 38.45 PASS Band5 5MHz QPSK 20625 12RB#0 21.95 15.80 38.45 PASS Band5 5MHz QPSK 20625 12RB#0 21.95 15.77 38.45 PASS Band5 </td <td>Band5</td> <td>5MHz</td> <td>QPSK</td> <td>20525</td> <td>1RB#12</td> <td>22.90</td> <td>16.75</td> <td>38.45</td> <td>PASS</td>	Band5	5MHz	QPSK	20525	1RB#12	22.90	16.75	38.45	PASS
Band5 5MHz QPSK 20525 12RB#6 21.95 15.80 38.45 PASS Band5 5MHz QPSK 20525 12RB#13 21.96 15.81 38.45 PASS Band5 5MHz QPSK 20525 25RB#0 21.98 15.83 38.45 PASS Band5 5MHz QPSK 20625 1RB#0 22.98 16.83 38.45 PASS Band5 5MHz QPSK 20625 1RB#12 23.02 16.87 38.45 PASS Band5 5MHz QPSK 20625 1RB#24 22.98 16.83 38.45 PASS Band5 5MHz QPSK 20625 12RB#0 21.95 15.80 38.45 PASS Band5 5MHz QPSK 20625 12RB#0 21.95 15.77 38.45 PASS Band5 5MHz QPSK 20625 12RB#13 21.93 15.78 38.45 PASS Band5<	Band5	5MHz	QPSK	20525	1RB#24	22.84	16.69	38.45	PASS
Band5 5MHz QPSK 20525 12RB#13 21.96 15.81 38.45 PASS Band5 5MHz QPSK 20525 25RB#0 21.98 15.83 38.45 PASS Band5 5MHz QPSK 20625 1RB#0 22.98 16.83 38.45 PASS Band5 5MHz QPSK 20625 1RB#12 23.02 16.87 38.45 PASS Band5 5MHz QPSK 20625 1RB#24 22.98 16.83 38.45 PASS Band5 5MHz QPSK 20625 12RB#0 21.95 15.80 38.45 PASS Band5 5MHz QPSK 20625 12RB#6 21.92 15.77 38.45 PASS Band5 5MHz QPSK 20625 12RB#13 21.92 15.77 38.45 PASS Band5 10MHz QPSK 20625 25RB#0 21.92 15.77 38.45 PASS Band5	Band5	5MHz	QPSK	20525	12RB#0	21.99	15.84	38.45	PASS
Band5 5MHz QPSK 20525 25RB#0 21.98 15.83 38.45 PASS Band5 5MHz QPSK 20625 1RB#0 22.98 16.83 38.45 PASS Band5 5MHz QPSK 20625 1RB#12 23.02 16.87 38.45 PASS Band5 5MHz QPSK 20625 12RB#0 21.95 15.80 38.45 PASS Band5 5MHz QPSK 20625 12RB#0 21.95 15.80 38.45 PASS Band5 5MHz QPSK 20625 12RB#0 21.92 15.77 38.45 PASS Band5 5MHz QPSK 20625 12RB#13 21.92 15.77 38.45 PASS Band5 5MHz QPSK 20625 25RB#0 21.92 15.77 38.45 PASS Band5 10MHz QPSK 20450 1RB#0 23.25 17.10 38.45 PASS Band5 </td <td>Band5</td> <td>5MHz</td> <td>QPSK</td> <td>20525</td> <td>12RB#6</td> <td>21.95</td> <td>15.80</td> <td>38.45</td> <td>PASS</td>	Band5	5MHz	QPSK	20525	12RB#6	21.95	15.80	38.45	PASS
Band5 5MHz QPSK 20625 1RB#0 22.98 16.83 38.45 PASS Band5 5MHz QPSK 20625 1RB#12 23.02 16.87 38.45 PASS Band5 5MHz QPSK 20625 1RB#24 22.98 16.83 38.45 PASS Band5 5MHz QPSK 20625 12RB#0 21.95 15.80 38.45 PASS Band5 5MHz QPSK 20625 12RB#6 21.92 15.77 38.45 PASS Band5 5MHz QPSK 20625 12RB#13 21.93 15.78 38.45 PASS Band5 5MHz QPSK 20625 25RB#0 21.92 15.77 38.45 PASS Band5 10MHz QPSK 20450 1RB#0 23.25 17.10 38.45 PASS Band5 10MHz QPSK 20450 1RB#49 22.90 16.75 38.45 PASS Band5<	Band5	5MHz	QPSK	20525	12RB#13	21.96	15.81	38.45	PASS
Band5 5MHz QPSK 20625 1RB#12 23.02 16.87 38.45 PASS Band5 5MHz QPSK 20625 1RB#24 22.98 16.83 38.45 PASS Band5 5MHz QPSK 20625 12RB#0 21.95 15.80 38.45 PASS Band5 5MHz QPSK 20625 12RB#6 21.92 15.77 38.45 PASS Band5 5MHz QPSK 20625 12RB#13 21.93 15.78 38.45 PASS Band5 5MHz QPSK 20625 25RB#0 21.92 15.77 38.45 PASS Band5 10MHz QPSK 20450 1RB#0 23.25 17.10 38.45 PASS Band5 10MHz QPSK 20450 1RB#24 23.04 16.89 38.45 PASS Band5 10MHz QPSK 20450 1RB#49 22.90 16.75 38.45 PASS Band	Band5	5MHz	QPSK	20525	25RB#0	21.98	15.83	38.45	PASS
Band5 5MHz QPSK 20625 1RB#24 22.98 16.83 38.45 PASS Band5 5MHz QPSK 20625 12RB#0 21.95 15.80 38.45 PASS Band5 5MHz QPSK 20625 12RB#6 21.92 15.77 38.45 PASS Band5 5MHz QPSK 20625 12RB#13 21.93 15.78 38.45 PASS Band5 5MHz QPSK 20625 25RB#0 21.92 15.77 38.45 PASS Band5 10MHz QPSK 20450 1RB#0 23.25 17.10 38.45 PASS Band5 10MHz QPSK 20450 1RB#24 23.04 16.89 38.45 PASS Band5 10MHz QPSK 20450 1RB#49 22.90 16.75 38.45 PASS Band5 10MHz QPSK 20450 25RB#0 22.23 16.08 38.45 PASS Ban	Band5	5MHz	QPSK	20625	1RB#0	22.98	16.83	38.45	PASS
Band5 5MHz QPSK 20625 12RB#0 21.95 15.80 38.45 PASS Band5 5MHz QPSK 20625 12RB#6 21.92 15.77 38.45 PASS Band5 5MHz QPSK 20625 12RB#13 21.93 15.78 38.45 PASS Band5 5MHz QPSK 20625 25RB#0 21.92 15.77 38.45 PASS Band5 10MHz QPSK 20450 1RB#0 23.25 17.10 38.45 PASS Band5 10MHz QPSK 20450 1RB#24 23.04 16.89 38.45 PASS Band5 10MHz QPSK 20450 1RB#49 22.90 16.75 38.45 PASS Band5 10MHz QPSK 20450 25RB#0 22.23 16.08 38.45 PASS Band5 10MHz QPSK 20450 25RB#12 22.12 15.97 38.45 PASS	Band5	5MHz	QPSK	20625	1RB#12	23.02	16.87	38.45	PASS
Band5 5MHz QPSK 20625 12RB#6 21.92 15.77 38.45 PASS Band5 5MHz QPSK 20625 12RB#13 21.93 15.78 38.45 PASS Band5 5MHz QPSK 20625 25RB#0 21.92 15.77 38.45 PASS Band5 10MHz QPSK 20450 1RB#0 23.25 17.10 38.45 PASS Band5 10MHz QPSK 20450 1RB#24 23.04 16.89 38.45 PASS Band5 10MHz QPSK 20450 1RB#49 22.90 16.75 38.45 PASS Band5 10MHz QPSK 20450 25RB#0 22.23 16.08 38.45 PASS Band5 10MHz QPSK 20450 25RB#12 22.12 15.97 38.45 PASS	Band5	5MHz	QPSK	20625	1RB#24	22.98	16.83	38.45	PASS
Band5 5MHz QPSK 20625 12RB#13 21.93 15.78 38.45 PASS Band5 5MHz QPSK 20625 25RB#0 21.92 15.77 38.45 PASS Band5 10MHz QPSK 20450 1RB#0 23.25 17.10 38.45 PASS Band5 10MHz QPSK 20450 1RB#24 23.04 16.89 38.45 PASS Band5 10MHz QPSK 20450 1RB#49 22.90 16.75 38.45 PASS Band5 10MHz QPSK 20450 25RB#0 22.23 16.08 38.45 PASS Band5 10MHz QPSK 20450 25RB#12 22.12 15.97 38.45 PASS	Band5	5MHz	QPSK	20625	12RB#0	21.95	15.80	38.45	PASS
Band5 5MHz QPSK 20625 25RB#0 21.92 15.77 38.45 PASS Band5 10MHz QPSK 20450 1RB#0 23.25 17.10 38.45 PASS Band5 10MHz QPSK 20450 1RB#24 23.04 16.89 38.45 PASS Band5 10MHz QPSK 20450 1RB#49 22.90 16.75 38.45 PASS Band5 10MHz QPSK 20450 25RB#0 22.23 16.08 38.45 PASS Band5 10MHz QPSK 20450 25RB#12 22.12 15.97 38.45 PASS	Band5	5MHz	QPSK	20625	12RB#6	21.92	15.77	38.45	PASS
Band5 10MHz QPSK 20450 1RB#0 23.25 17.10 38.45 PASS Band5 10MHz QPSK 20450 1RB#24 23.04 16.89 38.45 PASS Band5 10MHz QPSK 20450 1RB#49 22.90 16.75 38.45 PASS Band5 10MHz QPSK 20450 25RB#0 22.23 16.08 38.45 PASS Band5 10MHz QPSK 20450 25RB#12 22.12 15.97 38.45 PASS	Band5	5MHz	QPSK	20625	12RB#13	21.93	15.78	38.45	PASS
Band5 10MHz QPSK 20450 1RB#24 23.04 16.89 38.45 PASS Band5 10MHz QPSK 20450 1RB#49 22.90 16.75 38.45 PASS Band5 10MHz QPSK 20450 25RB#0 22.23 16.08 38.45 PASS Band5 10MHz QPSK 20450 25RB#12 22.12 15.97 38.45 PASS	Band5	5MHz	QPSK	20625	25RB#0	21.92	15.77	38.45	PASS
Band5 10MHz QPSK 20450 1RB#49 22.90 16.75 38.45 PASS Band5 10MHz QPSK 20450 25RB#0 22.23 16.08 38.45 PASS Band5 10MHz QPSK 20450 25RB#12 22.12 15.97 38.45 PASS	Band5	10MHz	QPSK	20450	1RB#0	23.25	17.10	38.45	PASS
Band5 10MHz QPSK 20450 25RB#0 22.23 16.08 38.45 PASS Band5 10MHz QPSK 20450 25RB#12 22.12 15.97 38.45 PASS	Band5	10MHz	QPSK	20450	1RB#24	23.04	16.89	38.45	PASS
Band5 10MHz QPSK 20450 25RB#12 22.12 15.97 38.45 PASS	Band5	10MHz	QPSK	20450	1RB#49	22.90	16.75	38.45	PASS
	Band5	10MHz	QPSK	20450	25RB#0	22.23	16.08	38.45	PASS
Band5 10MHz QPSK 20450 25RB#25 22.04 15.89 38.45 PASS	Band5	10MHz	QPSK	20450	25RB#12	22.12	15.97	38.45	PASS
	Band5	10MHz	QPSK	20450	25RB#25	22.04	15.89	38.45	PASS



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, **Company** **Company*** **Co

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国·深圳•科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Report No.: ZR/2019/1003001

Page: 5 of 30

Band5	10MHz	QPSK	20450	50RB#0	22.11	15.96	38.45	PASS
Band5	10MHz	10MHz QPSK 20525		1RB#0	23.05	16.90	38.45	PASS
Band5	10MHz	QPSK	20525	1RB#24	22.88	16.73	38.45	PASS
Band5	10MHz	QPSK	20525	1RB#49	22.82	16.67	38.45	PASS
Band5	10MHz	QPSK	20525	25RB#0	22.03	15.88	38.45	PASS
Band5	10MHz	QPSK	20525	25RB#12	21.96	15.81	38.45	PASS
Band5	10MHz	QPSK	20525	25RB#25	21.90	15.75	38.45	PASS
Band5	10MHz	QPSK	20525	50RB#0	21.98	15.83	38.45	PASS
Band5	10MHz	QPSK	20600	1RB#0	22.96	16.81	38.45	PASS
Band5	10MHz	QPSK	20600	1RB#24	22.92	16.77	38.45	PASS
Band5	10MHz	QPSK	20600	1RB#49	22.84	16.69	38.45	PASS
Band5	10MHz	QPSK	20600	25RB#0	21.99	15.84	38.45	PASS
Band5	10MHz	QPSK	20600	25RB#12	21.95	15.80	38.45	PASS
Band5	10MHz	QPSK	20600	25RB#25	21.92	15.77	38.45	PASS
Band5	10MHz	QPSK	20600	50RB#0	21.95	15.80	38.45	PASS

Remark:

a: For getting the EIRP (Efficient Isotropic Radiated Power) in substitution method, the following formula should be taken to calculate it,

ERP [dBm] = Conducted Power [dBm] + Gain [dBd]

EIRP [dBm] = Conducted Power [dBm] + Gain [dBi]



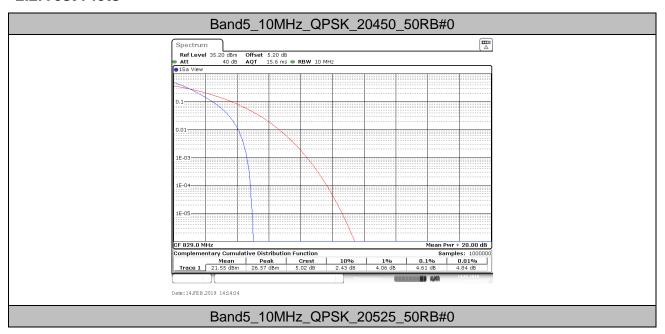
Page: 6 of 30

2. Peak-to-Average Ratio(CCDF)

2.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band5	10MHz	QPSK	20450	50RB#0	4.61	13	PASS
Band5	10MHz	QPSK	20525	50RB#0	4.29	13	PASS
Band5	10MHz	QPSK	20600	50RB#0	5.39	13	PASS

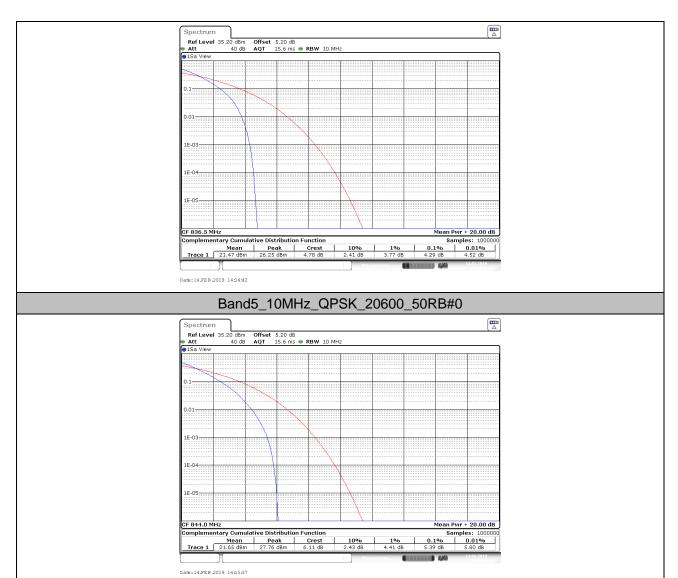
2.2. Test Plots





Report No.: ZR/2019/1003001

Page: 7 of 30

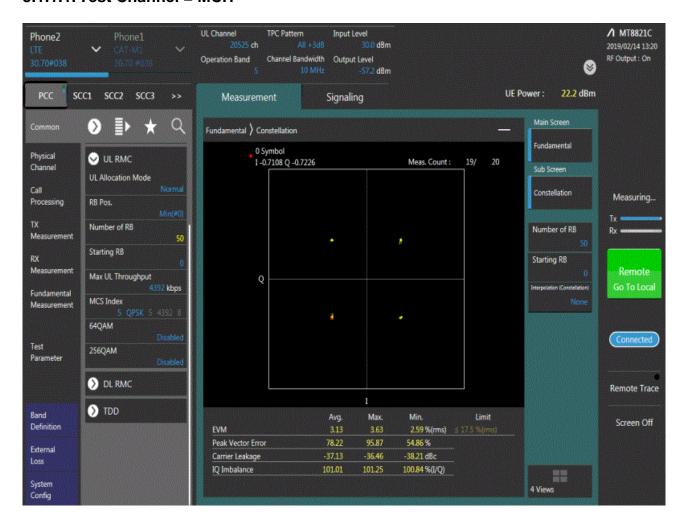




Page: 8 of 30

3. Modulation Characteristics

- 3.1.Test BAND = LTE BAND5
- 3.1.1. Test Mode = LTE /TM1 10MHz
- 3.1.1.1. Test Channel = MCH





9 of 30 Page:

4. 26dB Bandwidth and Occupied Bandwidth

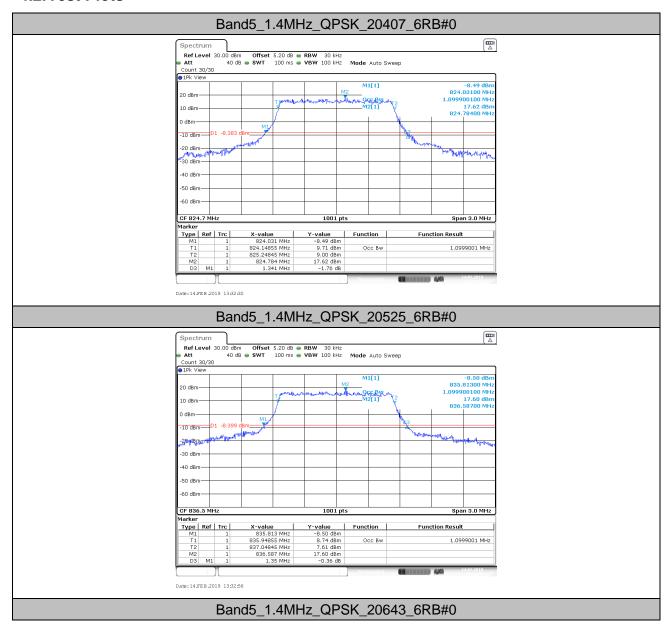
4.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band5	1.4MHz	QPSK	20407	6RB#0	1.100	1.341	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	1.100	1.350	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	1.097	1.332	PASS
Band5	3MHz	QPSK	20415	15RB#0	2.703	3.042	PASS
Band5	3MHz	QPSK	20525	15RB#0	2.697	3.036	PASS
Band5	3MHz	QPSK	20635	15RB#0	2.703	3.030	PASS
Band5	5MHz	QPSK	20425	25RB#0	4.466	4.960	PASS
Band5	5MHz	QPSK	20525	25RB#0	4.476	4.990	PASS
Band5	5MHz	QPSK	20625	25RB#0	4.466	4.940	PASS
Band5	10MHz	QPSK	20450	50RB#0	8.931	10.040	PASS
Band5	10MHz	QPSK	20525	50RB#0	8.931	9.940	PASS
Band5	10MHz	QPSK	20600	50RB#0	8.931	9.980	PASS



Page: 10 of 30

4.2. Test Plots





Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issue defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

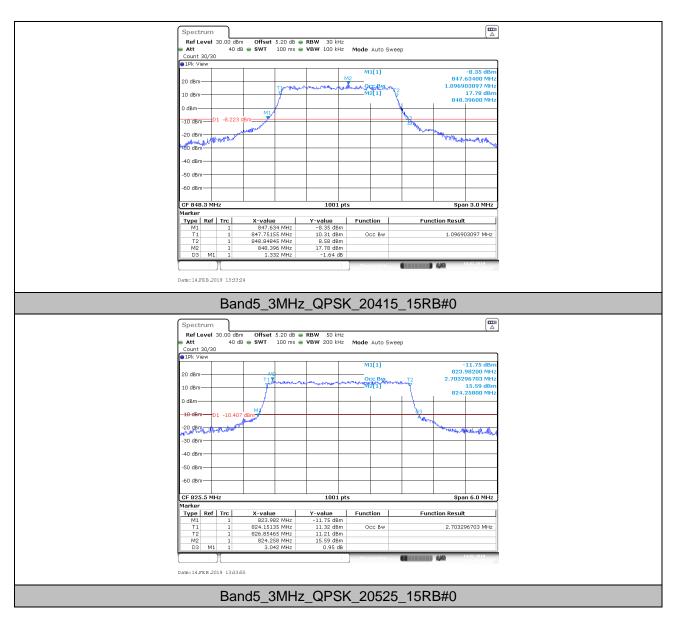
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, **Certificate**.

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房

邮编: 518057 t (86-755) 26012053 f (86-755) 26710594

Report No.: ZR/2019/1003001

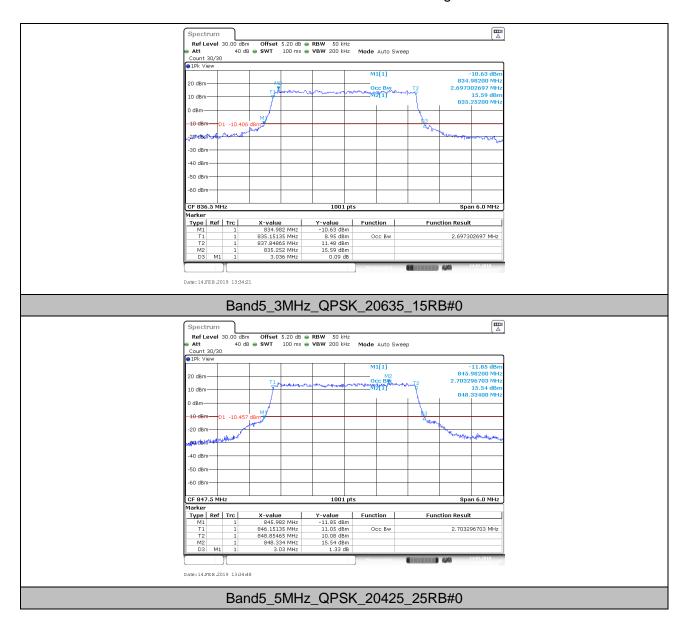
Page: 11 of 30





Report No.: ZR/2019/1003001

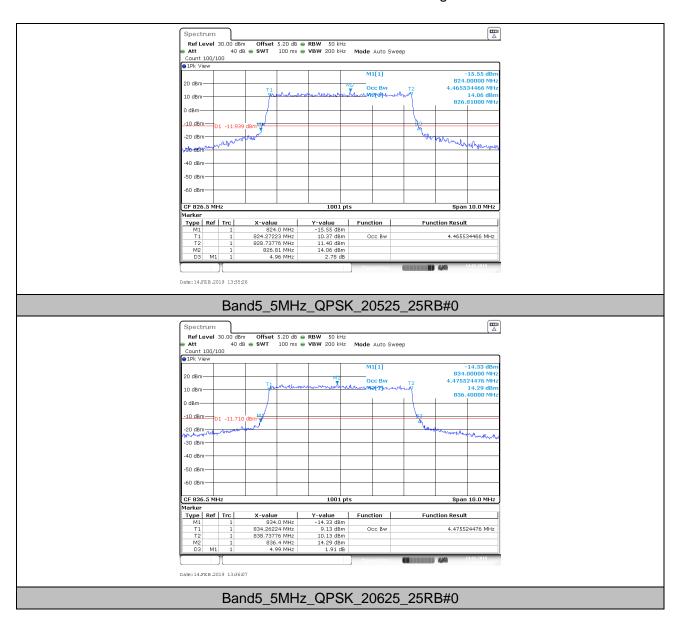
Page: 12 of 30





Report No.: ZR/2019/1003001

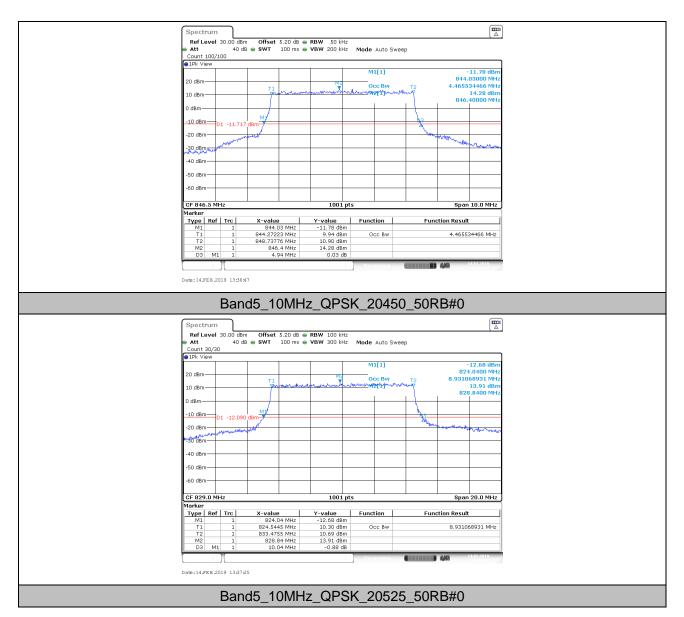
Page: 13 of 30





Report No.: ZR/2019/1003001

Page: 14 of 30





Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issue defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

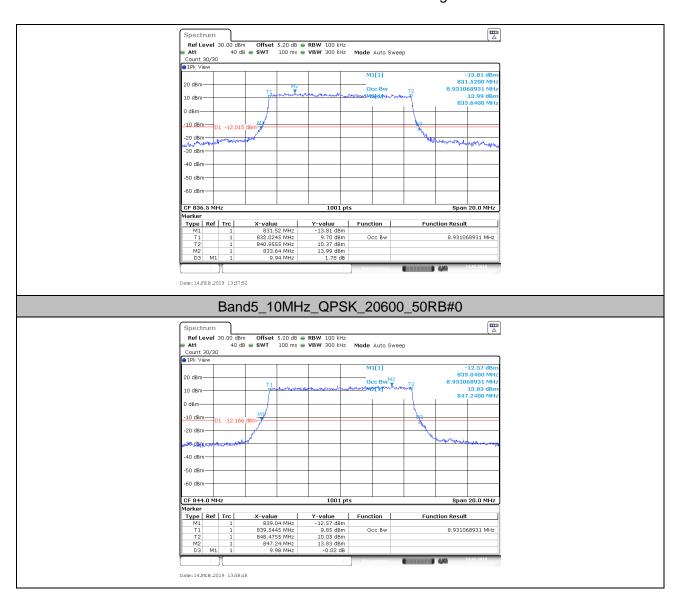
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, **Certificate**.

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 tt (86-755) 26012053 ft (86-755) 26710594 www.sgsgroup.com.cn 中国·深圳•科技园中区M-10栋一号厂房 邮编: 518057 tt (86-755) 26012053 ft (86-755) 26710594 sgs.china@sgs.com



Report No.: ZR/2019/1003001

Page: 15 of 30





Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issue defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, **Certificate**.

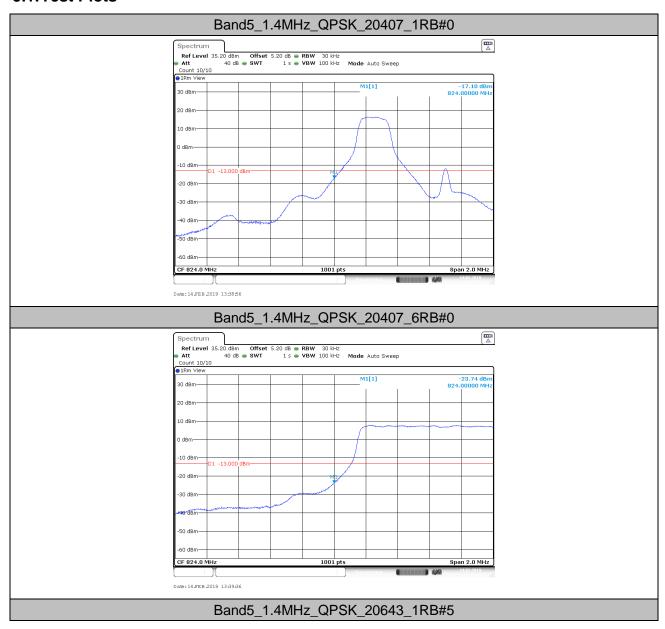
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房

邮编: 518057 t (86-755) 26012053 f (86-755) 26710594

Page: 16 of 30

5. Band Edge Compliance

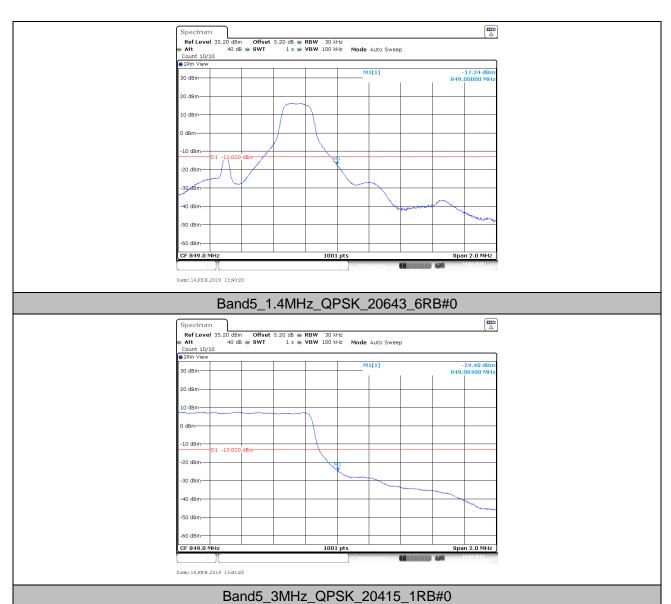
5.1. Test Plots





Report No.: ZR/2019/1003001

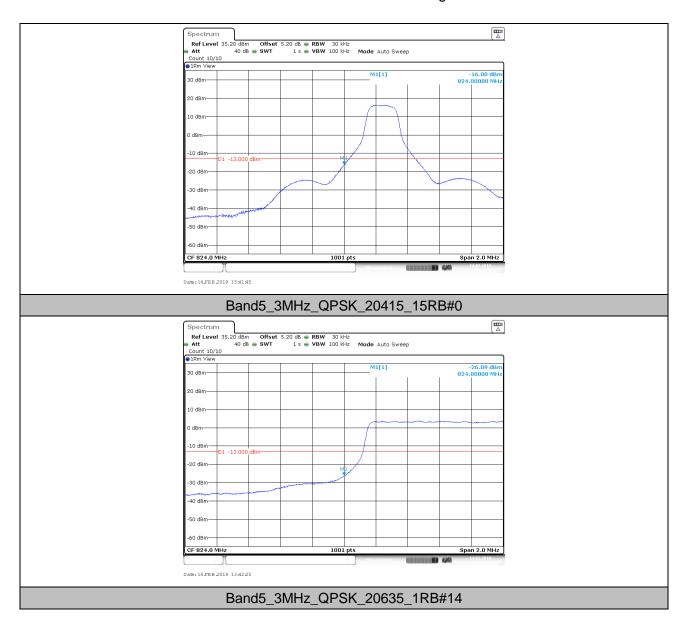
Page: 17 of 30





Report No.: ZR/2019/1003001

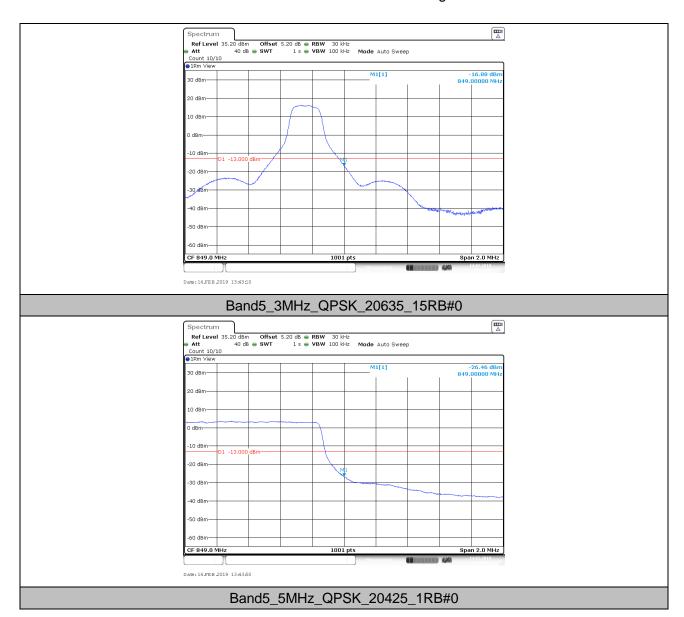
Page: 18 of 30





Report No.: ZR/2019/1003001

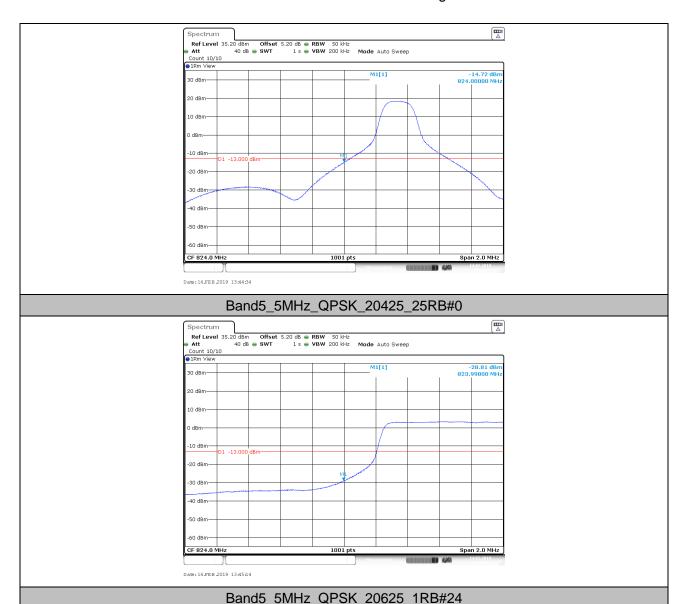
Page: 19 of 30





Report No.: ZR/2019/1003001

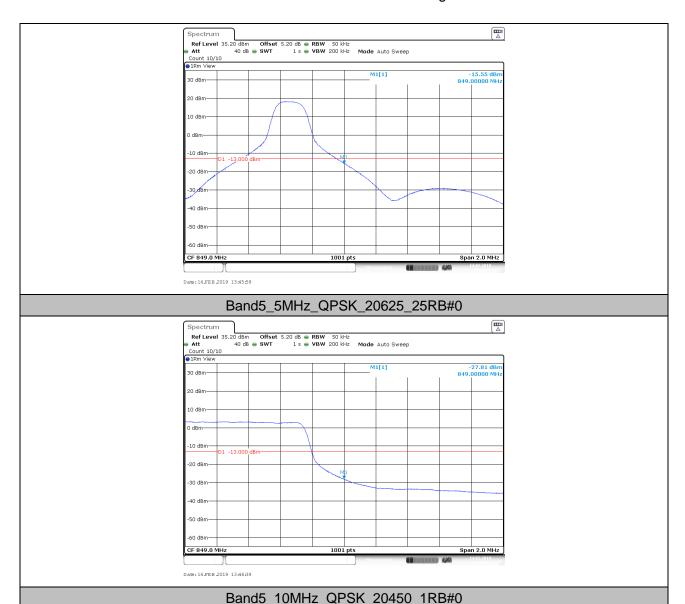
Page: 20 of 30





Report No.: ZR/2019/1003001

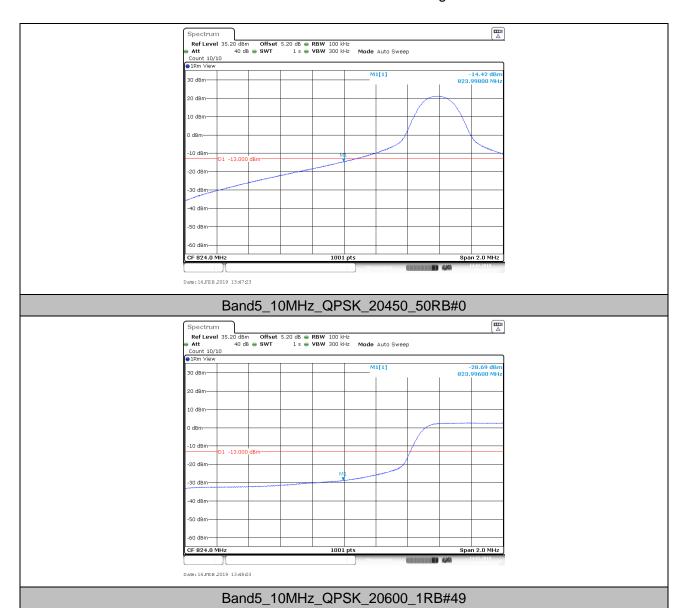
Page: 21 of 30





Report No.: ZR/2019/1003001

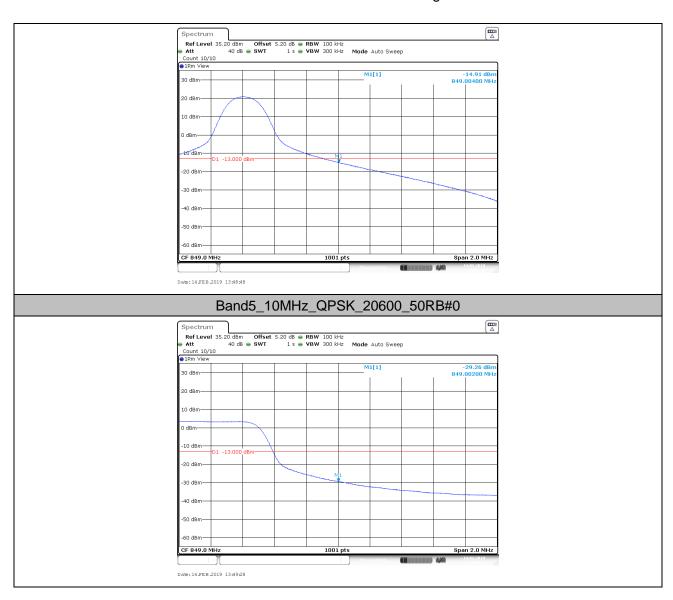
Page: 22 of 30





Report No.: ZR/2019/1003001

Page: 23 of 30





Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issue defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, **Certificate**.

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房

邮编: 518057 t (86-755) 26012053 f (86-755) 26710594

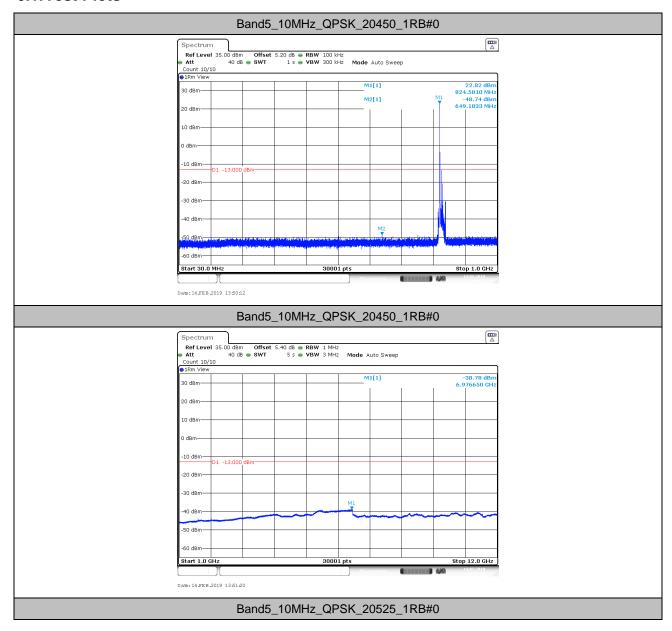
Page: 24 of 30

6. Spurious Emission at Antenna Terminal

Remark1: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of < RBW/2 so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points = k * (Span / RBW)" with k = 4 and 5, which results in an acceptable level error of less than 0.5 dB.

Remark2: only the worst case data displayed in this report.

6.1. Test Plots





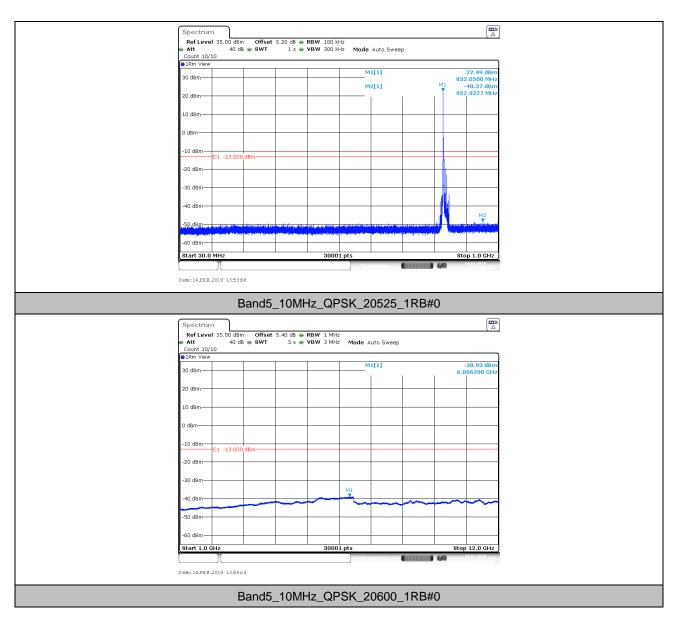
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issue defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443,

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 tt (86-755) 26012053 ft (86-755) 26710594 www.sgsgroup.com.cn 中国·深圳•科技园中区M-10栋一号厂房 邮编: 518057 tt (86-755) 26012053 ft (86-755) 26710594 sgs.china@sgs.com

Report No.: ZR/2019/1003001

Page: 25 of 30

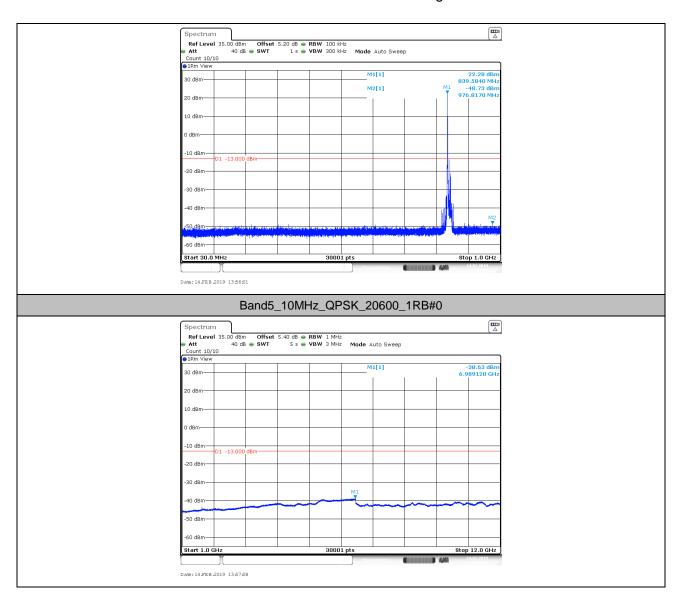






Report No.: ZR/2019/1003001

Page: 26 of 30





Page: 27 of 30

7. Field Strength of Spurious Radiation

7.1.Test BAND = LTE BAND 5

7.1.1. Test Mode =LTE/TM1 10MHz

7.1.1.1. Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
112.180000	-79.11	-13.00	66.11	Vertical
267.020000	-74.49	-13.00	61.49	Vertical
703.916667	-71.32	-13.00	58.32	Vertical
1649.000000	-38.05	-13.00	25.05	Vertical
3298.350000	-66.94	-13.00	53.94	Vertical
4134.412500	-61.58	-13.00	48.58	Vertical
62.806667	-77.14	-13.00	64.14	Horizontal
267.020000	-76.17	-13.00	63.17	Horizontal
509.766667	-72.94	-13.00	59.94	Horizontal
1649.000000	-33.17	-13.00	20.17	Horizontal
3297.862500	-65.15	-13.00	52.15	Horizontal
4134.412500	-62.61	-13.00	49.61	Horizontal

7.1.1.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
72.046667	-80.81	-13.00	67.81	Vertical
111.573333	-79.52	-13.00	66.52	Vertical
267.020000	-74.23	-13.00	61.23	Vertical
1664.000000	-38.22	-13.00	25.22	Vertical
3328.087500	-66.83	-13.00	53.83	Vertical
4134.412500	-61.49	-13.00	48.49	Vertical
62.713333	-77.30	-13.00	64.30	Horizontal
267.020000	-75.93	-13.00	62.93	Horizontal



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issue defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, **Certificate**.

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 tt (86-755) 26012053 ft (86-755) 26710594 www.sgsgroup.com.cn 中国·深圳•科技园中区M-10栋一号厂房 邮编: 518057 tt (86-755) 26012053 ft (86-755) 26710594 sgs.china@sgs.com



Report No.: ZR/2019/1003001

28 of 30 Page:

509.720833	-72.11	-13.00	59.11	Horizontal
1664.000000	-32.31	-13.00	19.31	Horizontal
3328.087500	-64.07	-13.00	51.07	Horizontal
4134.412500	-62.82	-13.00	49.82	Horizontal

7.1.1.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
112.133333	-78.63	-13.00	65.63	Vertical
267.020000	-74.27	-13.00	61.27	Vertical
655.379167	-71.61	-13.00	58.61	Vertical
1679.000000	-42.26	-13.00	29.26	Vertical
3358.312500	-67.85	-13.00	54.85	Vertical
4134.412500	-61.27	-13.00	48.27	Vertical
62.200000	-76.87	-13.00	63.87	Horizontal
267.020000	-76.35	-13.00	63.35	Horizontal
509.720833	-72.12	-13.00	59.12	Horizontal
1679.000000	-34.68	-13.00	21.68	Horizontal
3358.312500	-64.82	-13.00	51.82	Horizontal
4134.412500	-62.61	-13.00	49.61	Horizontal

Remark:

- 1) The disturbance below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the worst case data had been displayed.
- 2) We have tested all modulation and all Bandwidth, but only the worst case data presented in this report.



Page: 29 of 30

8. Frequency Stability

8.1. Frequency Vs Voltage

				١	√oltage					
BAND	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band5	10MHz	QPSK	20450	50RB#0	VL	NT	1.30	0.001568	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	VN	NT	3.40	0.004101	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	VH	NT	5.30	0.006393	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	VL	NT	0.80	0.000956	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	VN	NT	1.30	0.001554	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	VH	NT	2.00	0.002391	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	VL	NT	3.00	0.003555	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	VN	NT	0.90	0.001066	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	VH	NT	-0.70	-0.000829	±2.5	PASS

8.2. Frequency Vs Temperature

	<u> </u>		<u> </u>							
				lem	perature					
BAND	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band5	10MHz	QPSK	20450	50RB#0	NV	-30	0.20	0.000241	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	-20	-0.70	-0.000844	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	0	2.10	0.002533	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	10	0.20	0.000241	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	20	0.50	0.000603	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	30	-0.10	-0.000121	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	40	1.70	0.002051	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	50	2.20	0.002654	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	-30	1.10	0.001315	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	-20	2.00	0.002391	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	0	0.30	0.000359	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	10	-0.50	-0.000598	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	20	2.70	0.003228	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	30	-2.40	-0.002869	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	40	0.60	0.000717	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	50	1.40	0.001674	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	-30	2.30	0.002725	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	-20	2.20	0.002607	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	0	0.90	0.001066	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	10	-2.00	-0.002370	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	20	-0.10	-0.000118	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	30	-0.30	-0.000355	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	40	1.50	0.001777	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	50	0.50	0.000592	±2.5	PASS



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issue defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, **Certificate**.

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 tt (86-755) 26012053 ft (86-755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 tt (86-755) 26012053 ft (86-755) 26710594 sgs.china@sgs.com

30 of 30 Page:

The End



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issue defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction document does not exonerate parties to a transaction prome exercising all their rights and obligations under the transaction document. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, **Contact University** in the content of the conte

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国・深圳・科技园中区M-10栋一号厂房

邮编: 518057 t (86-755) 26012053 f (86-755) 26710594