

**Annex 1: Measurement diagrams to
TEST REPORT
No.: 16-1-0001901T22**

According to:
FCC Regulations
Part 22, Part 24, Part 27

ISED-Regulations
RSS-132 Issue 3, RSS-133 Issue 6,
RSS-139 Issue 2, RSS-Gen Issue 4
RSS-130 Issue 1

for

peiker acoustic GmbH

**ATM-02-US-R1
Telematic Device**

FCC: QWY-ATM2-R-11
ISED: 6588A-ATM2R11
PMN: ATM 02 Roof version
HVIN: ATM-02-US-R1







Laboratory Accreditation and Listings		
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1. Measurement diagrams LTE-mode

1.1. Power conducted

1.1.1. Power conducted LTE-Band 2

LTE-Band 2				QPSK-Modulation			16-QAM-Modulation			max. modulation QPSK	max. modulation 16QAM	max. bandwidth	absolute max. value channels/bandwidths
channel bandwidth	ARFCN ch. no.	ARFCN-Frequency [MHz]	Resource block allocation	Peak detektor [dBm]	RMS detektor [dBm]	PAR Faktor [dB]	Peak detektor [dBm]	RMS detektor [dBm]	PAR Faktor [dB]				
1.4 MHz	18607	1850,7	1 RB low	25,0911	20,8898	4,2013	25,2167	20,5043	4,7124	20,947	20,504	20,9472	
			1 RB high	25,0353	20,727	4,3083	25,1189	20,3487	4,7702				
			50% RB mid	25,1611	20,9472	4,2139	25,1524	20,3532	4,7992				
			100% RB	25,3253	19,6899	5,6354	25,3005	18,9811	6,3194				
	18900	1880	1 RB low	25,4447	20,8168	4,6279	25,3231	19,9915	5,3316				
			1 RB high	25,0753	20,3273	4,748	25,3441	20,0148	5,3293				
			50% RB mid	25,3897	20,7594	4,6303	25,2828	19,984	5,2988				
			100% RB	25,2196	19,1736	6,046	25,3149	18,7238	6,5911				
	19193	1909,3	1 RB low	23,2276	19,5663	3,6613	23,6527	19,7237	3,929				
			1 RB high	22,8946	19,4092	3,4854	23,2567	19,5024	3,7543				
			50% RB mid	22,8885	19,3417	3,5468	23,2782	19,5966	3,6816				
			100% RB	23,7947	18,3224	5,4723	23,8894	18,3572	5,5322				
3 MHz	18615	1851,5	1 RB low	24,8914	20,9438	3,9476	25,0656	20,6248	4,4408	20,944	20,625	20,9438	
			1 RB high	24,8856	20,763	4,1226	25,0632	20,3941	4,6691				
			50% RB mid	24,254	19,7554	4,4986	24,9686	20,2352	4,7334				
			100% RB	25,204	19,8198	5,3842	25,199	18,9978	6,2012				
	18900	1880	1 RB low	24,7626	20,3701	4,3925	25,1088	20,3314	4,7774				
			1 RB high	24,6862	20,3605	4,3257	24,8967	19,8874	5,0093				
			50% RB mid	24,051	19,3724	4,6786	24,9749	19,9976	4,9773				
			100% RB	25,1652	19,3423	5,8229	25,0565	18,6756	6,3809				
	19185	1908,5	1 RB low	23,3775	19,5057	3,8718	23,8593	19,8696	3,9897				
			1 RB high	22,5576	19,3434	3,2142	23,0119	19,8184	3,1935				
			50% RB mid	22,7058	18,4204	4,2854	23,4155	19,4719	3,9436				
			100% RB	23,8339	18,3971	5,4368	24,11	18,2565	5,8535				
5 MHz	18625	1852,5	1 RB low	24,9303	21,0656	3,8647	25,1279	20,6225	4,5054	21,066	20,623	21,0656	
			1 RB high	25,0066	20,9923	4,0143	25,0869	20,338	4,7489				
			50% RB mid	24,7342	19,7753	4,9589	25,0449	20,0664	4,9785				
			100% RB	25,5517	19,7065	5,8452	25,2748	18,9865	6,2883				
	18900	1880	1 RB low	24,9091	20,5976	4,3115	25,0948	20,1879	4,9069				
			1 RB high	24,6703	20,3685	4,3018	24,8688	19,9501	4,9187				
			50% RB mid	24,3908	19,3994	4,9914	25,1194	19,8216	5,2978				
			100% RB	24,7021	19,361	5,3411	25,6102	18,7606	6,8496				
	19175	1907,5	1 RB low	23,6898	19,8439	3,8459	24,0127	19,8337	4,179				
			1 RB high	22,5923	19,4641	3,1282	22,9875	19,6849	3,3026				
			50% RB mid	23,2398	18,3814	4,8584	23,653	19,2934	4,3596				
			100% RB	23,6006	18,3634	5,2372	24,0883	18,0802	6,0081				
10 MHz	18650	1855	1 RB low	25,1458	21,2663	3,8795	25,187	20,7182	4,4688	21,266	20,718	21,2663	21,4416
			1 RB high	24,9822	20,7611	4,2211	25,0196	20,3558	4,6638				
			50% RB mid	24,673	19,898	4,775	24,4325	18,9097	5,5228				
			100% RB	25,5354	19,6424	5,893	25,498	18,936	6,562				
	18900	1880	1 RB low	24,9253	20,7688	4,1565	25,0678	20,3325	4,7353				
			1 RB high	24,8777	20,6072	4,2705	25,0314	20,2809	4,7505				
			50% RB mid	24,3248	19,4206	4,9042	24,1972	18,7234	5,4738				
			100% RB	25,0264	19,4266	5,5998	24,9457	18,6632	6,2825				
	19150	1905	1 RB low	23,8371	19,7693	4,0678	24,2502	19,8313	4,4189				
			1 RB high	22,7193	19,5516	3,1677	23,0131	19,7038	3,3093				
			50% RB mid	23,1706	18,4592	4,7114	23,3823	18,1261	5,2562				
			100% RB	24,0891	18,4913	5,5978	24,6429	18,0971	6,5458				
15 MHz	18675	1857,5	1 RB low	25,09	21,1034	3,9866	25,1599	20,4794	4,6805	21,103	20,479	21,1034	
			1 RB high	25,1608	21,0759	4,0849	25,0264	20,4244	4,602				
			50% RB mid	24,512	19,6801	4,8319	25,0478	19,8602	5,1876				
			100% RB	25,6007	19,7165	5,8842	25,5737	18,8267	6,747				
	18900	1880	1 RB low	24,7077	20,5147	4,193	25,315	20,341	4,974				
			1 RB high	24,7966	20,6807	4,1159	25,257	20,417	4,84				
			50% RB mid	24,1964	19,3546	4,8418	24,8925	19,6798	5,2127				
			100% RB	25,5541	19,3136	6,2405	25,6356	18,5738	7,0618				
	19125	1902,5	1 RB low	24,2321	20,257	3,9751	24,3891	19,8994	4,4897				
			1 RB high	22,4235	20,2292	2,1943	22,9965	20,4246	2,5719				
			50% RB mid	23,6074	18,848	4,7594	23,9946	19,2934	4,7012				
			100% RB	24,9971	18,9446	6,0525	25,1262	18,2902	6,836				
20 MHz	18700	1860	1 RB low	25,2376	21,4416	3,8278	25,116	20,4661	4,6499	21,442	20,466	21,4416	
			1 RB high	25,2376	20,854	4,3836	25,1678	20,23	4,9378				
			50% RB mid	25,256	20,223	5,033	24,9356	19,9372	4,9984				
			100% RB	25,4031	19,5665	5,8366	25,4839	18,924	6,5599				
	18900	1880	1 RB low	24,7247	20,5067	4,218	24,7606	19,9181	4,8425				
			1 RB high	24,7959	20,8193	3,9766	25,594	20,7917	4,8023				
			50% RB mid	24,2763	19,4154	4,8609	25,1463	19,6305	5,5158				
			100% RB	25,6666	19,4958	6,1708	25,7739	18,6751	7,0988				
	19100	1900	1 RB low	24,2657	20,11	4,1557	25,2525	20,6521	4,6004				
			1 RB high	22,8342	20,2435	2,5907	23,5266	20,2777	3,2489				
			50% RB mid	23,638	18,7961	4,8419	24,3312	19,4769	4,8543				
			100% RB	24,8677	19,0102	5,8575	25,2377	18,7977	6,44				

1.1.2. Power conducted LTE-Band 4

LTE-Band 4				QPSK-Modulation			16-QAM-Modulation			max. modulation QPSK	max. modulation 16-QAM	max. channel	absolute max. value
channel bandwidth	ARFCN ch. no.	ARFCN-Frequency [MHz]	Resource block allocation	Peak detektor [dBm]	RMS detektor [dBm]	PAR Faktor [dB]	Peak detektor [dBm]	RMS detektor [dBm]	PAR Faktor [dB]				
1.4 MHz	19957	1710,7	1 RB low	25,8717	21,5742	4,2975	25,8281	21,2257	4,6024	21,678	21,2257	21,678	
			1 RB high	25,8413	21,5597	4,2816	25,9136	20,834	5,0796				
			50% RB mid	25,8847	21,678	4,2067	25,8907	20,8674	5,0233				
			100% RB	26,0276	20,4646	5,563	25,8904	19,6434	6,247				
	20175	1732,5	1 RB low	25,416	21,0323	4,3837	25,4194	20,4457	4,9737				
			1 RB high	25,4634	21,0133	4,4501	25,4064	20,4377	4,9687				
			50% RB mid	25,4929	21,041	4,4519	25,4639	20,5315	4,9324				
			100% RB	25,7505	19,9576	5,7929	25,6709	19,0778	6,5931				
	20393	1754,3	1 RB low	24,9383	20,4542	4,4841	24,997	19,8637	5,1333				
			1 RB high	24,8578	20,5341	4,3237	24,901	20,1042	4,7968				
			50% RB mid	24,9107	20,7219	4,1888	24,9112	19,6838	5,2274				
			100% RB	25,5216	19,5046	6,017	24,8703	18,563	6,3073				
3 MHz	19965	1711,5	1 RB low	25,7024	21,7285	3,9739	25,7899	21,2959	4,494	21,7285	21,2959	21,7285	
			1 RB high	25,7513	21,691	4,0603	25,6738	21,0752	4,5986				
			50% RB mid	24,9781	20,5797	4,3984	25,7153	20,83	4,8853				
			100% RB	25,9615	20,5186	5,4429	25,9654	19,6122	6,3532				
	20175	1732,5	1 RB low	25,2272	21,0636	4,1636	25,2023	20,5757	4,6266				
			1 RB high	25,2889	21,0366	4,2523	25,2187	20,4516	4,7671				
			50% RB mid	24,4425	20,0634	4,3791	25,178	20,244	4,934				
			100% RB	25,6859	20,0334	5,6525	25,6857	19,2304	6,4553				
	20385	1753,5	1 RB low	24,8426	20,7322	4,1104	24,8643	20,0566	4,8077				
			1 RB high	24,8064	20,9189	3,8875	24,6862	19,8646	4,8216				
			50% RB mid	24,1421	19,7085	4,4336	25,0059	20,0151	4,9908				
			100% RB	25,0879	19,5403	5,5476	24,7027	18,4962	6,2065				
5 MHz	19975	1712,5	1 RB low	25,7985	21,8059	3,9926	25,9087	21,4563	4,4524	21,869	21,4563	21,869	
			1 RB high	25,9565	21,869	4,0875	25,8957	20,9717	4,924				
			50% RB mid	25,5301	20,5898	4,9403	25,9383	21,0718	4,8665				
			100% RB	26,1033	20,5642	5,5391	26,3939	19,7877	6,6062				
	20175	1732,5	1 RB low	25,6464	21,5097	4,1367	25,2906	20,4321	4,8585				
			1 RB high	25,1876	20,9347	4,2529	25,1919	20,3005	4,8914				
			50% RB mid	24,9362	20,1077	4,8285	25,2212	20,1969	5,0243				
			100% RB	25,8486	19,9865	5,8621	25,7502	19,0353	6,7149				
	20375	1752,5	1 RB low	25,0496	20,7883	4,2613	24,9884	20,0937	4,8947				
			1 RB high	24,8424	20,9145	3,9279	24,7463	19,9068	4,8395				
			50% RB mid	24,544	19,6823	4,8617	24,8254	19,8111	5,0143				
			100% RB	24,9132	19,6292	5,284	25,0646	18,6806	6,384				
10 MHz	20000	1715	1 RB low	25,9238	21,853	4,0708	25,9701	21,4773	4,4928	22,066	21,4773	22,066	
			1 RB high	26,0309	22,0663	3,9646	26,0979	21,4468	4,6511				
			50% RB mid	25,1955	20,5326	4,6629	25,116	19,8349	5,2811				
			100% RB	26,1798	20,8222	5,3576	26,3146	19,771	6,5436				
	20175	1732,5	1 RB low	25,3585	21,4256	3,9329	25,3213	20,7572	4,5641				
			1 RB high	25,3923	21,3274	4,0649	25,4854	20,6929	4,7925				
			50% RB mid	24,8391	20,03	4,8091	24,4034	19,0431	5,3603				
			100% RB	26,0723	20,0989	5,9734	25,6003	19,0649	6,5354				
	20350	1750	1 RB low	25,2014	20,9813	4,2201	24,9746	19,9988	4,9758				
			1 RB high	24,8853	20,9577	3,9276	24,8198	20,0164	4,8034				
			50% RB mid	24,4184	19,70	4,7174	24,0592	18,6895	5,3697				
			100% RB	25,5225	19,5734	5,9491	25,1182	18,6823	6,4359				
15 MHz	20025	1717,5	1 RB low	25,3327	21,0409	4,2918	25,4746	20,5173	4,9573	21,0409	20,5173	21,0409	
			1 RB high	25,29	21,0356	4,2544	25,1956	20,1894	5,0062				
			50% RB mid	25,0448	20,1692	4,8756	25,4875	20,2181	5,2694				
			100% RB	25,9912	20,1096	5,8816	25,9311	19,0713	6,8598				
	20175	1732,5	1 RB low	24,6801	20,6173	4,0628	24,6528	19,8258	4,827				
			1 RB high	24,6281	20,384	4,2441	24,6532	19,843	4,8102				
			50% RB mid	24,4942	19,6786	4,8156	24,9542	19,7633	5,1909				
			100% RB	25,7156	19,5424	6,1732	25,4274	18,4031	7,0243				
	20325	1747,5	1 RB low	24,3608	20,0667	4,2941	24,5786	19,9656	4,613				
			1 RB high	24,2417	20,0857	4,156	24,395	19,8179	4,5771				
			50% RB mid	24,2021	19,4311	4,771	24,6299	19,4337	5,1962				
			100% RB	25,9307	19,692	6,2387	25,1444	18,1407	7,0037				
20 MHz	20050	1720	1 RB low	25,4358	21,0393	4,3965	25,134	20,643	4,491	21,555	20,643	21,555	
			1 RB high	25,7739	21,555	4,2189	25,567	20,543	5,024				
			50% RB mid	25,0624	20,2005	4,8619	25,4752	20,2672	5,208				
			100% RB	26,1691	20,1472	6,0219	25,8583	19,091	6,7673				
	20175	1732,5	1 RB low	24,6914	20,47	4,2214	24,6915	19,7063	4,9852				
			1 RB high	24,7462	20,4942	4,252	24,7453	19,7311	5,0142				
			50% RB mid	24,5214	19,7014	4,82	24,8252	19,6694	5,1558				
			100% RB	25,6656	19,5873	6,0783	25,283	18,4649	6,8181				
	20300	1745	1 RB low	24,6832	20,4606	4,2226	24,4867	19,6546	4,8321				
			1 RB high	24,3708	20,2819	4,0889	24,4924	19,6493	4,8431				
			50% RB mid	24,258	19,3035	4,9545	24,8808	19,5711	5,3097				
			100% RB	25,5578	19,3072	6,2506	25,3847	18,2462	7,1385				

1.1.3. Power conducted LTE-Band 5

LTE-Band 5				QPSK-Modulation			16-QAM-Modulation			max. modulation QPSK	max. modulation 16-QAM	max. channel	absolute max. value
channel bandwidth	ARFCN ch. no.	ARFCN-Frequency [MHz]	Resource block allocation	Peak detektor [dBm]	RMS detektor [dBm]	PAR Faktor [dB]	Peak detektor [dBm]	RMS detektor [dBm]	PAR Faktor [dB]				
1.4 MHz	20407	824.7	1 RB low	25,4278	21,0455	4,3823	25,3666	20,5506	4,816	21,59	20,55	21,59	
			1 RB high	25,8855	21,586	4,2995	25,6153	20,3939	5,2214				
			50% RB mid	26,0249	21,4611	4,5638	25,6814	20,3848	5,2966				
			100% RB	26,273	20,3355	5,9375	25,6942	19,1029	6,5913				
	20525	836.5	1 RB low	25,9004	21,1779	4,7225	25,5877	20,1726	5,4151	21,27	20,29		
			1 RB high	25,6799	21,0753	4,6046	25,5793	20,2947	5,2846				
			50% RB mid	26,03	21,27	4,7611	25,9006	20,2593	5,6413				
			100% RB	26,6658	20,2114	6,4544	26,0082	18,9731	7,0351				
	20643	848.3	1 RB low	25,9114	21,2572	4,6542	25,9603	20,7443	5,216	21,46	20,74		
			1 RB high	25,7561	21,4045	4,3516	25,7125	20,5124	5,2001				
			50% RB mid	26,1122	21,4612	4,651	26,2679	20,7121	5,5558				
			100% RB	26,7244	20,4164	6,308	26,1777	19,3084	6,8693				
3 MHz	20415	825.5	1 RB low	25,552	21,4702	4,0818	25,3922	20,5742	4,818	21,47	20,57		
			1 RB high	25,6732	21,2434	4,4298	25,7113	20,5035	5,2078				
			50% RB mid	24,9436	20,1207	4,8229	25,7797	20,5623	5,2174				
			100% RB	26,1139	20,0973	6,0166	25,7001	19,1381	6,562				
	20525	836.5	1 RB low	25,8153	21,2357	4,5796	25,8402	20,416	5,4242	21,24	20,60		
			1 RB high	25,8532	21,2254	4,6278	25,4323	20,3271	5,1052				
			50% RB mid	25,765	21,2123	4,5527	25,8008	20,595	5,2058				
			100% RB	26,0896	20,3656	5,724	26,2353	19,1254	7,1099				
	20635	847.5	1 RB low	26,1745	21,6265	4,548	26,0814	20,9077	5,1737	21,63	20,91		
			1 RB high	25,7736	21,5475	4,2261	25,8173	20,9079	4,9094				
			50% RB mid	25,6749	20,6771	4,9978	26,0263	20,7681	5,2582				
			100% RB	26,1115	20,544	5,5675	25,9396	19,4101	6,5295				
5 MHz	20425	826.5	1 RB low	25,8023	21,6686	4,1337	25,6297	21,1437	4,486	21,67	21,14		
			1 RB high	26,1327	21,4149	4,7178	26,0921	20,7401	5,352				
			50% RB mid	26,0146	20,3906	5,624	26,0557	20,6407	5,415				
			100% RB	25,7563	20,2341	5,5222	26,2801	19,3739	6,9062				
	20525	836.5	1 RB low	26,0997	21,4438	4,6559	26,1168	20,7801	5,3367	21,44	20,88		
			1 RB high	25,523	21,32	4,2045	25,6485	20,8806	4,7679				
			50% RB mid	25,6632	20,1185	5,5447	26,0244	20,7183	5,3061				
			100% RB	26,54	20,0473	6,4927	26,2637	19,2114	7,0523				
	20625	846.5	1 RB low	26,2389	21,79	4,4489	26,059	21,0372	5,0218	22,00	21,04		
			1 RB high	26,0039	22,0028	4,0011	25,9117	20,9059	5,0058				
			50% RB mid	25,851	20,525	5,326	26,4524	20,8902	5,5622				
			100% RB	26,5992	20,2564	6,3428	26,6392	19,2666	7,3726				
10 MHz	20450	829	1 RB low	26,543	20,7654	5,7776	25,5921	20,6195	4,9726	21,57	20,93		
			1 RB high	26,261	21,5666	4,6944	26,3107	20,9279	5,3828				
			50% RB mid	25,8026	20,4103	5,3923	25,6886	19,5333	6,1553				
			100% RB	26,8452	20,0903	6,7549	26,007	19,1315	6,8755				
	20525	836.5	1 RB low	25,8595	21,0637	4,7958	25,891	20,854	5,037	21,06	20,86		
			1 RB high	25,3047	21,0146	4,2901	25,3994	20,8594	4,54				
			50% RB mid	25,4692	20,029	5,4402	25,0722	19,18	5,8922				
			100% RB	26,6172	20,0279	6,5893	26,4255	19,108	7,3175				
	20600	844	1 RB low	25,4373	21,1894	4,2479	25,5784	21,1405	4,4379	21,51	21,14		
			1 RB high	25,7777	21,5059	4,2718	25,8842	20,886	4,9982				
			50% RB mid	25,7693	20,4986	5,2707	25,7206	19,8396	5,881				
			100% RB	26,0073	20,3088	5,6985	26,5238	19,5953	6,9285				

1.1.4. Power conducted LTE-Band 7

LTE-Band 7				QPSK-Modulation			16-QAM-Modulation			max. modulation QPSK	max. modulation 16-QAM	max. channel	absolute max. value
channel bandwidth	ARFCN ch. no.	ARFCN-Frequency [MHz]	Resource block allocation	Peak detektor [dBm]	RMS detektor [dBm]	PAR Faktor [dB]	Peak detektor [dBm]	RMS detektor [dBm]	PAR Faktor [dB]				
5 MHz	20775		1 RB low	24,0528	20,8349	3,2179	24,0607	20,0218	4,0389	20,8349	20,0218	20,83	
			1 RB high	24,0169	20,5632	3,4537	24,0037	19,7677	4,236				
			50% RB mid	23,711	19,4876	4,2234	24,0183	19,7948	4,2235				
			100% RB	24,341	19,3049	5,0361	24,6278	18,4186	6,2092				
	21100		1 RB low	24,0098	20,1544	3,8554	24,0657	19,2024	4,8633	20,2652	19,3459		
			1 RB high	23,9025	20,2652	3,6373	23,7389	19,3459	4,393				
			50% RB mid	23,5079	18,9265	4,5814	23,9123	19,0962	4,8161				
			100% RB	24,6632	18,8698	5,7934	24,0465	17,8801	6,1664				
	21425		1 RB low	23,8385	20,1847	3,6538	24,0746	19,2794	4,7952	20,1847	19,2794		
			1 RB high	22,5293	19,9832	2,5461	22,9969	19,2119	3,785				
			50% RB mid	23,2194	18,9879	4,2315	23,5921	19,257	4,3351				
			100% RB	24,3161	18,9947	5,3214	23,7681	18,065	5,7031				
10 MHz	20800		1 RB low	24,4029	21,0888	3,3141	24,4268	20,6372	3,7896	21,0888	20,6372		
			1 RB high	24,5517	20,9679	3,5838	24,3972	19,9639	4,4333				
			50% RB mid	23,558	19,3662	4,1918	23,3876	18,4784	4,9092				
			100% RB	25,06	19,4863	5,5737	24,8822	18,6719	6,2103				
	21000		1 RB low	24,3173	20,3335	3,9838	24,3691	20,1033	4,2658	20,3533	20,1033		
			1 RB high	23,8281	20,3533	3,4748	23,8376	19,5496	4,288				
			50% RB mid	23,2602	18,8692	4,391	23,054	17,9001	5,1539				
			100% RB	24,6598	19,0043	5,6555	24,5389	18,0547	6,4842				
	21400		1 RB low	24,3737	20,7657	3,608	24,2666	19,8303	4,4363	20,7657	19,8303		
			1 RB high	22,6408	20,3552	2,2856	23,0347	19,5846	3,4501				
			50% RB mid	23,3859	19,1672	4,2187	23,2596	18,2333	5,0263				
			100% RB	24,5195	19,1926	5,3269	24,0886	18,3151	5,7735				
15 MHz	2825		1 RB low	24,4085	20,8287	3,5798	24,3911	20,2763	4,1148	20,8287	20,2763		
			1 RB high	24,2862	20,3782	3,908	24,4206	19,9032	4,5174				
			50% RB mid	23,643	19,3363	4,3067	24,1348	19,4382	4,6966				
			100% RB	24,928	19,3148	5,6132	24,946	18,5028	6,4432				
	21100		1 RB low	24,1717	20,3692	3,8025	24,2123	19,6693	4,543	20,3692	19,6693		
			1 RB high	23,9952	20,1577	3,8375	23,9696	19,4624	4,5072				
			50% RB mid	23,6502	19,1445	4,5057	24,3132	19,1848	5,1284				
			100% RB	25,0702	19,1277	5,9425	24,8187	18,1625	6,6562				
	21375		1 RB low	23,6659	20,052	3,6139	23,492	19,4927	3,9993	20,052	19,4927		
			1 RB high	22,683	20,0104	2,6726	22,9373	19,2098	3,7275				
			50% RB mid	23,2086	18,7374	4,4712	23,7638	18,885	4,8788				
			100% RB	24,5878	18,8762	5,7116	24,4164	17,8082	6,6082				
20 MHz	2850		1 RB low	24,4049	20,9183	3,4866	24,5508	20,3956	4,1552	21,2638	20,3956		
			1 RB high	25,0019	21,2638	3,7381	24,5221	19,9302	4,5919				
			50% RB mid	23,8076	19,5319	4,2757	24,1734	19,284	4,8894				
			100% RB	25,3709	19,8051	5,5658	24,7313	18,5272	6,2041				
	21100		1 RB low	24,607	21,1411	3,4659	24,527	19,9916	4,5354	21,1411	19,9916		
			1 RB high	23,9869	20,1262	3,8607	24,2229	19,4315	4,7914				
			50% RB mid	23,6342	19,2204	4,4138	24,4924	19,2267	5,2657				
			100% RB	25,1538	19,2025	5,9513	24,6309	18,1705	6,4604				
	21300		1 RB low	23,3835	19,9283	3,4552	23,5904	19,3843	4,2061	20,0486	19,5337		
			1 RB high	22,7783	20,0486	2,7297	23,3047	19,5337	3,771				
			50% RB mid	23,3659	18,8067	4,5592	23,9764	19,1899	4,7865				
			100% RB	24,2889	18,8548	5,4341	23,9743	19,1344	4,8399				

1.1.5. Power conducted LTE-Band 12

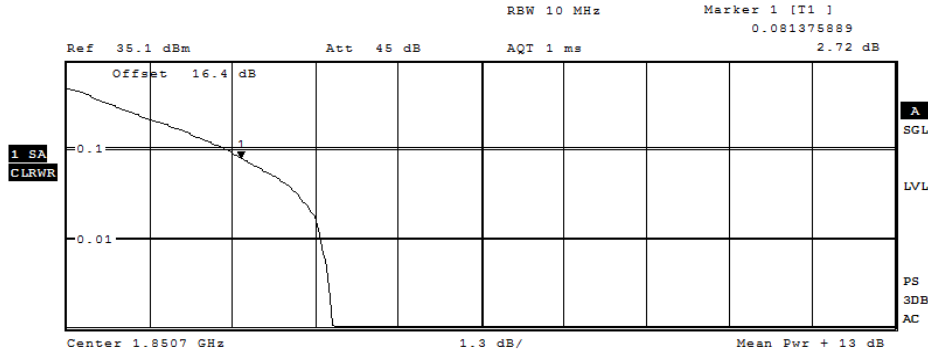
LTE-Band 12				QPSK-Modulation			16-QAM-Modulation			max. modulation QPSK	max. modulation 16-QAM	max. channel	absolute max. value
channel bandwidth	ARFCN ch. no.	ARFCN-Frequency [MHz]	Resource block allocation	Peak detektor [dBm]	RMS detektor [dBm]	PAR Faktor [dB]	Peak detektor [dBm]	RMS detektor [dBm]	PAR Faktor [dB]				
1.4 MHz	23017	699.7	1 RB low	25,38	20,94	4,44	25,31	20,40	4,91	20,94	20,40		21,32
			1 RB high	25,36	20,92	4,44	25,39	20,18	5,21				
			50% RB mid	25,56	20,80	4,76	25,57	19,86	5,71				
			100% RB	25,79	19,72	6,06	25,88	18,73	7,15				
	23095	707.5	1 RB low	25,74	20,85	4,89	25,59	20,24	5,35	21,06	20,24		
			1 RB high	25,75	21,06	4,69	25,61	19,97	5,63				
			50% RB mid	25,64	20,88	4,76	25,75	19,93	5,82				
			100% RB	26,06	19,88	6,18	26,17	18,87	7,30				
	23173	715.3	1 RB low	25,71	20,94	4,77	25,62	19,99	5,63	20,94	20,21		
			1 RB high	25,45	20,68	4,77	25,49	20,21	5,28				
			50% RB mid	25,72	20,56	5,16	25,65	19,77	5,89				
			100% RB	26,10	19,51	6,59	25,87	18,63	7,24				
3 MHz	23025	700.5	1 RB low	25,58	21,27	4,31	25,39	20,39	5,00	21,27	20,43		
			1 RB high	25,59	21,02	4,57	25,52	20,43	5,09				
			50% RB mid	24,71	19,90	4,81	24,76	19,05	5,72				
			100% RB	26,14	19,80	6,34	26,03	18,99	7,04				
	23095	707.5	1 RB low	25,51	20,93	4,57	25,58	20,20	5,38	20,99	20,35		
			1 RB high	25,56	20,99	4,57	25,58	20,35	5,23				
			50% RB mid	25,04	19,97	5,07	25,10	19,30	5,80				
			100% RB	26,02	19,92	6,10	25,65	18,91	6,74				
	23165	714.5	1 RB low	25,46	20,72	4,74	25,46	20,06	5,40	20,72	20,10		
			1 RB high	25,27	20,58	4,69	25,31	20,10	5,21				
			50% RB mid	24,88	19,70	5,18	25,65	19,70	5,95				
			100% RB	25,49	19,64	5,86	25,59	18,64	6,95				
5 MHz	23035	701.5	1 RB low	25,47	21,21	4,25	25,32	20,57	4,75	21,21	20,57		
			1 RB high	25,63	20,94	4,69	25,64	20,36	5,28				
			50% RB mid	25,13	19,85	5,28	25,65	20,32	5,33				
			100% RB	25,43	19,44	5,99	26,66	19,53	7,14				
	23095	707.5	1 RB low	25,56	20,88	4,68	26,35	21,02	5,32	21,10	21,12		
			1 RB high	25,64	21,10	4,54	26,24	21,10	5,14				
			50% RB mid	24,97	19,75	5,22	26,43	21,12	5,31				
			100% RB	26,00	19,78	6,22	27,04	19,50	7,54				
	23155	713.5	1 RB low	25,43	20,71	4,72	26,09	20,79	5,30	20,71	20,79		
			1 RB high	25,28	20,66	4,63	25,70	20,50	5,20				
			50% RB mid	25,12	19,64	5,48	25,80	20,51	5,29				
			100% RB	25,89	19,70	6,19	26,54	19,63	6,91				
10 MHz	23060	704	1 RB low	25,49	21,14	4,36	26,26	21,24	5,02	21,14	21,24		
			1 RB high	25,73	21,04	4,68	25,95	20,61	5,34				
			50% RB mid	25,56	19,95	5,62	25,72	19,26	6,45				
			100% RB	25,52	19,77	5,75	26,25	19,01	7,24				
	23095	707.5	1 RB low	25,89	21,32	4,56	26,04	20,67	5,37	21,32	20,67		
			1 RB high	25,71	21,30	4,41	26,13	20,67	5,46				
			50% RB mid	25,30	19,84	5,47	25,58	19,16	6,43				
			100% RB	26,11	19,83	6,28	25,98	19,14	6,84				
	23130	711	1 RB low	25,64	20,45	5,19	25,64	20,40	5,23	20,92	20,40		
			1 RB high	25,37	20,92	4,45	25,67	20,39	5,27				
			50% RB mid	25,35	19,83	5,52	25,38	19,01	6,37				
			100% RB	26,64	19,71	6,93	26,06	18,93	7,13				

1.2. PAPR-Value (CCDF plots)

1.2.1. LTE Band 2

Worst-Case of each maximum Peak power value was tested with the CCDF method

1.2.1.1. 1.4MHz signal bandwidth

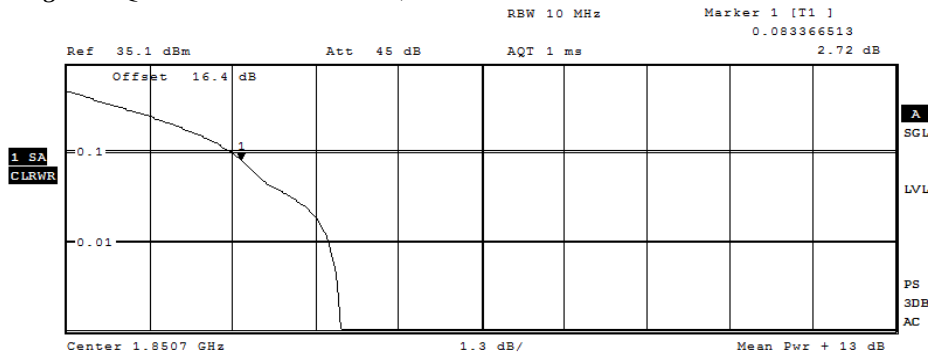


Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	20.80 dBm
Peak	25.05 dBm
Crest	4.25 dB
10 %	2.52 dB
1 %	4.00 dB
.1 %	4.19 dB
.01 %	4.25 dB

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Diagram: QPSK 1.4 MHz CH18607, 50% RB

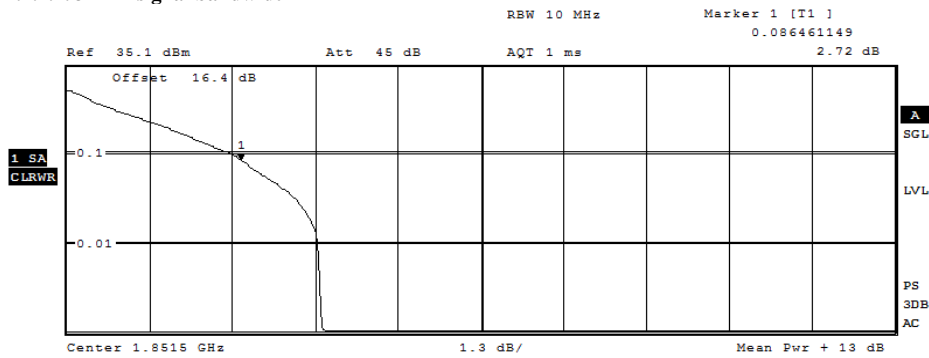


Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	20.38 dBm
Peak	24.77 dBm
Crest	4.39 dB
10 %	2.58 dB
1 %	4.10 dB
.1 %	4.31 dB
.01 %	4.38 dB

Diagram: 16QAM 1.4 MHz CH18607, 1RB low

1.2.1.2. 3MHz signal bandwidth

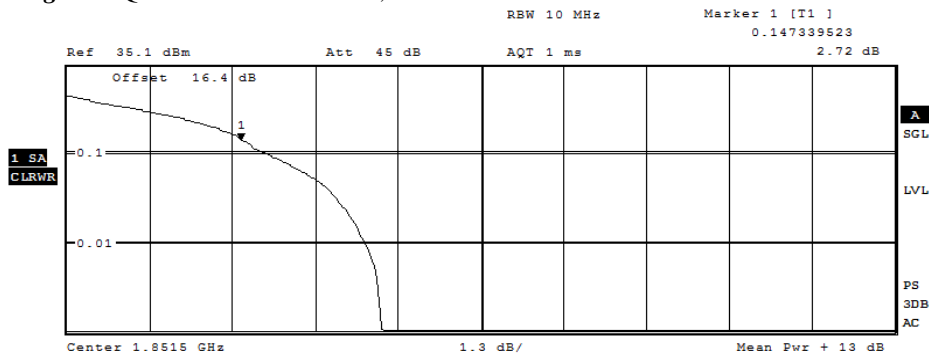


Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	21.07 dBm
Peak	25.12 dBm
Crest	4.05 dB
10 %	2.58 dB
1 %	3.94 dB
.1 %	4.02 dB
.01 %	4.06 dB

Date: 10.NOV.2017 13:38:38

Diagram: QPSK 3 MHz CH18615,1 RB Low



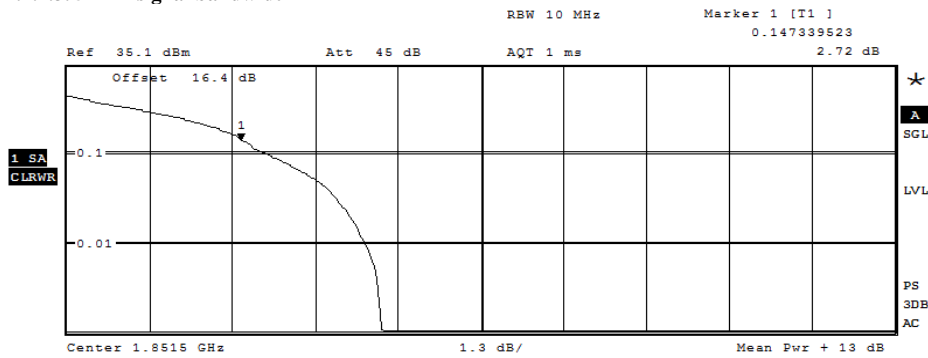
Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	19.86 dBm
Peak	24.91 dBm
Crest	5.05 dB
10 %	3.15 dB
1 %	4.69 dB
.1 %	4.96 dB
.01 %	5.04 dB

Date: 10.NOV.2017 13:39:45

Diagram: 16QAM 3 MHz CH18615, 1RB low

1.2.1.3. 5MHz signal bandwidth

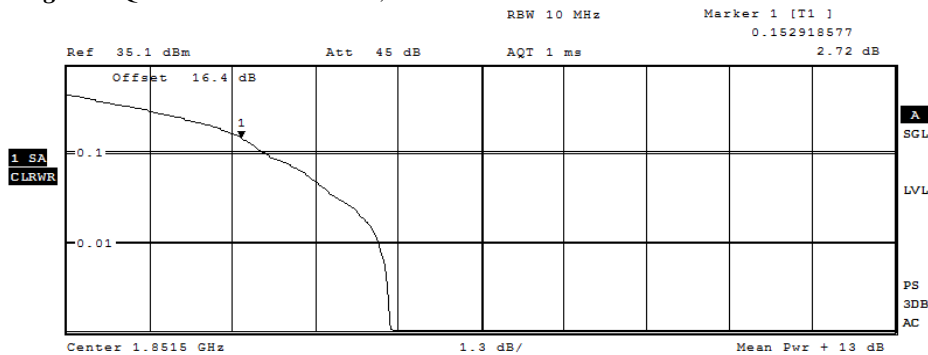


Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	19.86 dBm
Peak	24.91 dBm
Crest	5.05 dB
10 %	3.15 dB
1 %	4.69 dB
.1 %	4.96 dB
.01 %	5.04 dB

Date: 10.NOV.2017 13:41:17

Diagram: QPSK 5 MHz CH18625, 1RB low



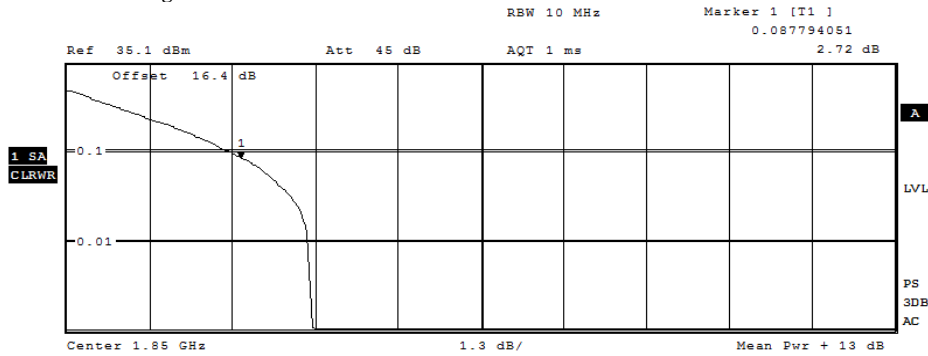
Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	19.70 dBm
Peak	24.84 dBm
Crest	5.14 dB
10 %	3.13 dB
1 %	4.90 dB
.1 %	5.10 dB
.01 %	5.15 dB

Date: 10.NOV.2017 13:43:44

Diagram: 16QAM 5 MHz CH18625, 1RB low

1.2.1.4. 10MHz signal bandwidth

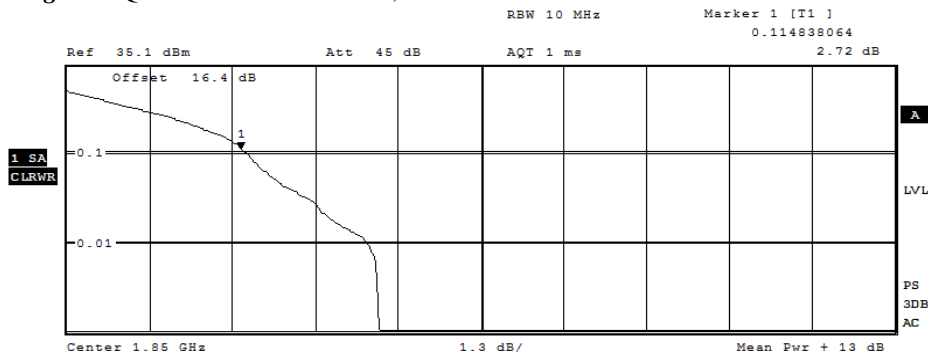


Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	21.31 dBm
Peak	25.19 dBm
Crest	3.88 dB
10 %	2.56 dB
1 %	3.77 dB
.1 %	3.88 dB
.01 %	3.90 dB

Date: 10.NOV.2017 13:49:56

Diagram: QPSK 10 MHz CH18650, 1RB low



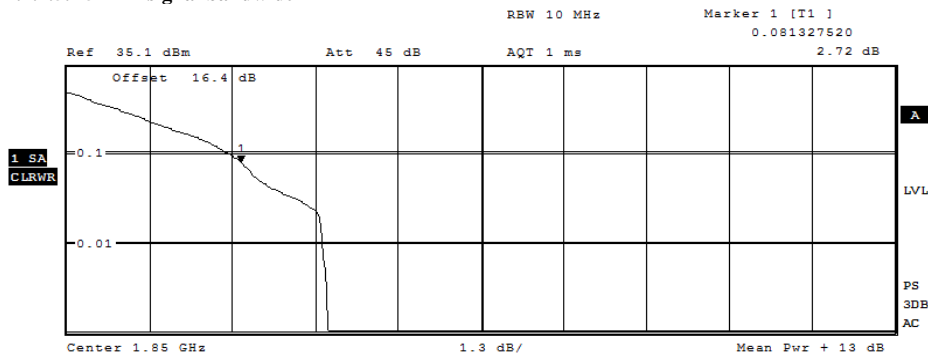
Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	20.07 dBm
Peak	25.04 dBm
Crest	4.98 dB
10 %	2.81 dB
1 %	4.71 dB
.1 %	4.92 dB
.01 %	4.96 dB

Date: 10.NOV.2017 13:51:10

Diagram: 16QAM 10 MHz CH18650, 1RB low

1.2.1.5. 15MHz signal bandwidth

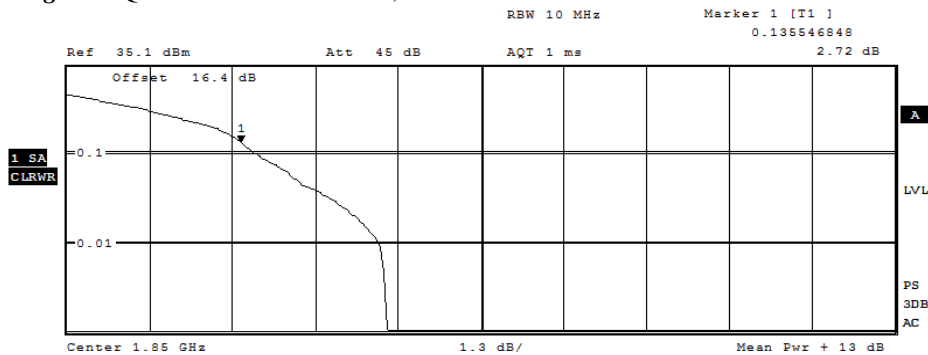


Complementary Cumulative Distribution Function
NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	20.73 dBm
Peak	24.90 dBm
Crest	4.18 dB
10 %	2.54 dB
1 %	4.02 dB
.1 %	4.10 dB
.01 %	4.13 dB

Date: 10.NOV.2017 13:57:52

Diagram: QPSK 15 MHz CH18675, 1RB low



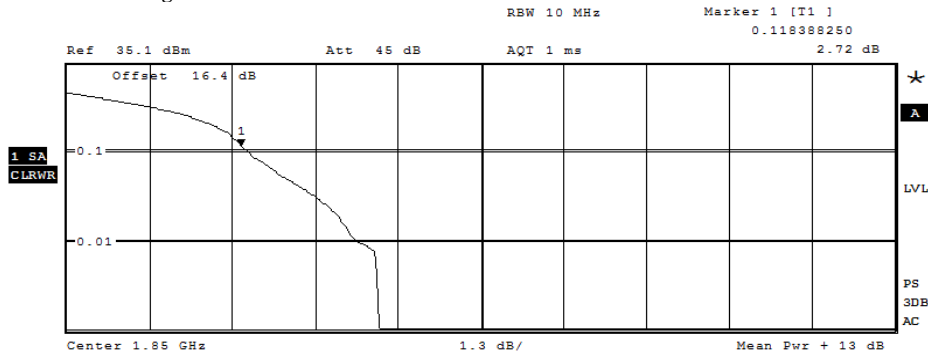
Complementary Cumulative Distribution Function
NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	19.77 dBm
Peak	24.83 dBm
Crest	5.07 dB
10 %	2.96 dB
1 %	4.90 dB
.1 %	5.04 dB
.01 %	5.08 dB

Date: 10.NOV.2017 13:58:35

Diagram: 16QAM 15 MHz CH18675, 1RB low

1.2.1.6. 20MHz signal bandwidth

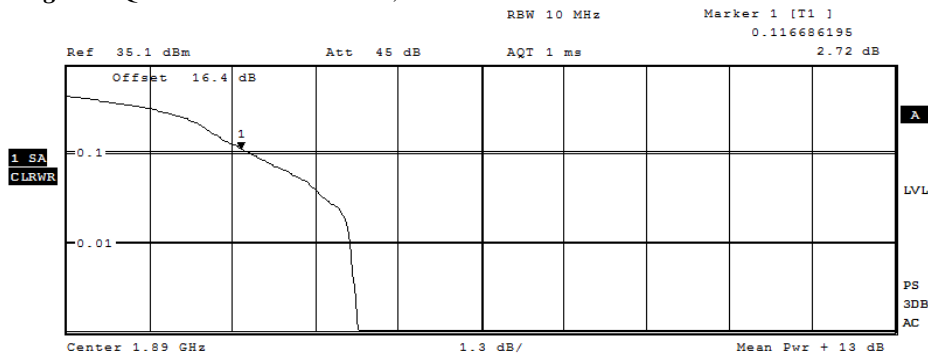


Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	19.94 dBm
Peak	24.90 dBm
Crest	4.97 dB
10 %	2.83 dB
1 %	4.54 dB
.1 %	4.92 dB
.01 %	4.98 dB

Date: 10.NOV.2017 13:59:44

Diagram: QPSK 20 MHz CH18700, 1RB low



Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	20.57 dBm
Peak	25.20 dBm
Crest	4.64 dB
10 %	2.90 dB
1 %	4.46 dB
.1 %	4.58 dB
.01 %	4.65 dB

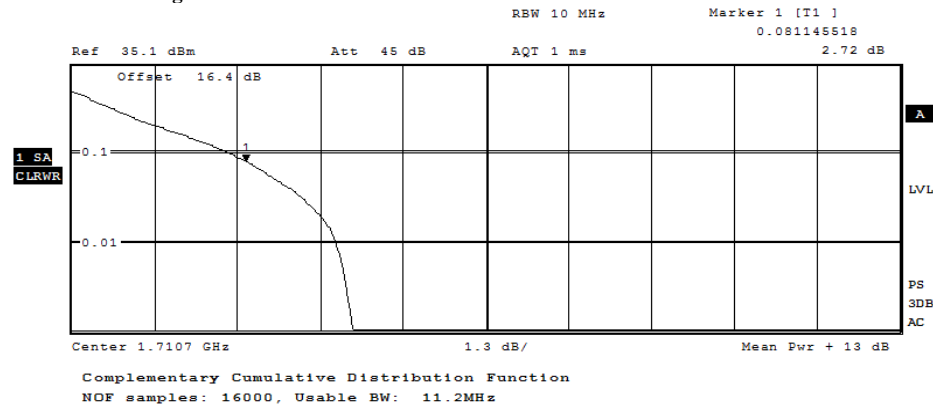
Date: 10.NOV.2017 14:01:40

Diagram: 16QAM 20 MHz CH18900, 1RB high

1.2.2. LTE Band 4

Worst-Case of each maximum Peak power value was tested with the CCDF method

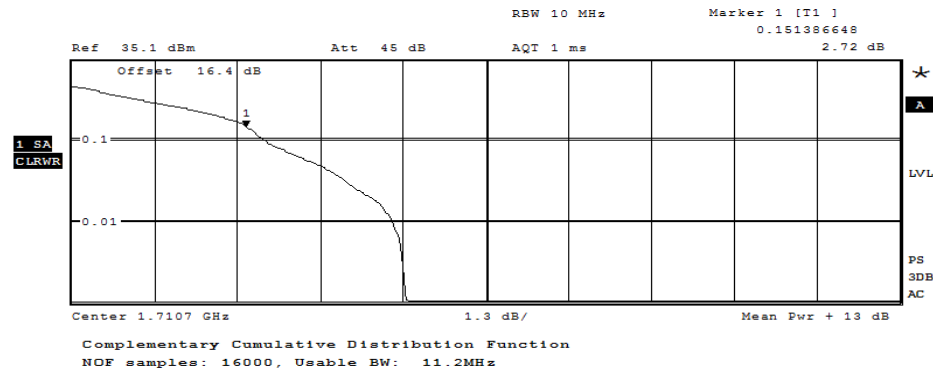
1.2.2.1. 1.4MHz signal bandwidth



Trace 1	
Mean	21.56 dBm
Peak	26.06 dBm
Crest	4.50 dB
10 %	2.46 dB
1 %	4.15 dB
.1 %	4.42 dB
.01 %	4.50 dB

Date: 13.NOV.2017 11:05:32

Diagram: QPSK 1.4 MHz CH19957, 50% RB

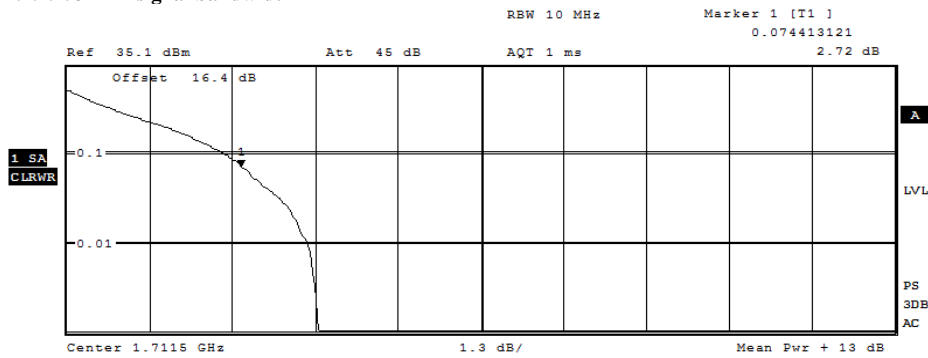


Trace 1	
Mean	20.72 dBm
Peak	26.06 dBm
Crest	5.34 dB
10 %	3.02 dB
1 %	5.04 dB
.1 %	5.25 dB
.01 %	5.33 dB

Date: 13.NOV.2017 11:06:59

Diagram: 16QAM 1.4 MHz CH19957, 1RB low

1.2.2.2. 3MHz signal bandwidth

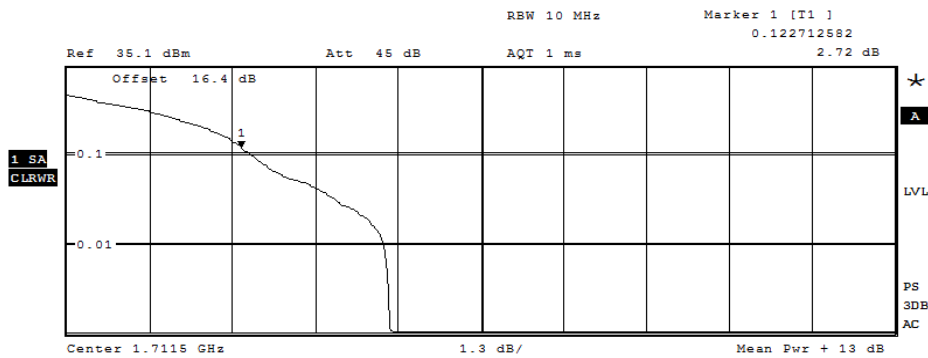


Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	22.03 dBm
Peak	26.06 dBm
Crest	4.04 dB
10 %	2.48 dB
1 %	3.77 dB
.1 %	3.96 dB
.01 %	3.98 dB

Date: 13.NOV.2017 11:08:45

Diagram: QPSK 3 MHz CH19965, 1 RB low



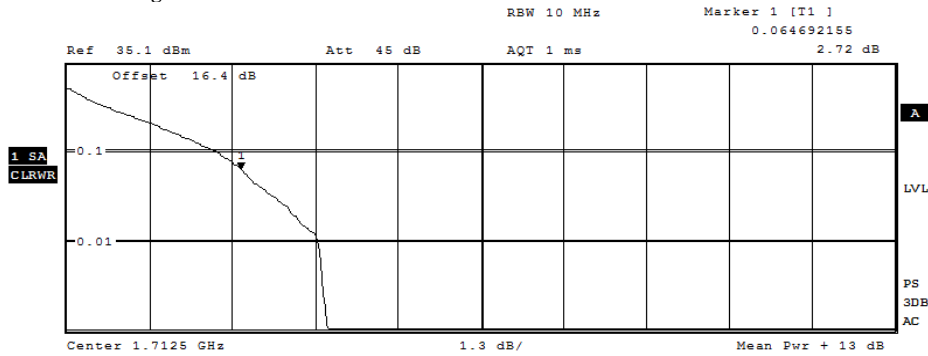
Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	20.78 dBm
Peak	25.92 dBm
Crest	5.14 dB
10 %	2.90 dB
1 %	4.98 dB
.1 %	5.10 dB
.01 %	5.15 dB

Date: 13.NOV.2017 11:10:02

Diagram: 16QAM 3 MHz CH19965, 1 RB low

1.2.2.3. 5MHz signal bandwidth

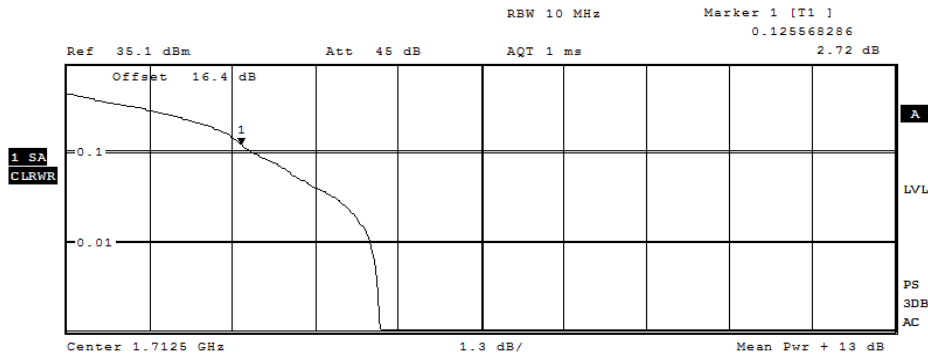


Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	21.83 dBm
Peak	26.00 dBm
Crest	4.17 dB
10 %	2.35 dB
1 %	3.94 dB
.1 %	4.08 dB
.01 %	4.17 dB

Date: 13.NOV.2017 11:11:24

Diagram: QPSK 5 MHz CH19975, 1 RB high



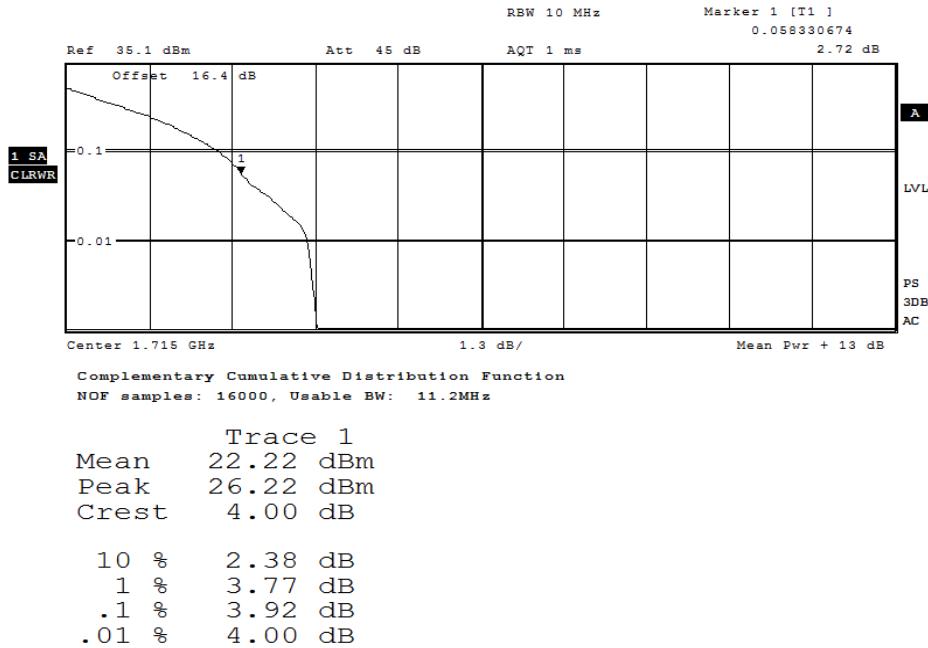
Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	20.94 dBm
Peak	25.93 dBm
Crest	4.98 dB
10 %	2.92 dB
1 %	4.77 dB
.1 %	4.94 dB
.01 %	5.00 dB

Date: 13.NOV.2017 11:12:44

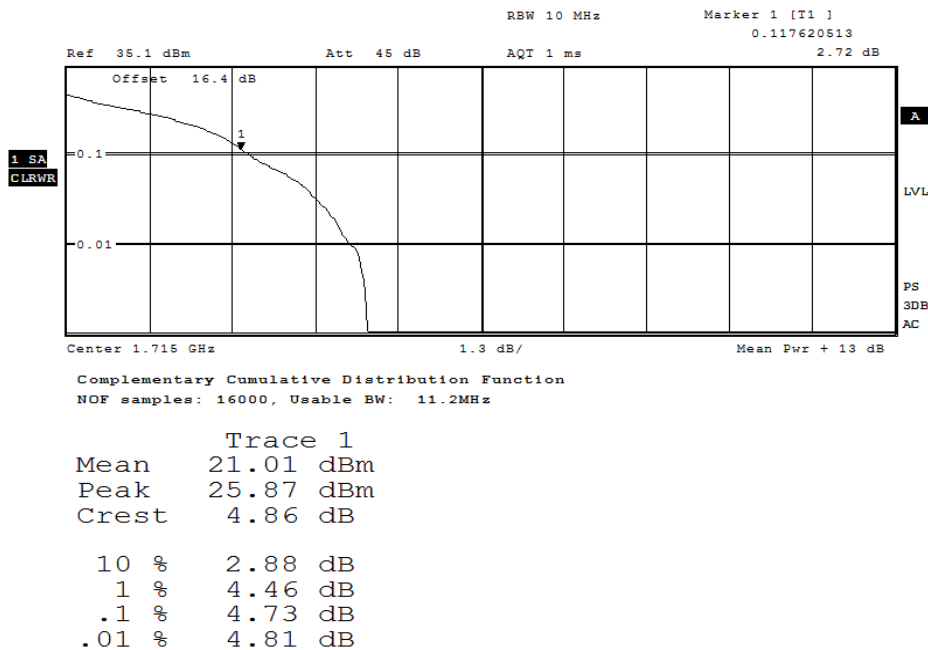
Diagram: 16QAM 5 MHz CH19975, 1 RB low

1.2.2.4. 10MHz signal bandwidth 14,21



Date: 13.NOV.2017 11:17:12

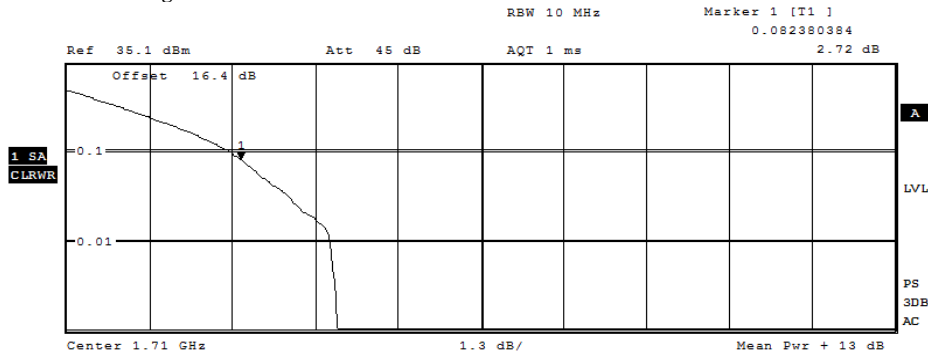
Diagram: QPSK 10 MHz CH20000, 1 RB high



Date: 13.NOV.2017 11:18:22

Diagram: 16QAM 10 MHz CH20000, 1 RB low

1.2.2.5. 15MHz signal bandwidth

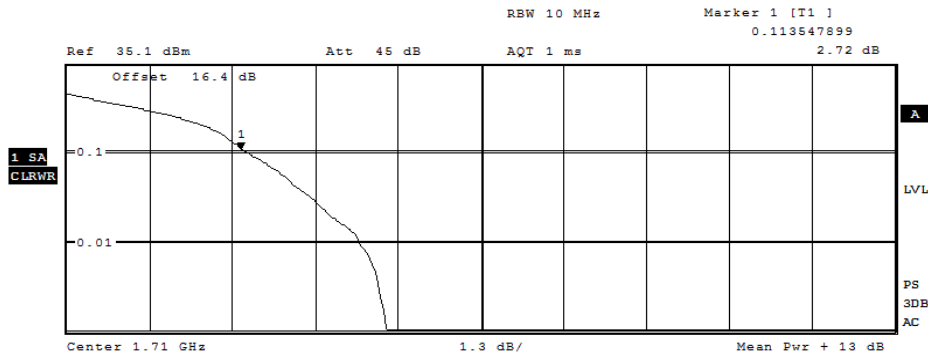


Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	21.17 dBm
Peak	25.42 dBm
Crest	4.26 dB
10 %	2.56 dB
1 %	4.15 dB
.1 %	4.25 dB
.01 %	4.27 dB

Date: 13.NOV.2017 11:20:57

Diagram: QPSK 15 MHz CH20025, 1 RB low



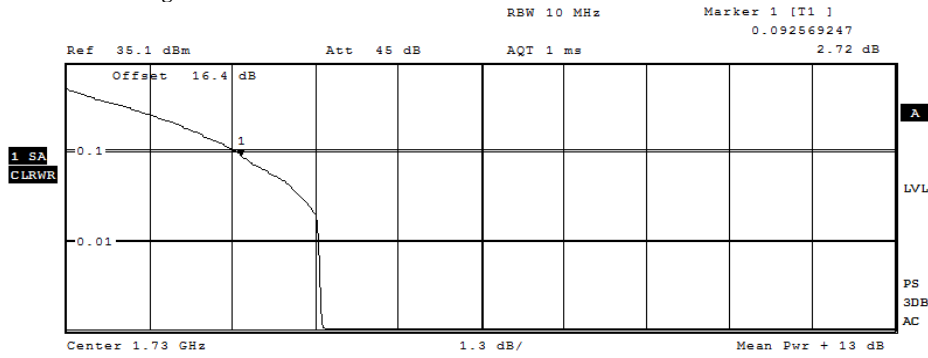
Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	20.23 dBm
Peak	25.35 dBm
Crest	5.12 dB
10 %	2.83 dB
1 %	4.60 dB
.1 %	5.02 dB
.01 %	5.10 dB

Date: 13.NOV.2017 11:21:45

Diagram: 16QAM 15 MHz CH20025, 1 RB low

1.2.2.6. 20MHz signal bandwidth

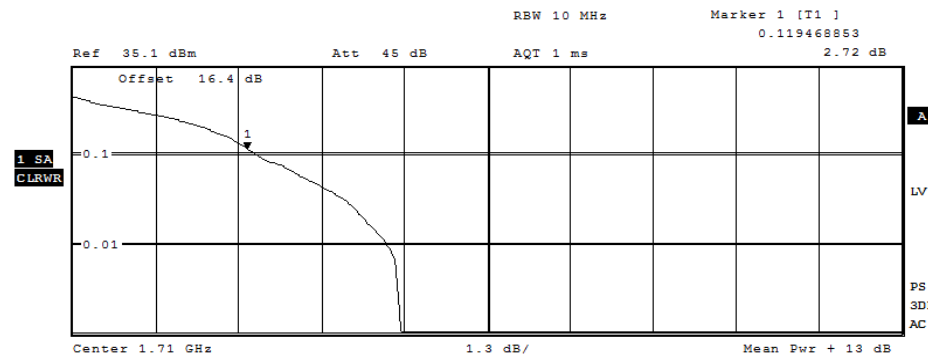


Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	21.24 dBm
Peak	25.29 dBm
Crest	4.05 dB
10 %	2.67 dB
1 %	3.96 dB
.1 %	4.02 dB
.01 %	4.06 dB

Date: 13.NOV.2017 11:25:38

Diagram: QPSK 20 MHz CH20050, 1 RB high



Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	20.08 dBm
Peak	25.28 dBm
Crest	5.20 dB
10 %	2.88 dB
1 %	4.94 dB
.1 %	5.15 dB
.01 %	5.21 dB

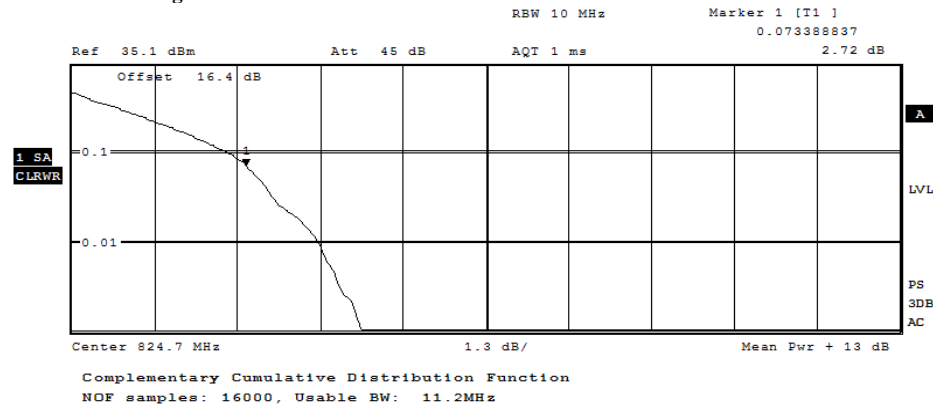
Date: 13.NOV.2017 11:24:37

Diagram: 16QAM 20 MHz CH20050, 1 RB low

1.2.3. LTE Band 5

Worst-Case of each maximum Peak power value was tested with the CCDF method

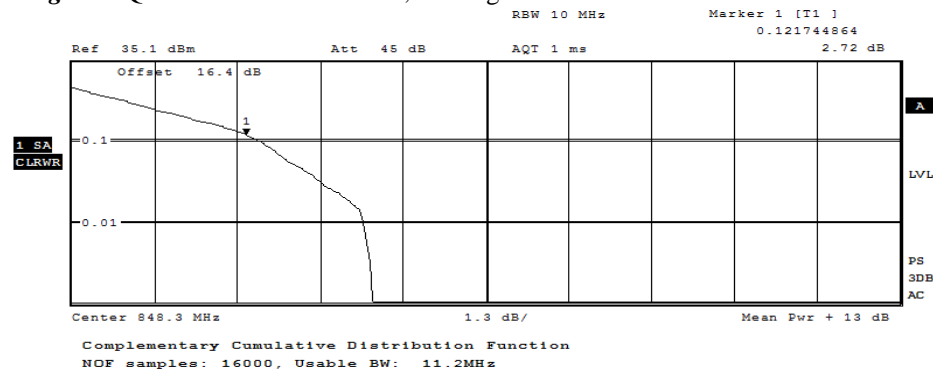
1.2.3.1. 1.4MHz signal bandwidth



Trace 1	
Mean	21.15 dBm
Peak	25.77 dBm
Crest	4.62 dB
10 %	2.46 dB
1 %	3.88 dB
.1 %	4.54 dB
.01 %	4.63 dB

Date: 13.NOV.2017 11:28:05

Diagram: QPSK 1.4 MHz CH20407,1RB high

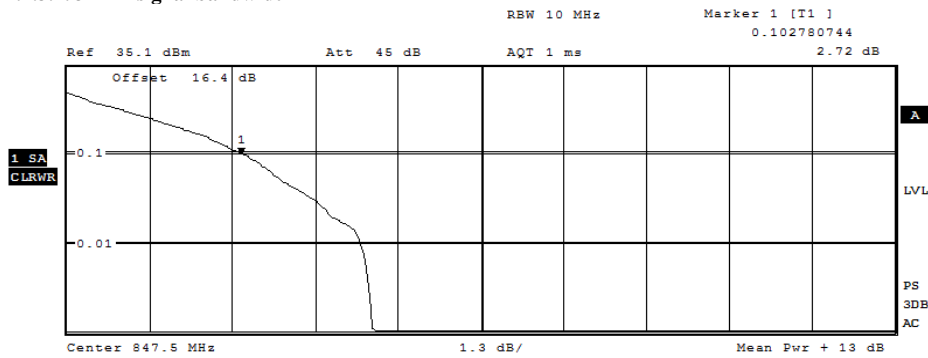


Trace 1	
Mean	21.31 dBm
Peak	26.11 dBm
Crest	4.80 dB
10 %	2.94 dB
1 %	4.58 dB
.1 %	4.73 dB
.01 %	4.79 dB

Date: 13.NOV.2017 11:41:43

Diagram: 16QAM 1.4 MHz CH20643,1RB low

1.2.3.2. 3MHz signal bandwidth

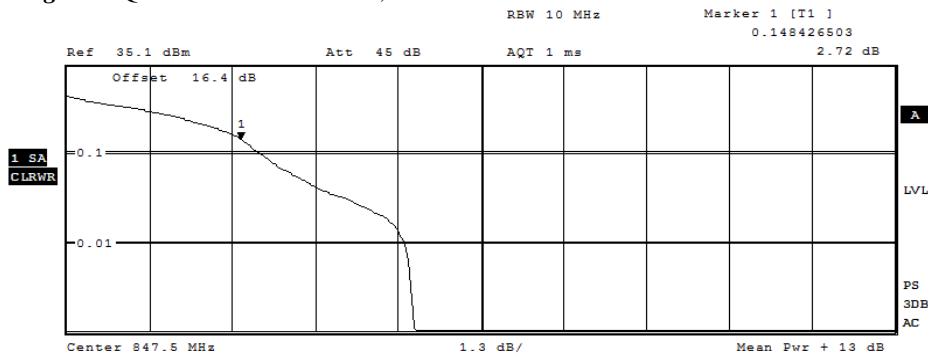


Center 847.5 MHz 1.3 dB/ Mean Pwr + 13 dB
 Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	21.16 dBm
Peak	26.04 dBm
Crest	4.88 dB
10 %	2.77 dB
1 %	4.63 dB
.1 %	4.81 dB
.01 %	4.88 dB

Date: 13.NOV.2017 11:30:02

Diagram: QPSK 3 MHz CH20635,1RB low



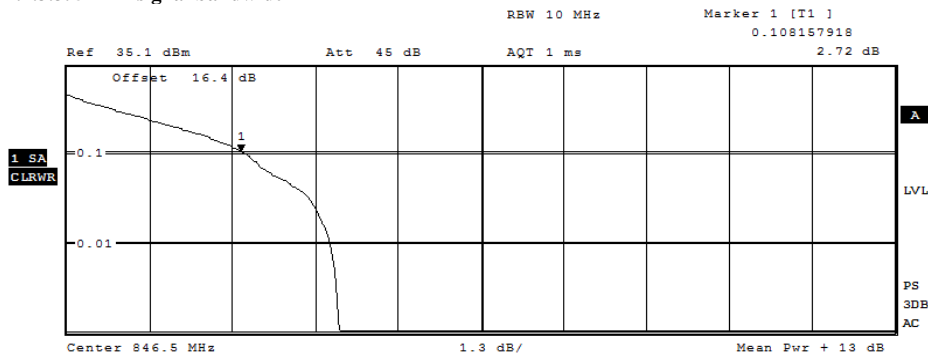
Center 847.5 MHz 1.3 dB/ Mean Pwr + 13 dB
 Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	20.32 dBm
Peak	25.82 dBm
Crest	5.50 dB
10 %	3.04 dB
1 %	5.31 dB
.1 %	5.46 dB
.01 %	5.52 dB

Date: 13.NOV.2017 11:39:53

Diagram: 16QAM 3 MHz CH20635,1RB high

1.2.3.3. 5MHz signal bandwidth

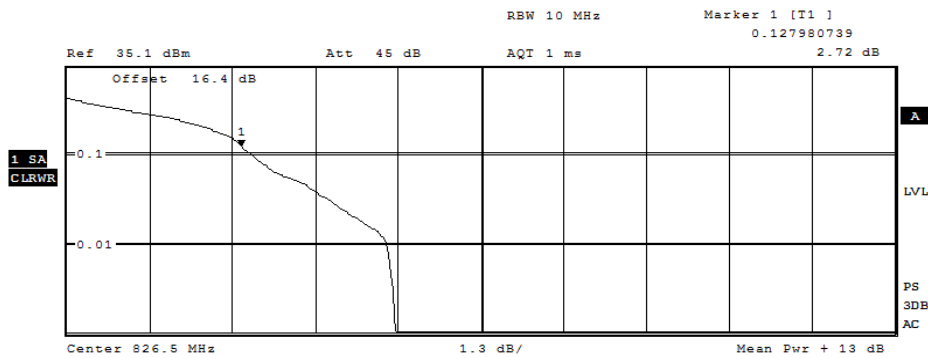


Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	21.53 dBm
Peak	25.89 dBm
Crest	4.36 dB
10 %	2.81 dB
1 %	4.15 dB
.1 %	4.27 dB
.01 %	4.31 dB

Date: 13.NOV.2017 11:32:10

Diagram: QPSK 5MHz CH20625,1RB high



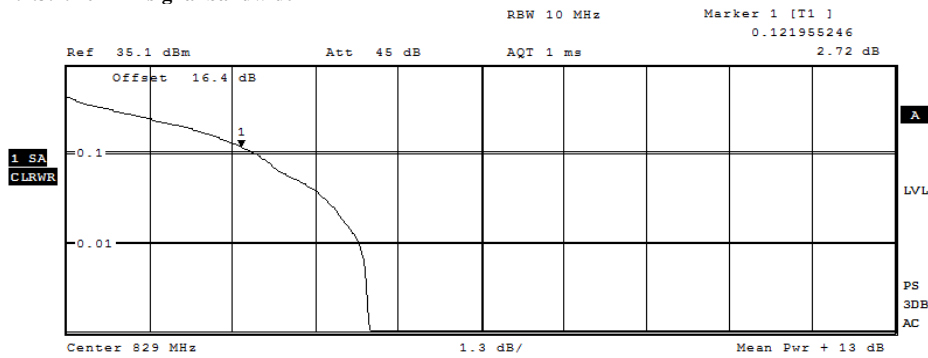
Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	20.39 dBm
Peak	25.62 dBm
Crest	5.22 dB
10 %	2.90 dB
1 %	5.02 dB
.1 %	5.15 dB
.01 %	5.21 dB

Date: 13.NOV.2017 11:37:54

Diagram: 16QAM 5MHz CH20425,1RB low

1.2.3.4. 10MHz signal bandwidth

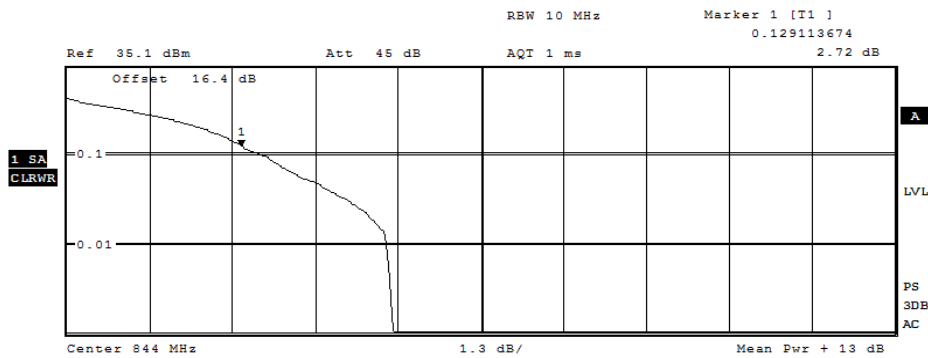


Complementary Cumulative Distribution Function
NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	21.80 dBm
Peak	26.66 dBm
Crest	4.86 dB
10 %	2.96 dB
1 %	4.58 dB
.1 %	4.77 dB
.01 %	4.81 dB

Date: 13.NOV.2017 11:33:59

Diagram: QPSK 10MHz CH20450,1RB high



Complementary Cumulative Distribution Function
NOF samples: 16000, Usable BW: 11.2MHz

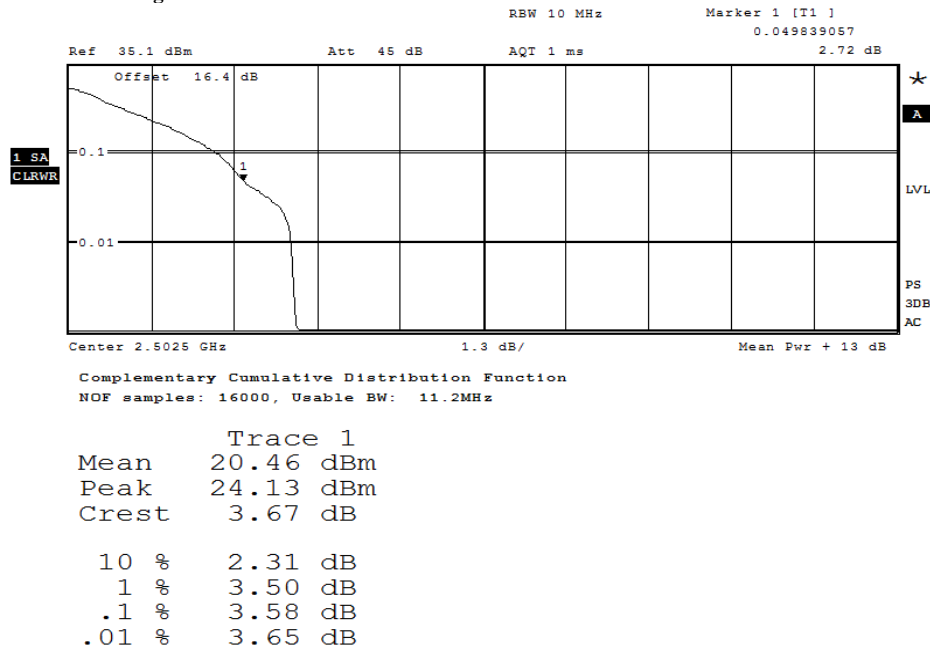
Trace 1	
Mean	19.92 dBm
Peak	25.11 dBm
Crest	5.19 dB
10 %	3.06 dB
1 %	5.02 dB
.1 %	5.13 dB
.01 %	5.19 dB

Date: 13.NOV.2017 11:36:07

Diagram: 16QAM 10MHz CH20600,1RB low

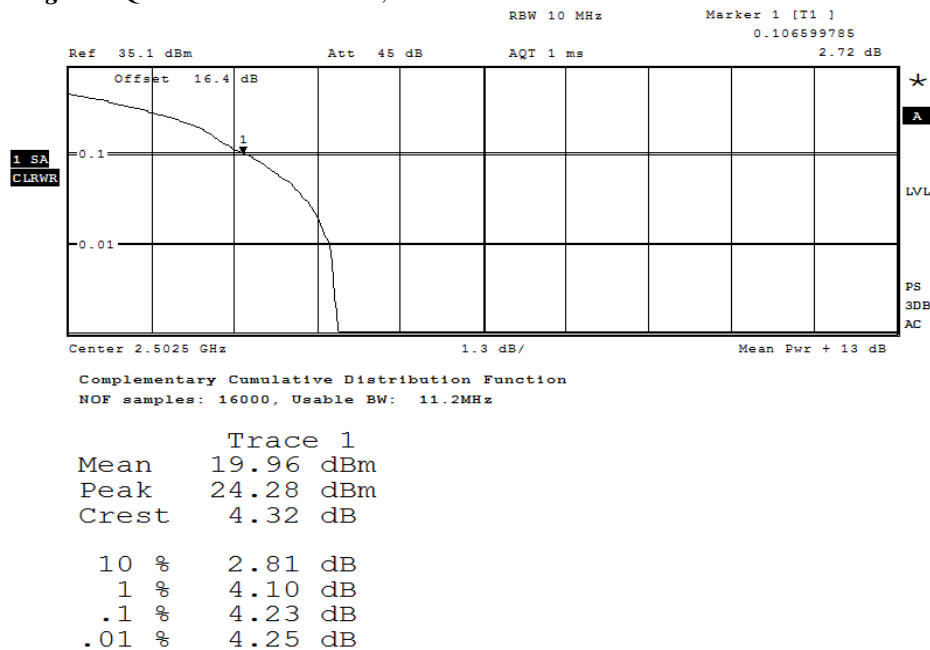
1.2.4. LTE Band 7

1.2.4.1. 5MHz signal bandwidth



Date: 13.NOV.2017 13:01:13

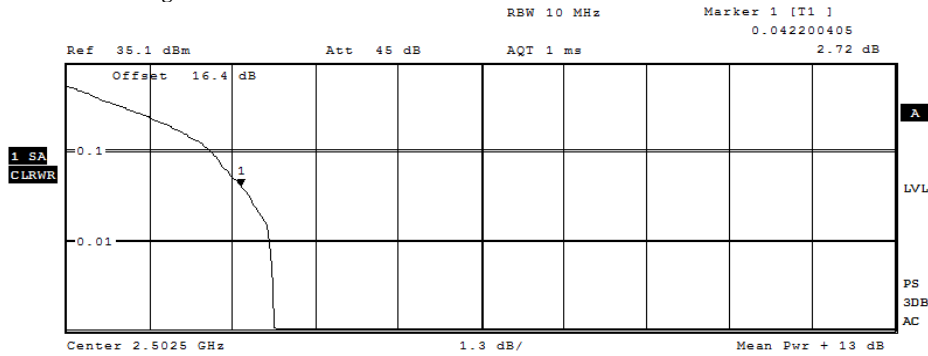
Diagram: QPSK 5 MHz CH20775, 1RB low



Date: 13.NOV.2017 12:59:52

Diagram: 16QAM 5 MHz CH20775, 1RB low

1.2.4.2. 10MHz signal bandwidth

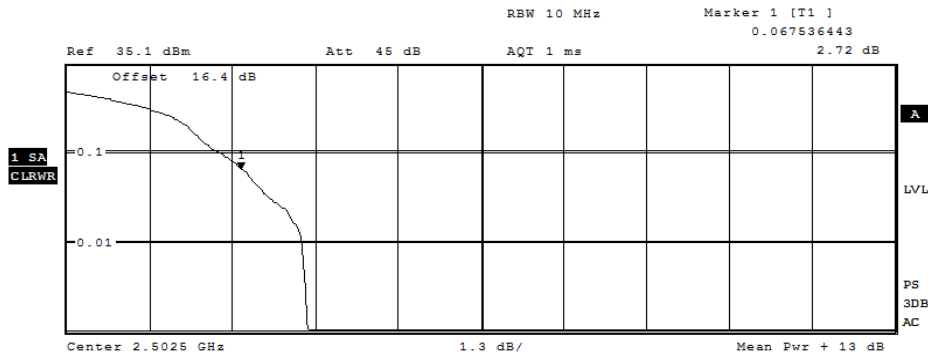


Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	21.00 dBm
Peak	24.35 dBm
Crest	3.34 dB
10 %	2.27 dB
1 %	3.19 dB
.1 %	3.27 dB
.01 %	3.31 dB

Date: 13.NOV.2017 13:02:17

Diagram: QPSK 10 MHz CH20800, 1RB low



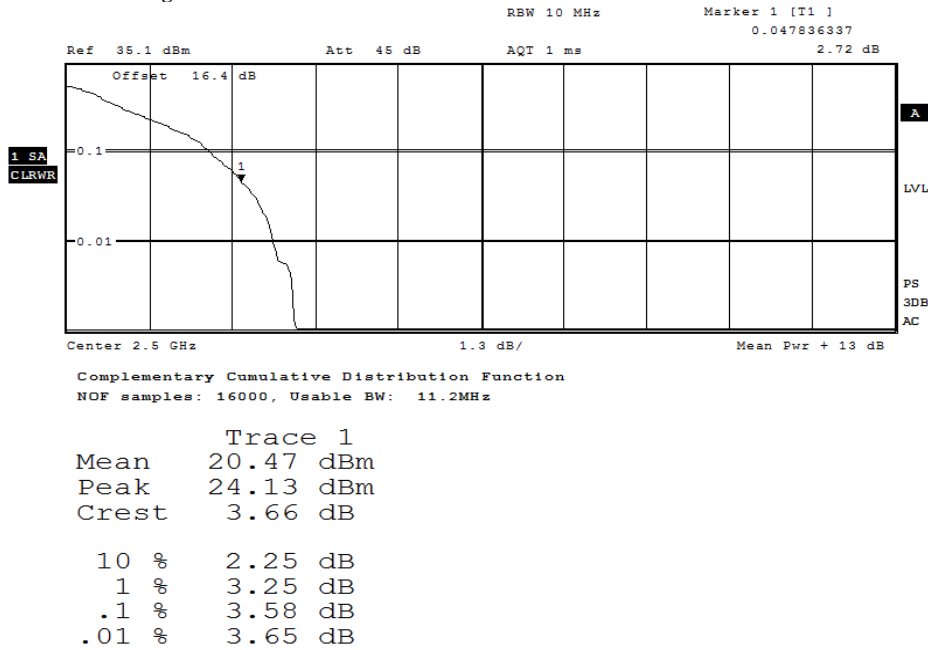
Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	20.31 dBm
Peak	24.13 dBm
Crest	3.83 dB
10 %	2.40 dB
1 %	3.69 dB
.1 %	3.79 dB
.01 %	3.83 dB

Date: 13.NOV.2017 13:03:03

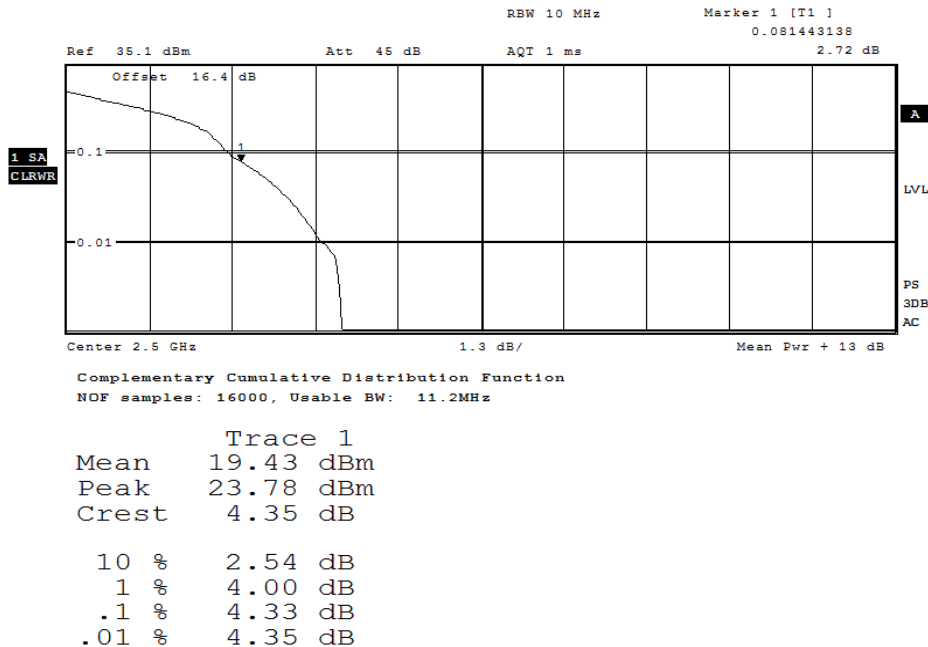
Diagram: 16QAM 10 MHz CH20800, 1RB low

1.2.4.3. 15MHz signal bandwidth



Date: 13.NOV.2017 13:04:30

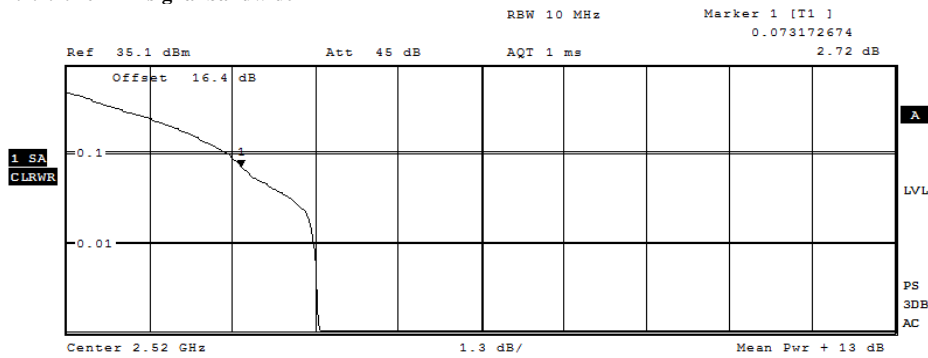
Diagram: QPSK 15 MHz CH20825, 1RB low



Date: 13.NOV.2017 13:05:23

Diagram: 16QAM 15 MHz CH20825, 1RB low

1.2.4.4. 20MHz signal bandwidth

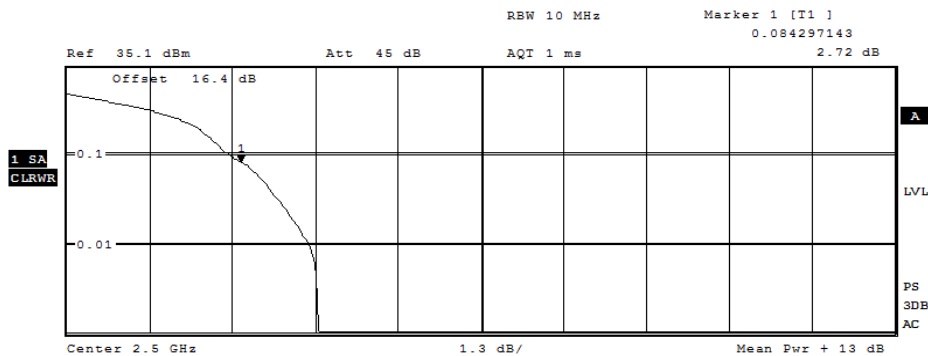


Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	20.23 dBm
Peak	24.23 dBm
Crest	4.00 dB
10 %	2.52 dB
1 %	3.88 dB
.1 %	3.98 dB
.01 %	4.02 dB

Date: 13.NOV.2017 13:09:18

Diagram: QPSK 20 MHz CH20850, 1RB low



Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

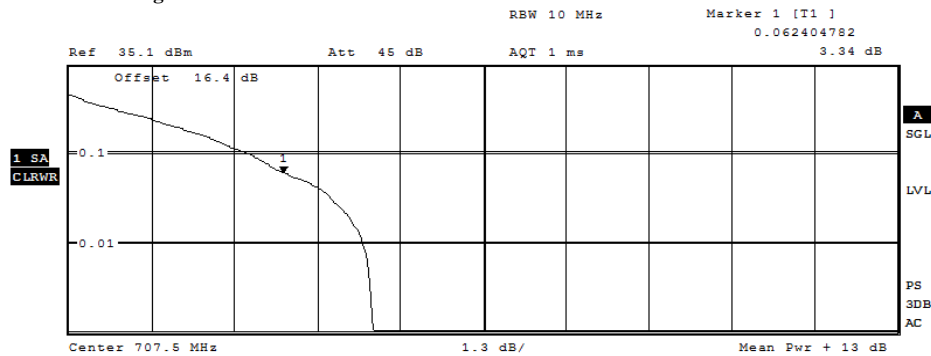
Trace 1	
Mean	20.18 dBm
Peak	24.20 dBm
Crest	4.02 dB
10 %	2.56 dB
1 %	3.81 dB
.1 %	3.96 dB
.01 %	4.02 dB

Date: 13.NOV.2017 13:06:35

Diagram: 16QAM 20 MHz CH20850, 1RB low

1.2.5. LTE Band 12

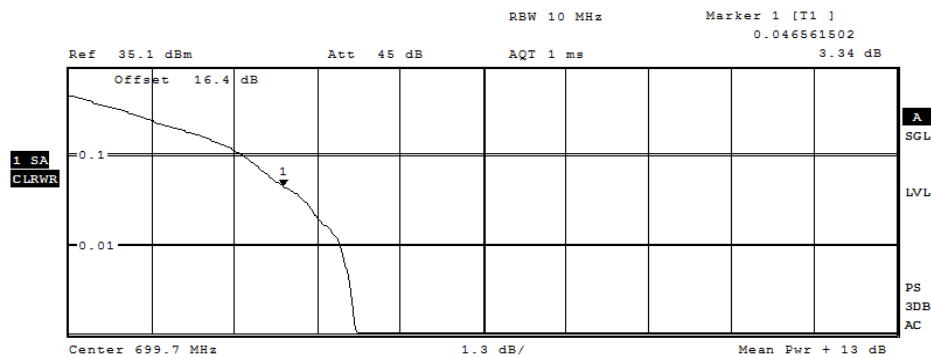
1.2.5.1. 5MHz signal bandwidth



Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	21.28 dBm
Peak	26.14 dBm
Crest	4.86 dB
10 %	2.81 dB
1 %	4.63 dB
.1 %	4.77 dB
.01 %	4.85 dB

Diagram: QPSK 1.4 MHz CH23095, 1 RB high

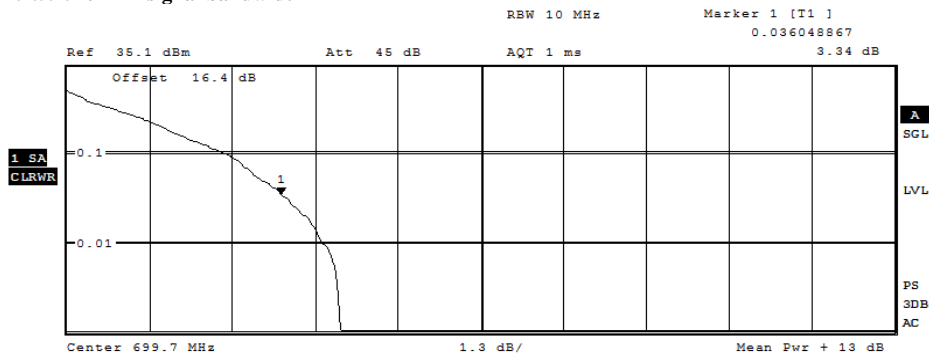


Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	21.16 dBm
Peak	25.81 dBm
Crest	4.64 dB
10 %	2.73 dB
1 %	4.27 dB
.1 %	4.52 dB
.01 %	4.60 dB

Diagram: 16QAM 1.4 MHz CH23017, 1 RB low

1.2.5.2. 10MHz signal bandwidth

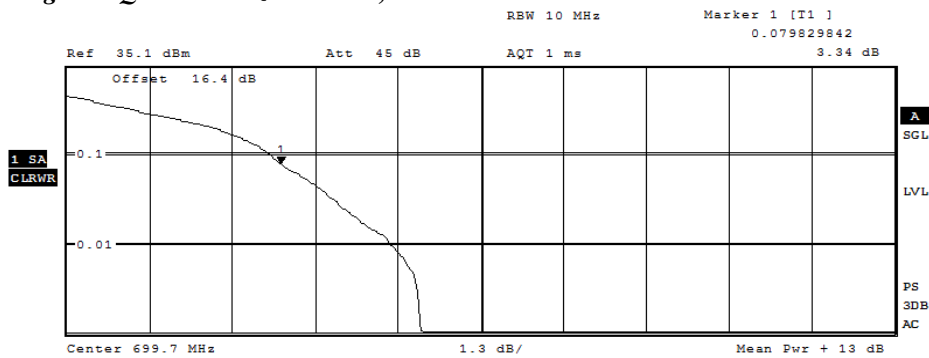


Complementary Cumulative Distribution Function
NOF samples: 16000, Usable BW: 11.2MHz

Trace 1

Mean	21.22 dBm
Peak	25.59 dBm
Crest	4.37 dB
10 %	2.50 dB
1 %	4.02 dB
.1 %	4.31 dB
.01 %	4.38 dB

Diagram: QPSK 3 MHz CH23025, 1 RB low



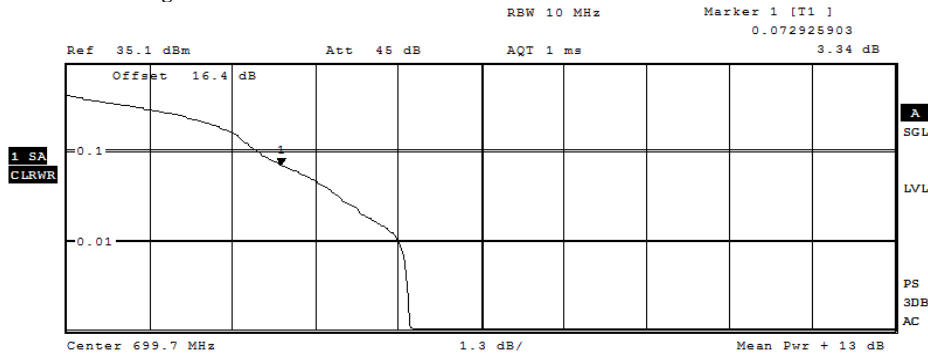
Complementary Cumulative Distribution Function
NOF samples: 16000, Usable BW: 11.2MHz

Trace 1

Mean	19.95 dBm
Peak	25.59 dBm
Crest	5.64 dB
10 %	3.21 dB
1 %	5.08 dB
.1 %	5.56 dB
.01 %	5.65 dB

Diagram: 16QAM 3 MHz CH23025, 1 RB low

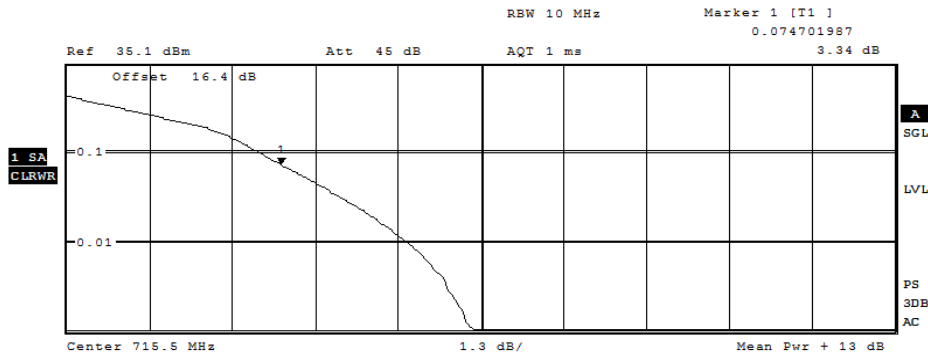
1.2.5.3. 15MHz signal bandwidth



Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	20.76 dBm
Peak	26.23 dBm
Crest	5.47 dB
10 %	3.00 dB
1 %	5.21 dB
.1 %	5.40 dB
.01 %	5.46 dB

Diagram: QPSK 5 MHz CH23035, 1 RB high

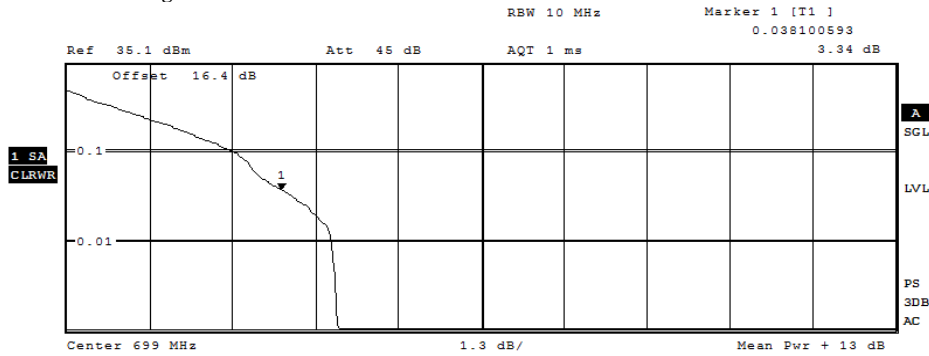


Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	19.24 dBm
Peak	26.57 dBm
Crest	7.32 dB
10 %	3.02 dB
1 %	5.33 dB
.1 %	6.35 dB
.01 %	6.94 dB

Diagram: 16QAM 5 MHz CH23155, 100% RB

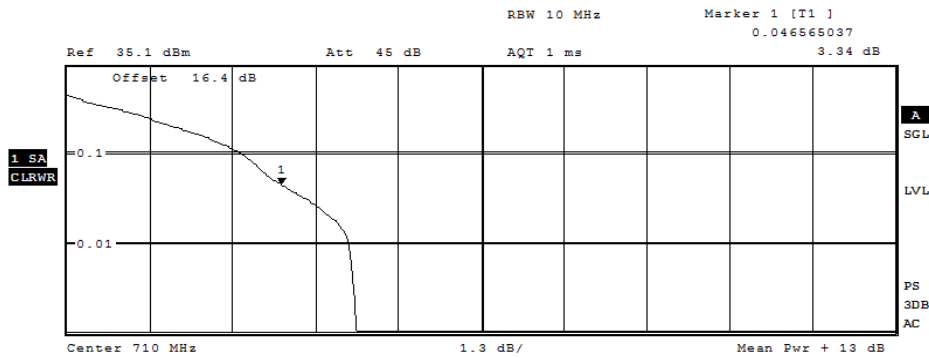
1.2.5.4. 20MHz signal bandwidth



Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	21.17 dBm
Peak	25.45 dBm
Crest	4.29 dB
10 %	2.60 dB
1 %	4.17 dB
.1 %	4.25 dB
.01 %	4.29 dB

Diagram: QPSK 10 MHz CH23060, 1 RB low



Complementary Cumulative Distribution Function
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1	
Mean	21.39 dBm
Peak	26.00 dBm
Crest	4.61 dB
10 %	2.75 dB
1 %	4.42 dB
.1 %	4.54 dB
.01 %	4.56 dB

Diagram: 16QAM 10 MHz CH23060, 1 RB high

1.3. Spurious emissions radiated (LTE Band 2)

1.3.1. Magnetic field strength radiated (LTE Band 2)

2.01a_RMC_LTE_FDD2_BW20_RB1low_CH18700_Laying

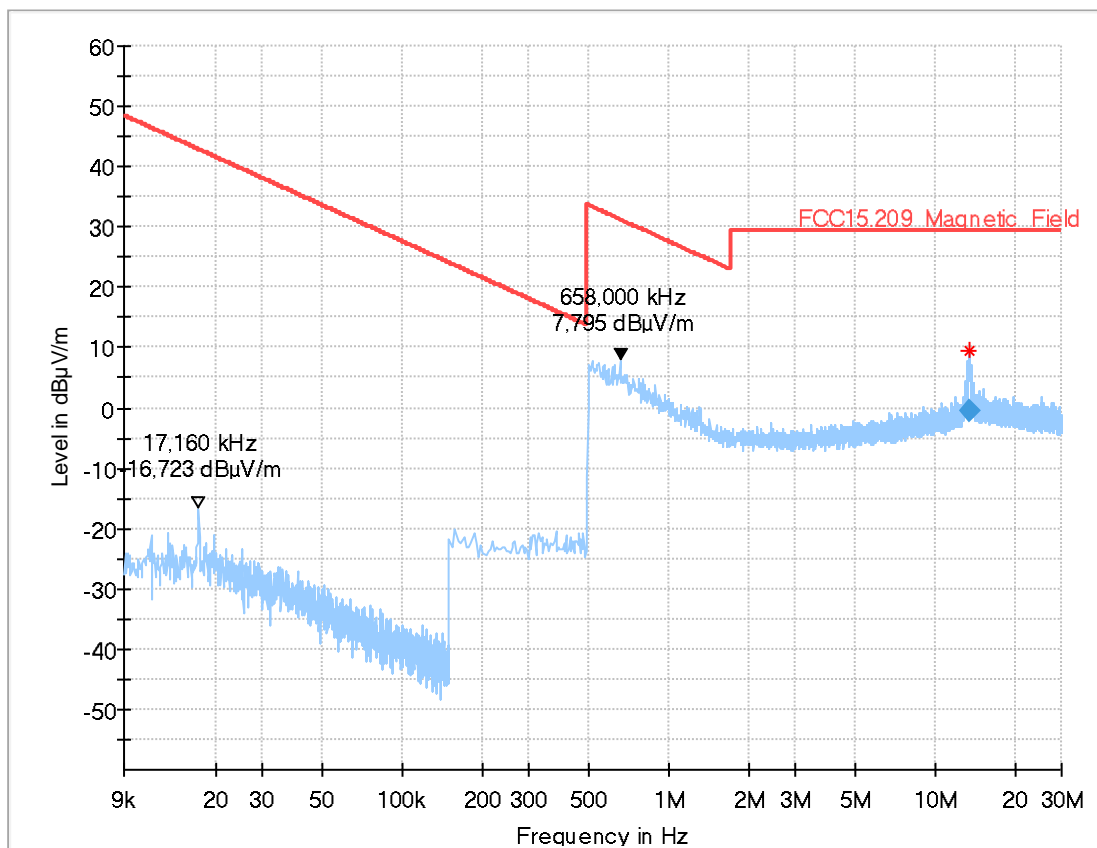
Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Operating Conditions:	LTE Band 2
Operator Name:	Klv
Comment:	Laying

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-



Final Result

Frequency (MHz)	RMS (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
13.502000	-0.63	29.54	30.17	1000.0	10.000	100.0	V	327.0	-11.8

2.01b_RMC_LTE_FDD2_BW20_RB1low_CH18700_Standing

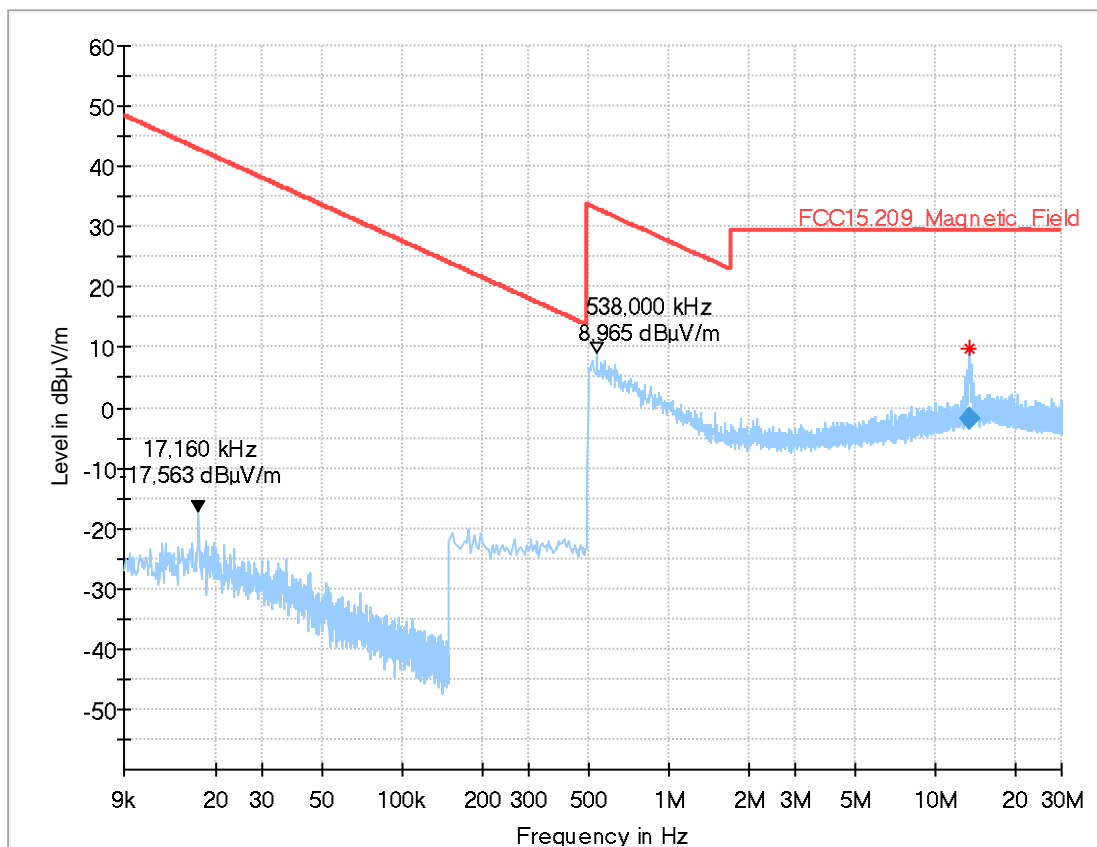
Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Operating Conditions:	LTE Band 2
Operator Name:	Klv
Comment:	Standing

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-



Final Result

Frequency (MHz)	RMS (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
13.574000	-1.96	29.54	31.51	1000.0	10.000	100.0	V	327.0	-11.8

2.02a_LTE_FDD2_BW20_RB1low_CH18900_Laying

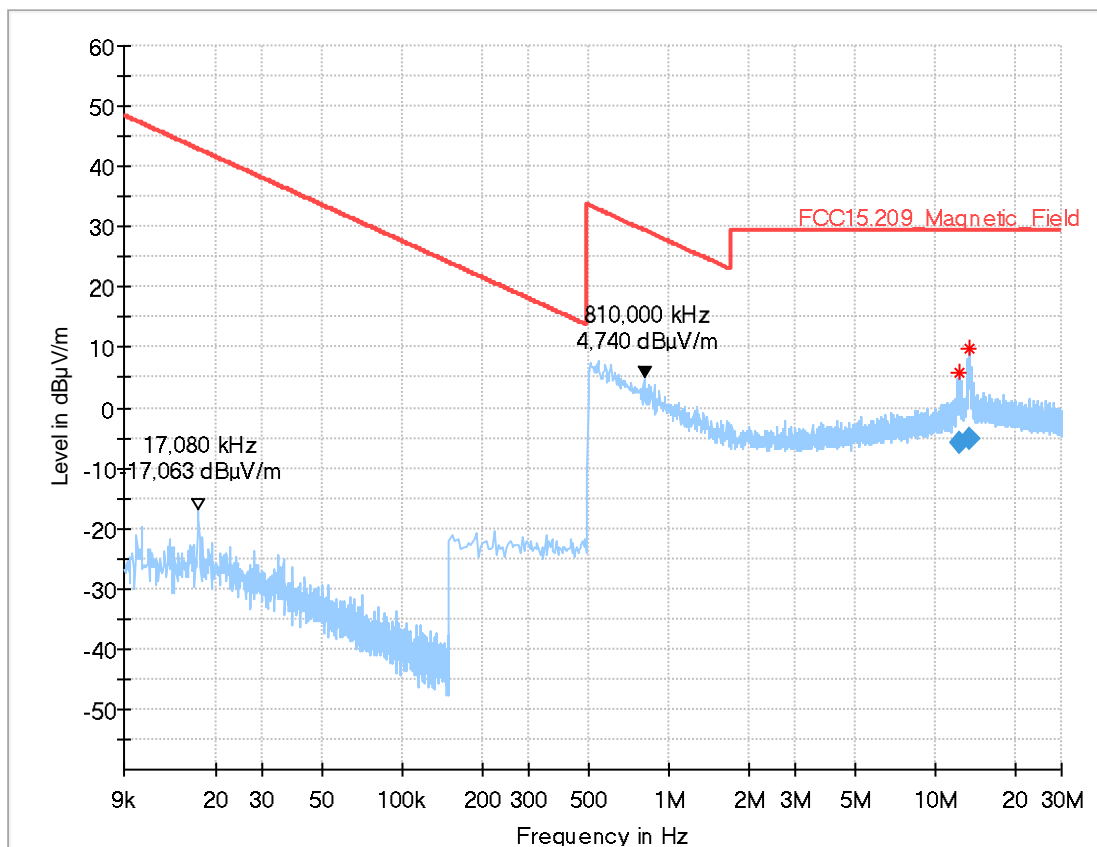
Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Operating Conditions:	LTE Band 2
Operator Name:	Klv
Comment:	Laying

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-



Final Result

Frequency (MHz)	RMS (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
12.478000	-5.75	29.54	35.29	1000.0	10.000	100.0	V	24.0	-12.3
13.470000	-5.17	29.54	34.71	1000.0	10.000	100.0	H	304.0	-11.8

2.02b_LTE_FDD2_BW20_RB1low_CH18900_Standing

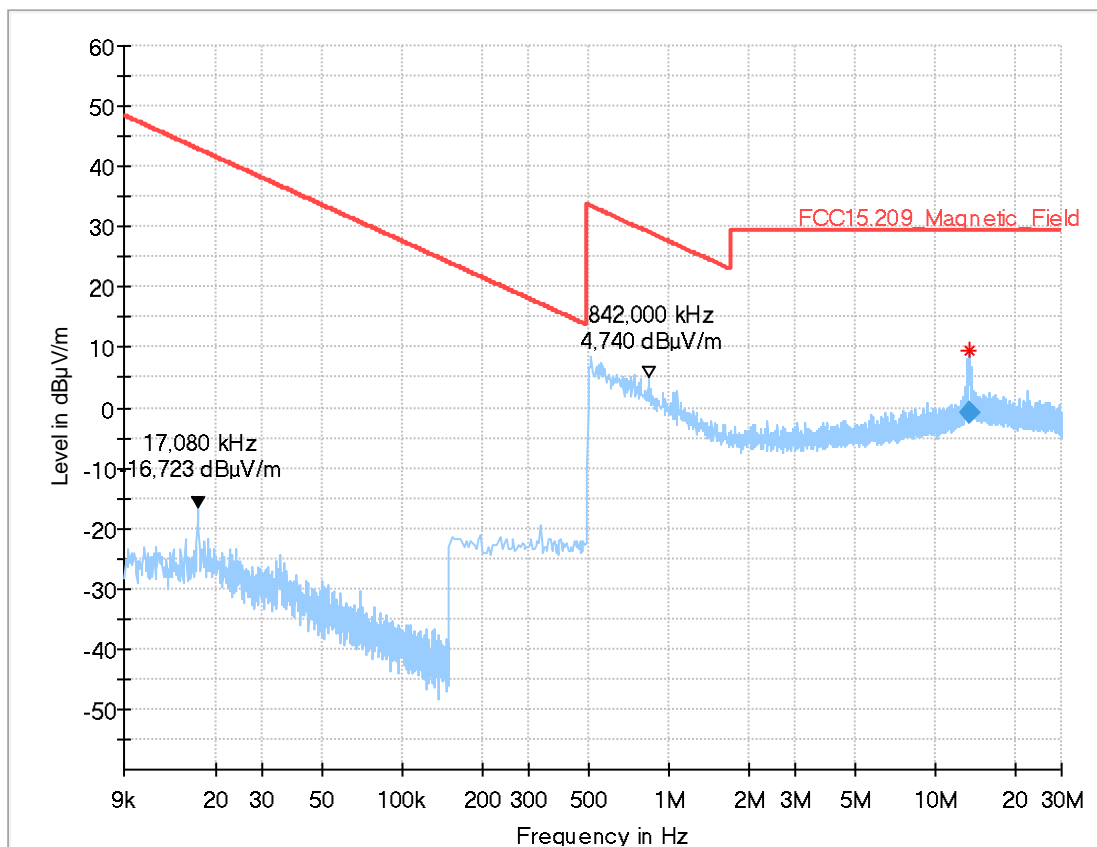
Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Operating Conditions:	LTE Band 2
Operator Name:	Klv
Comment:	Standing

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-



Final Result

Frequency (MHz)	RMS (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
13.502000	-0.84	29.54	30.38	1000.0	10.000	100.0	H	57.0	-11.8

1.3.2. Emissions above 30MHz (LTE Band 2)

8.01_LTE_FDD2_BW20_RB1low_CH18700

Common Information

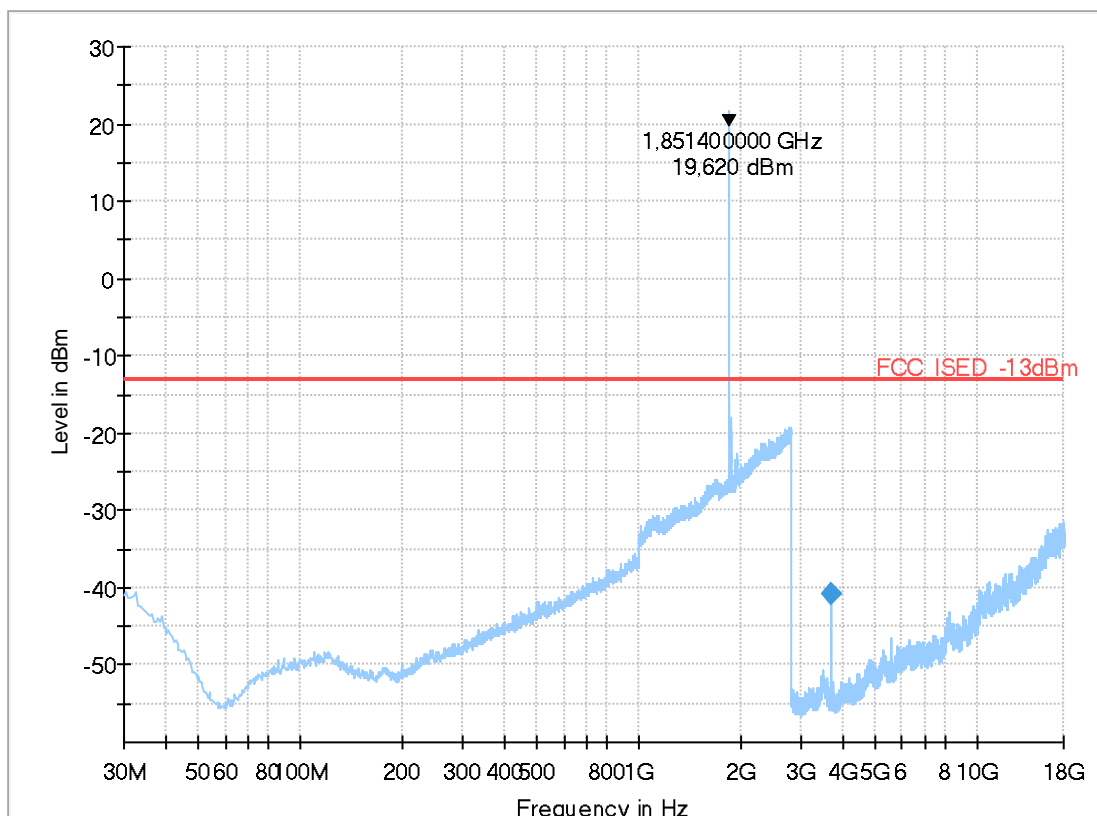
Test Description:	Radiated emission
Test Site:	Fully-Anechoic Room
Test Standard:	FCC FCC Part 27.53(h) AWS emission limits / RSS-139, Issue 3
Antenna polarisation:	vertical / horizontal
Measurement software version	EMC32 V9.26.0
Operation mode:	LTE Band 4, channel no=18700 BW=20 RB=1low Modulation=QPSK
Operator Name:	SRa

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC

Full Spectrum



Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
3702.206667	-40.74	-13.00	27.74	100.0	1000.000	155.0	H	296.0	90.0	-94.9

8.02_LTE_FDD2_BW20_RB1high_CH18900

Common Information

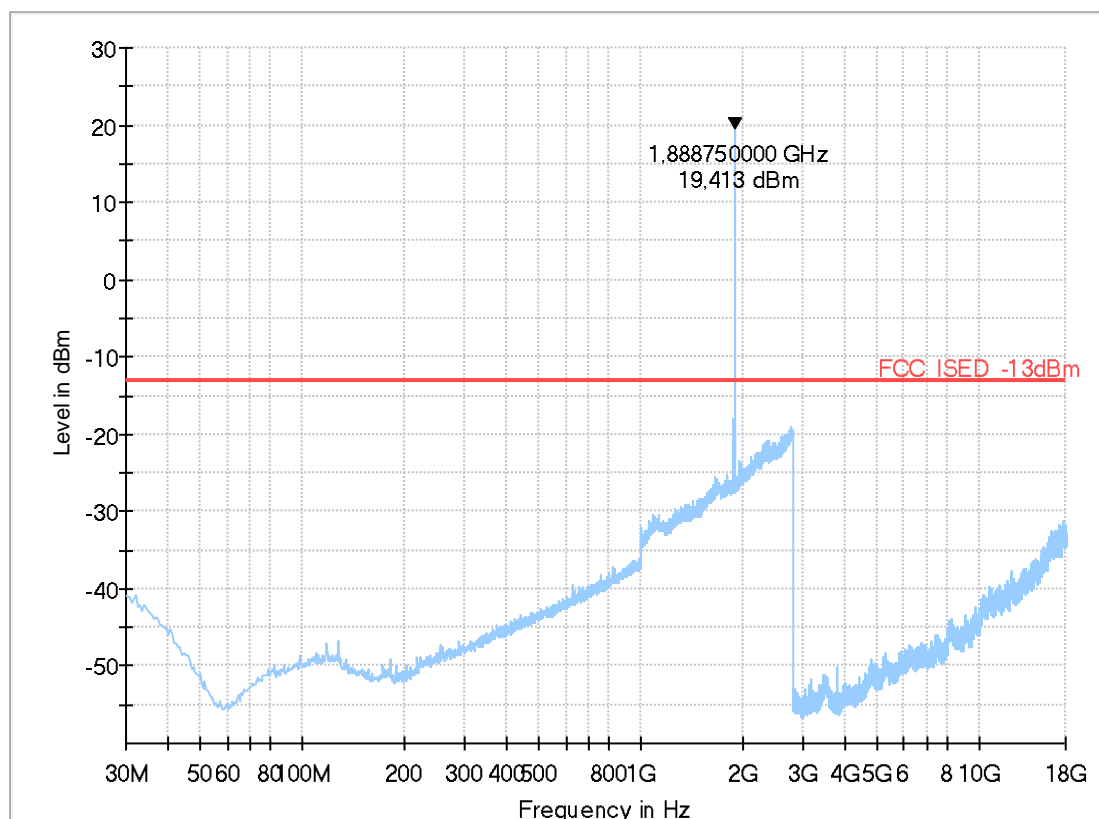
Test Description:	Radiated emission
Test Site:	Fully-Anechoic Room
Test Standard:	FCC FCC Part 27.53(h) AWS emission limits / RSS-139, Issue 3
Antenna polarisation:	vertical / horizontal
Measurement software version:	EMC32 V9.26.0
Operation mode:	LTE Band 2, channel no=18900 BW=20 RB=1high Modulation=16-16QAM
Operator Name:	SRa
Comment:	

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



1.4. Spurious emissions radiated (LTE Band 4)

1.4.1. Magnetic field strength radiated (LTE Band 4)

2.03a_RMC_LTE_FDD4_BW10_RB1high_QPSK_CH20000_Laying

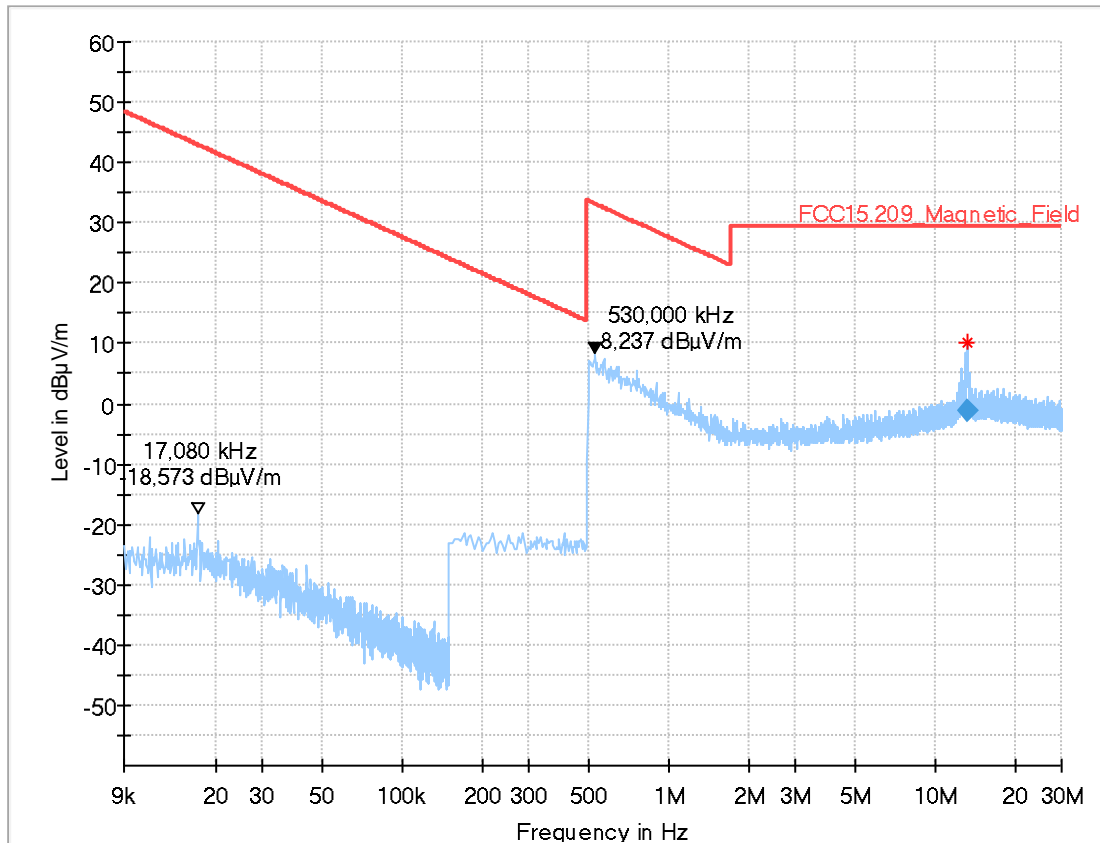
Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Operating Conditions:	LTE Band 4
Operator Name:	Klv
Comment:	Laying

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-



Final Result

Frequency (MHz)	RMS (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
13.254000	-1.26	29.54	30.80	1000.0	10.000	100.0	V	49.0	-11.9

2.03b_RMC_LTE_FDD4_BW10_RB1high_QPSK_CH20000_Standing

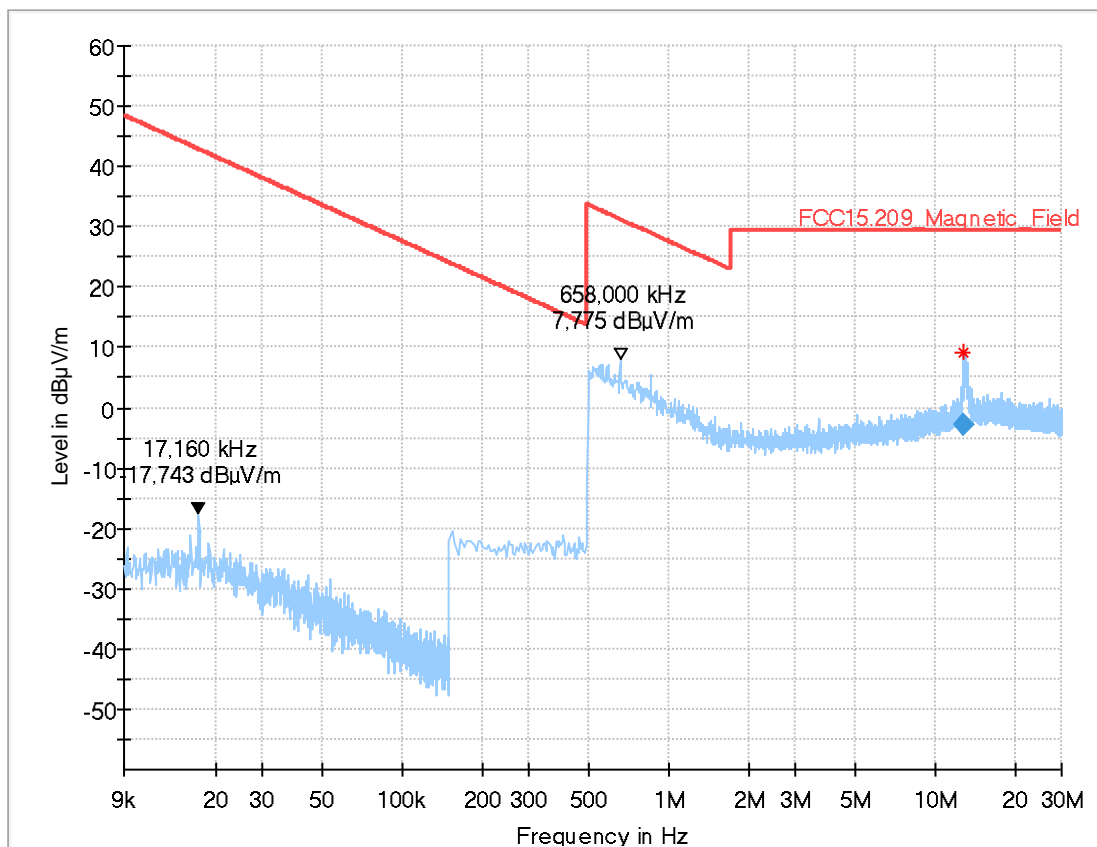
Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Operating Conditions:	LTE Band 4
Operator Name:	Klv
Comment:	Standing

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-



Final Result

Frequency (MHz)	RMS (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
12.866000	-2.94	29.54	32.48	1000.0	10.000	100.0	V	305.0	-12.1

2.04a_RMC_LTE_FDD4_BW10_RB1low_16-16QAM_CH20000_Laying

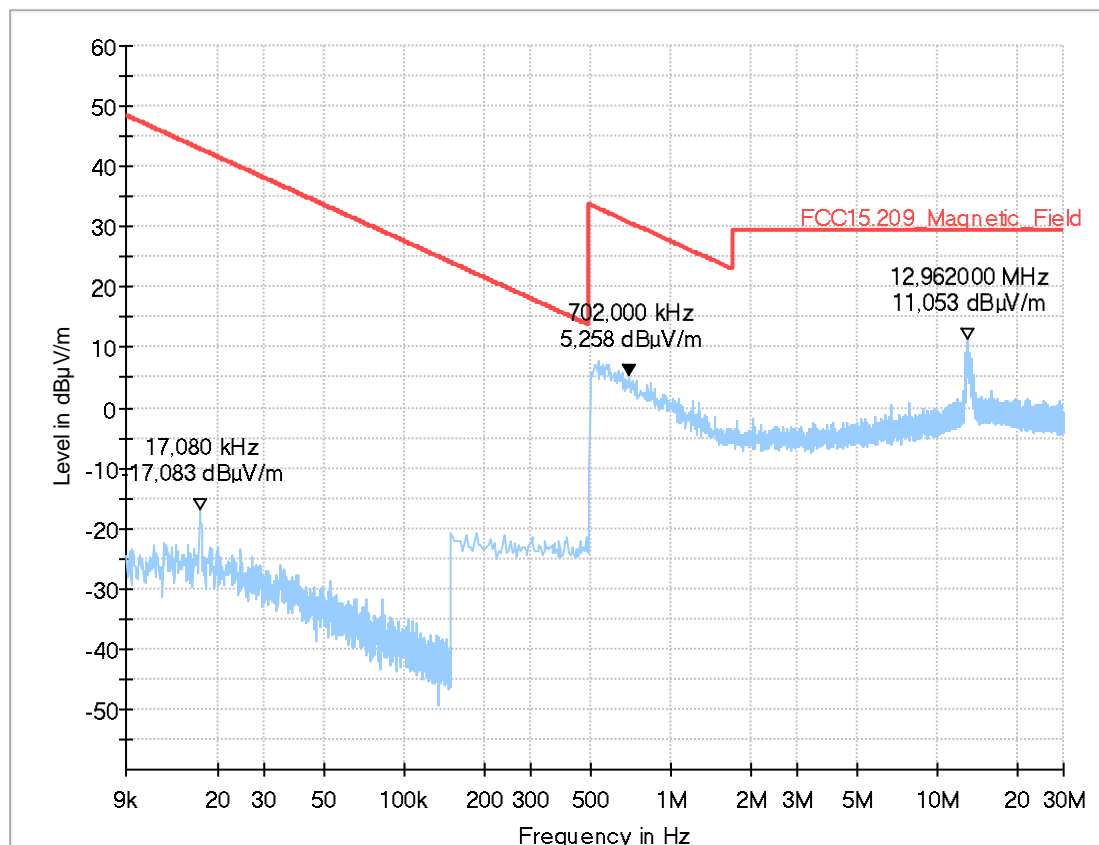
Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Operating Conditions:	LTE Band 4
Operator Name:	Klv
Comment:	Laying

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-



2.04b_RMC_LTE_FDD4_BW10_RB1low_16-16QAM_CH20000_Standing

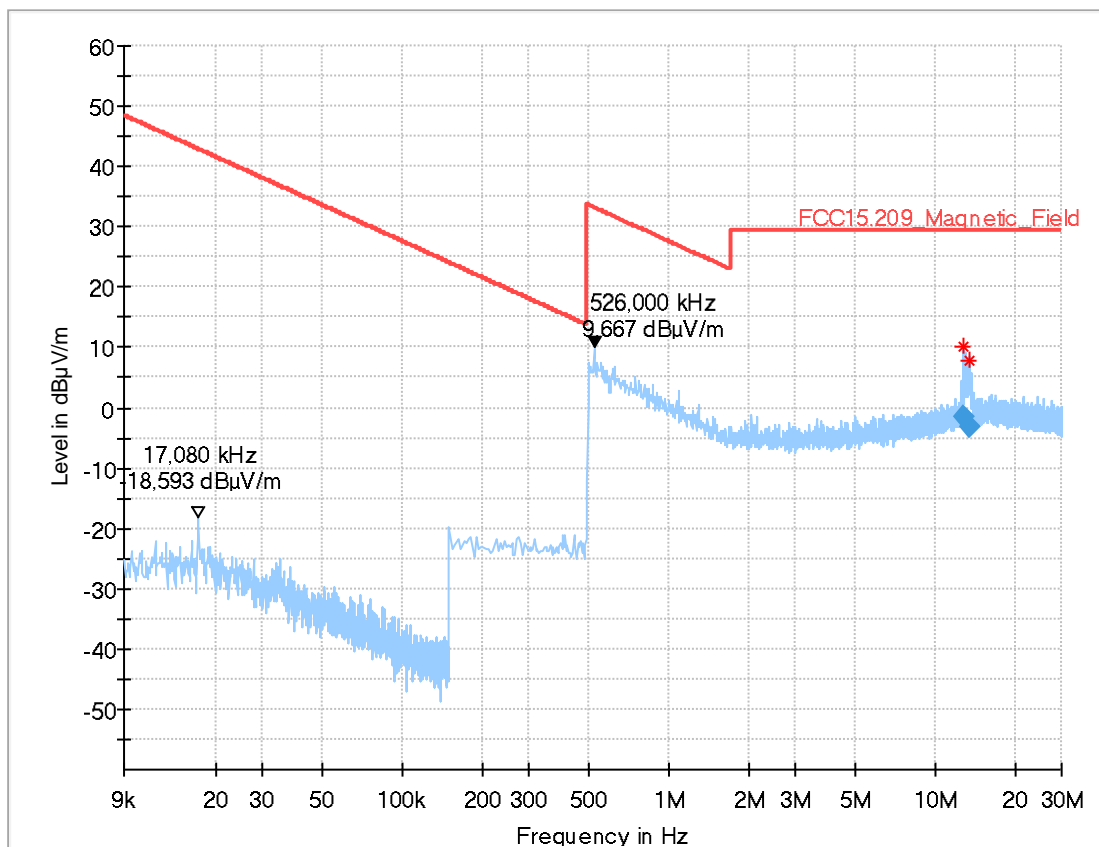
Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Operating Conditions:	LTE Band 4
Operator Name:	Klv
Comment:	Standing

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-



Final Result

Frequency (MHz)	RMS (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
12.922000	-1.49	29.54	31.03	1000.0	10.000	100.0	H	44.0	-12.1
13.506000	-3.12	29.54	32.66	1000.0	10.000	100.0	V	28.0	-11.8

1.4.2. Emissions above 30MHz (LTE Band 4)

8.03_RSE_LTE_FDD4_BW10_RB1high_QPSK_CH20000

Common Information

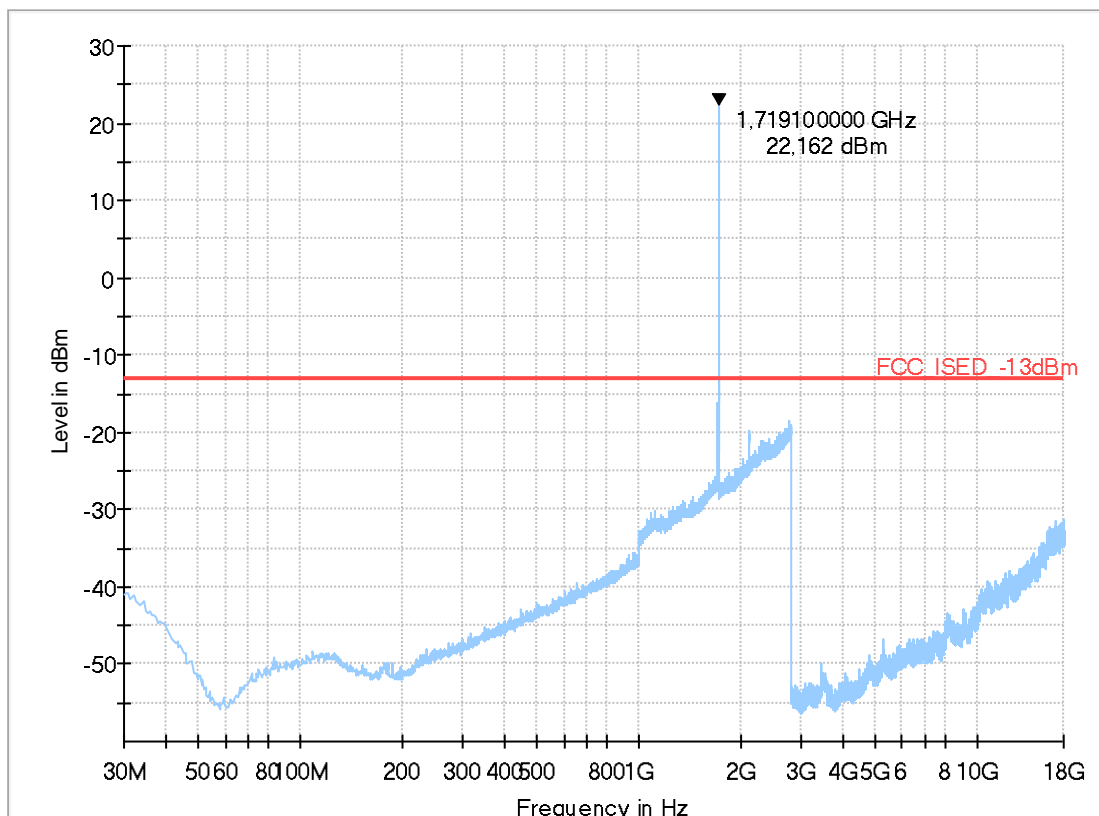
Test Description:	Radiated emission
Test Site:	Fully-Anechoic Room
Test Standard:	FCC FCC Part 27.53(h) AWS emission limits / RSS-139, Issue 3
Antenna polarisation:	vertical / horizontal
Measurement software version	EMC32 V9.26.0
Operation mode:	LTE Band 4, channel no= 20000, RB= 1, BW=10MHz, Modulation=QPSK, Position:high
Operator Name:	HEI

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



8.04_RSE_LTE_FDD4_BW10_RB1low_16-16QAM_CH20000

Common Information

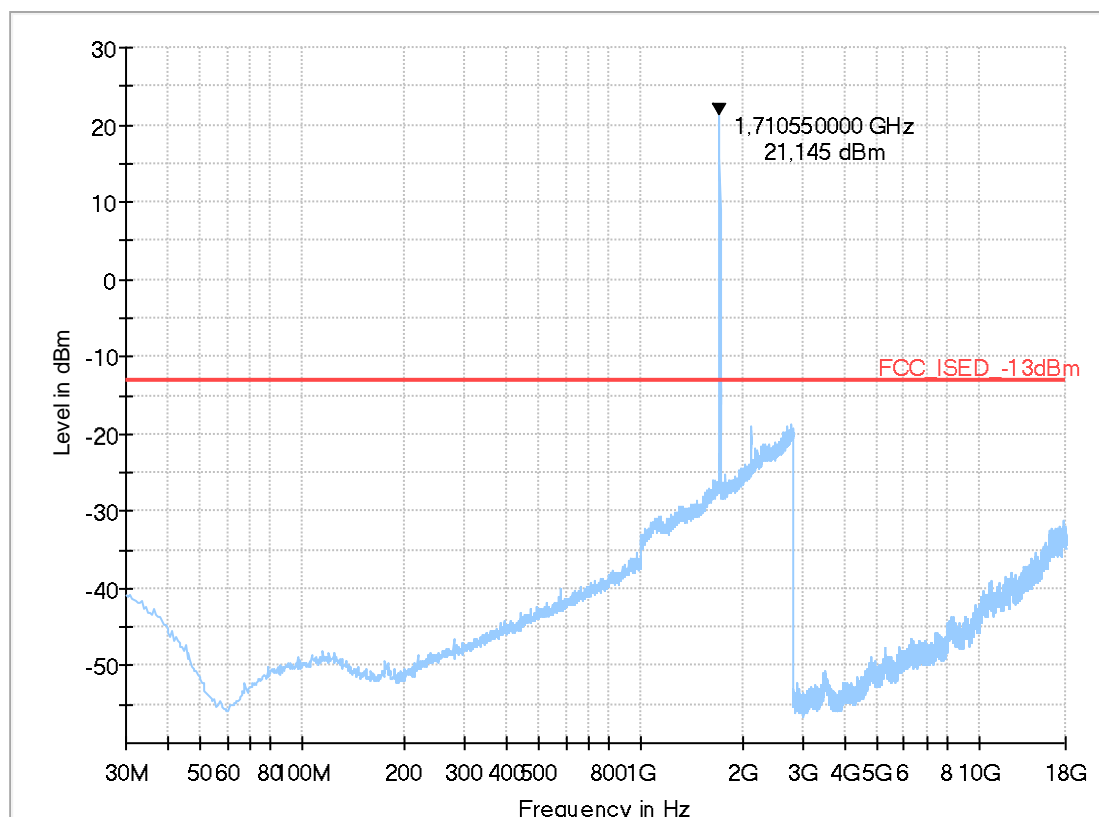
Test Description:	Radiated emission
Test Site:	Fully-Anechoic Room
Test Standard:	FCC FCC Part 27.53(h) AWS emission limits / RSS-139, Issue 3
Antenna polarisation:	vertical / horizontal
Measurement software version	EMC32 V9.26.0
Operation mode:	LTE Band 4, channel no= 20000, RB= 1, BW=10MHz, Modulation=16-16QAM, Position:Low
Operator Name:	HEI

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



1.5. Spurious emissions radiated (LTE Band 5)

1.5.1. Magnetic field strength radiated (LTE Band 5)

2.05a_RMC_LTE_FDD5_BW5_RB1low_QPSK_CH20425_laying

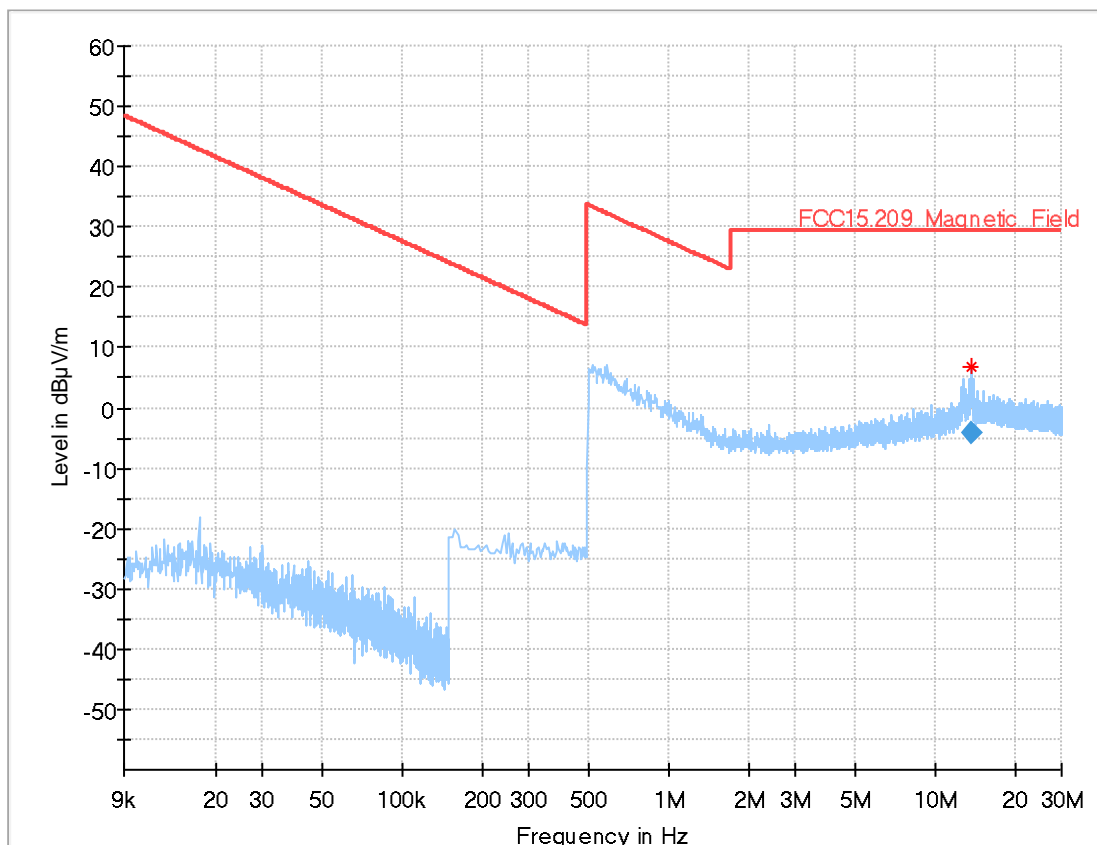
Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Operating Conditions:	RMC_LTE_FDD5_BW5_RB1low_QPSK_CH20425_laying
Operator Name:	TFra
Comment:	Laying

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-



Final Result

Frequency (MHz)	RMS (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
13.786000	-4.03	29.54	33.57	1000.0	10.000	100.0	V	55.0	-11.7

2.05b_RMC_LTE_FDD5_BW5_RB1low_QPSK_CH20425_standing

Common Information

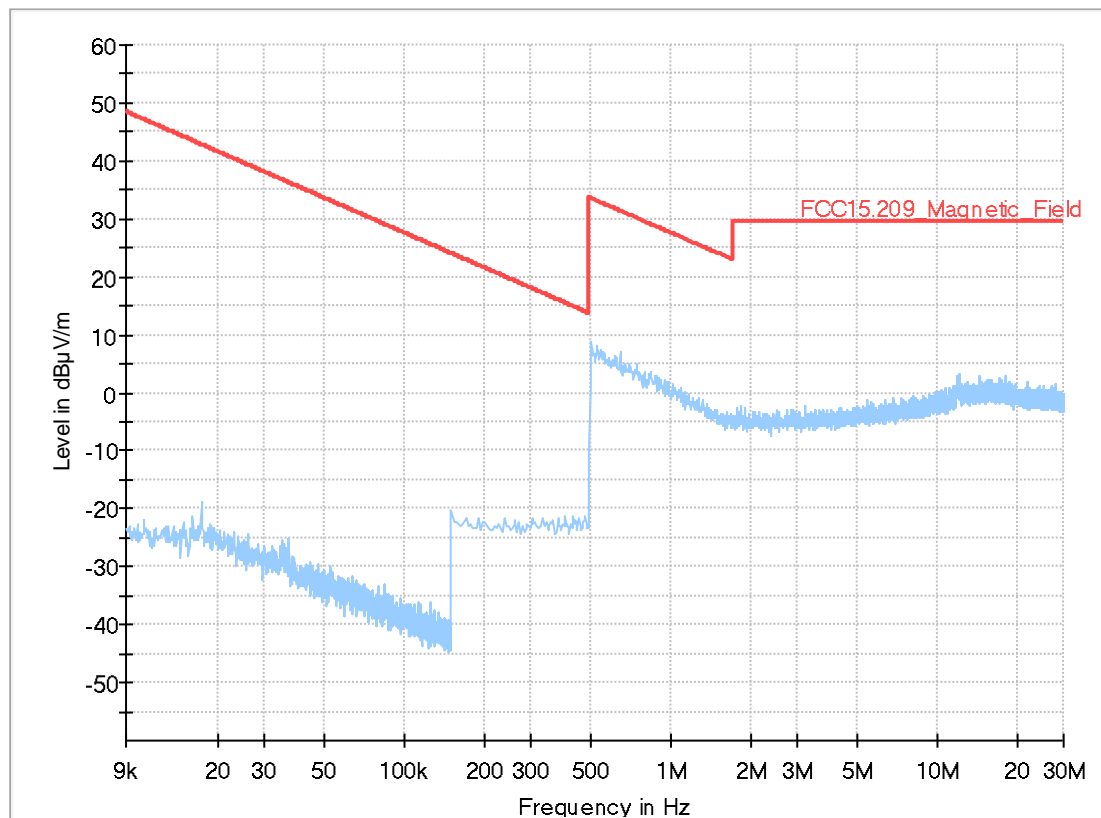
Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Operating Conditions:	RMC_LTE_FDD5_BW5_RB1low_QPSK_CH20425
Operator Name:	MBe
Comment:	Standing

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



2.06a_RMC_LTE_FDD5_BW5_RB1high_16-16QAM_CH20625_laying

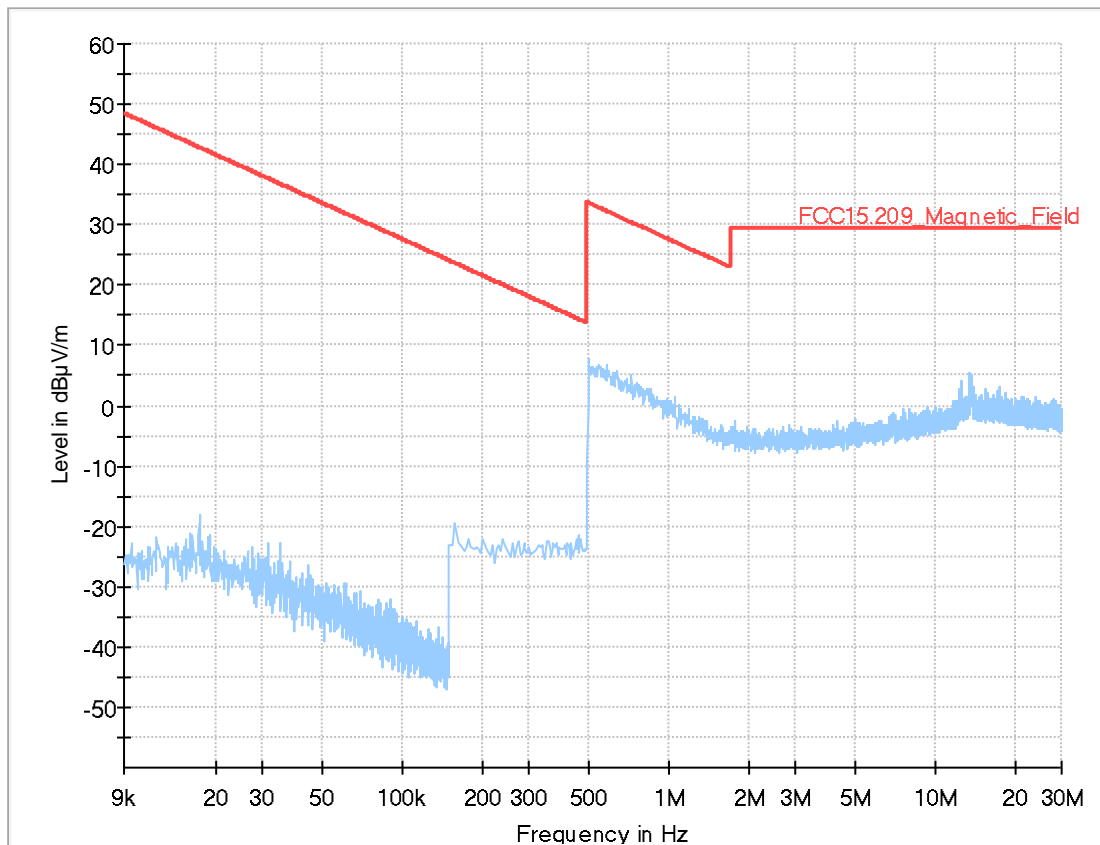
Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Operating Conditions:	RMC_LTE_FDD5_BW5_RB1high_16-16QAM_CH20625_laying
Operator Name:	TFra
Comment:	Laying

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-



2.06b_RMC_LTE_FDD5_BW5_RB1high_16-16QAM_CH20625_standing

Common Information

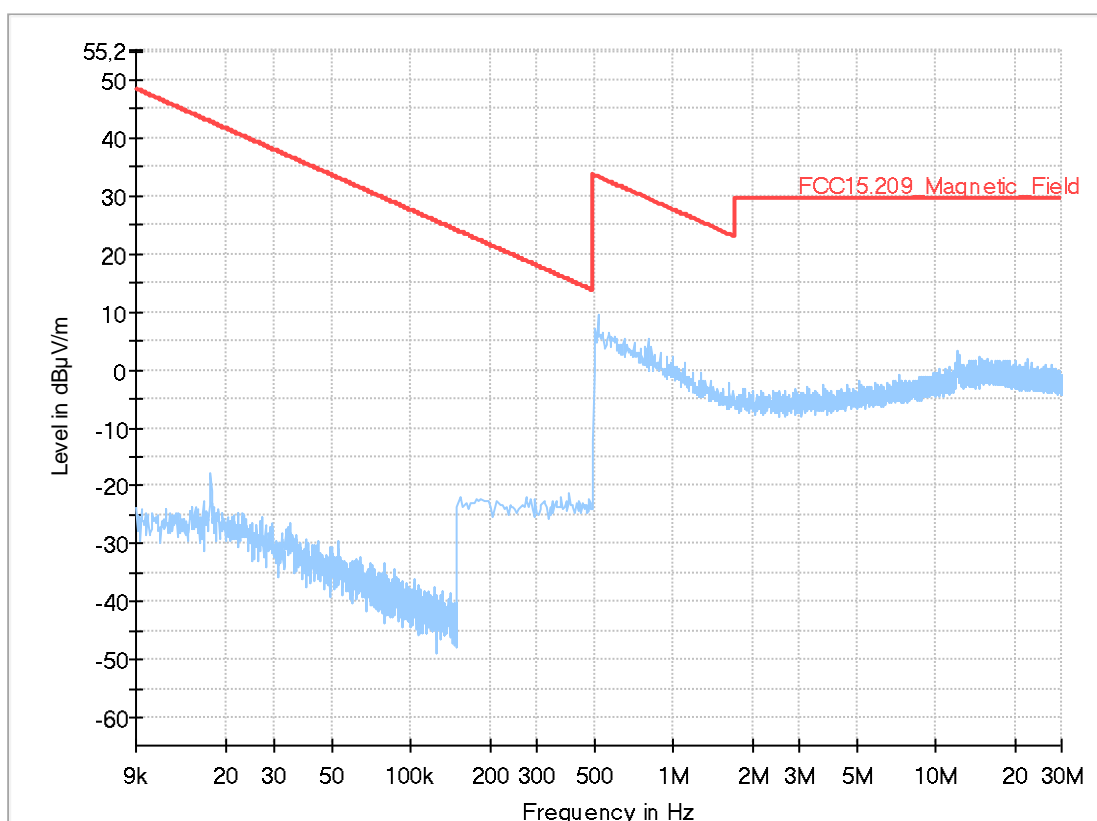
Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Operating Conditions:	RMC_LTE_FDD5_BW5_RB1high_16-16QAM_CH20625
Operator Name:	MBe
Comment:	Standing

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



1.5.2. Emissions above 30MHz (LTE Band 5)

8.05_RSE_LTE_FDD5_BW5_RB1low_QPSK_CH20425

Common Information

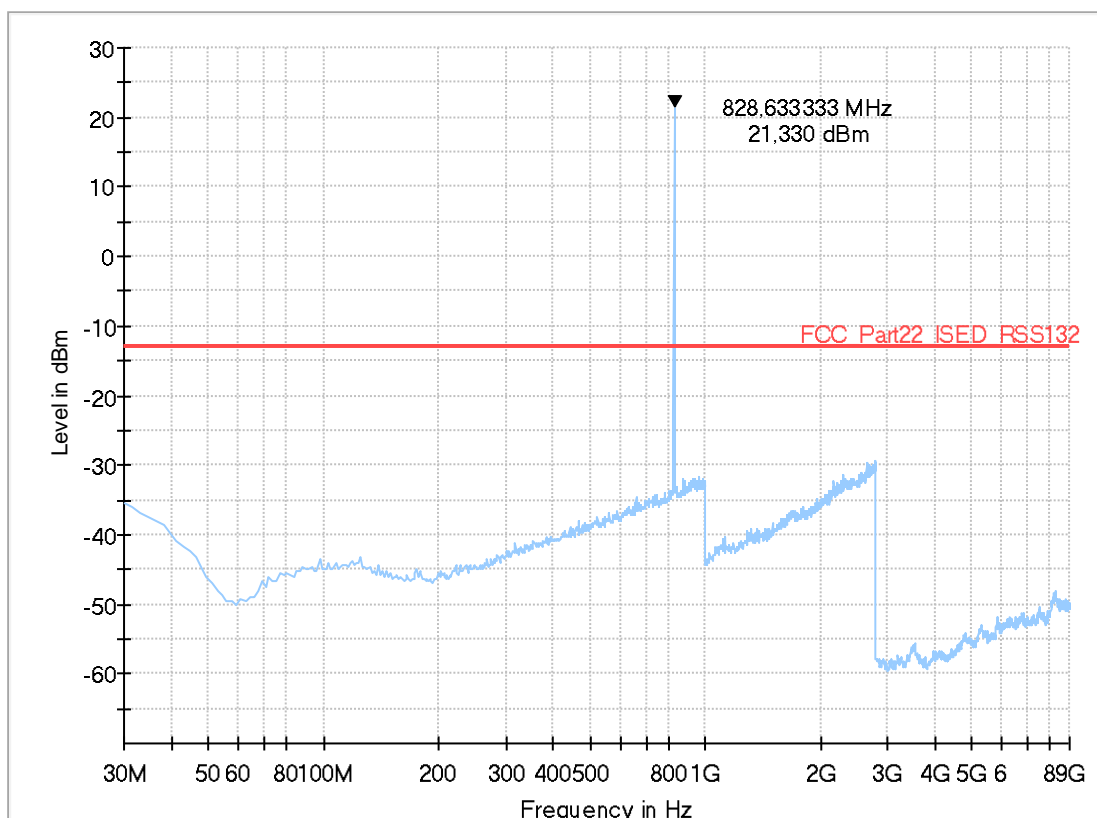
Test Description:	Radiated Spurious Emissions LTE FDDV
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 20425/ BW:5MHz / RB:1 / Position: low
Environmental Conditions:	Humidity: 48%rH; Temperature: 20°C
Operator:	HEI

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



8.06_RSE_LTE_FDD5_BW5_RB1high_1616QAM_CH20625

Common Information

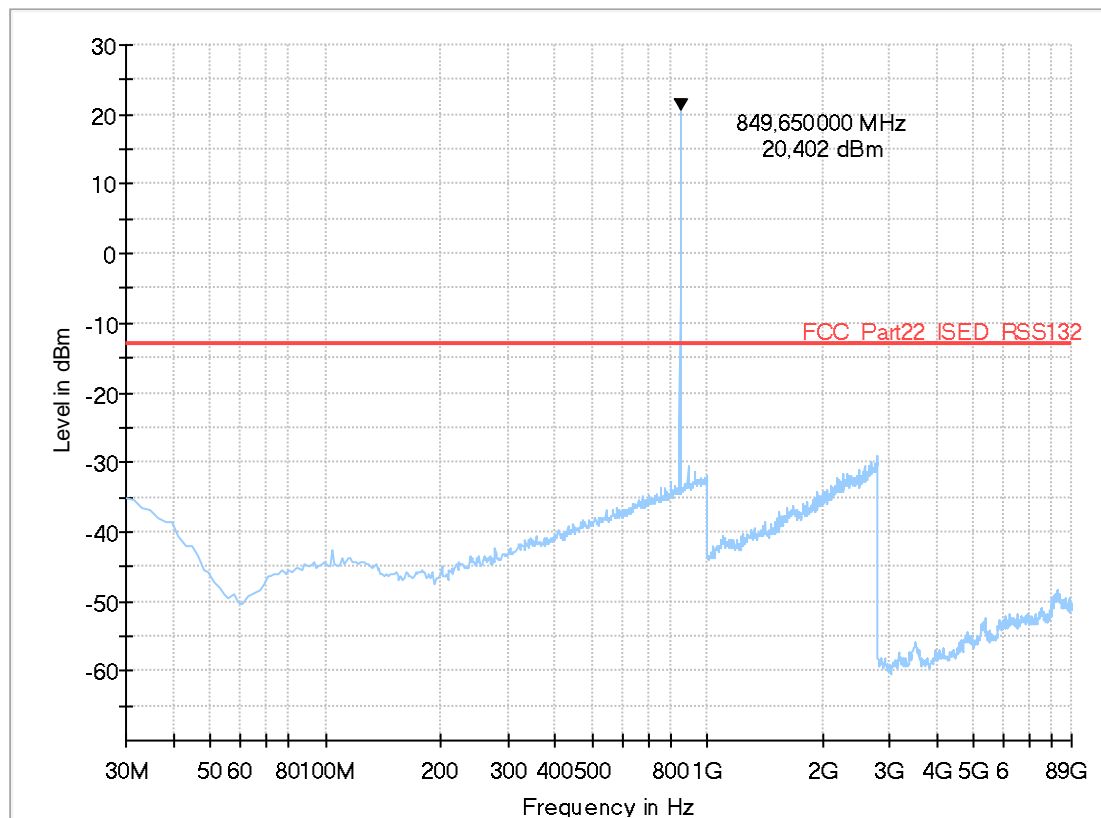
Test Description:	Radiated Spurious Emissions LTE FDDV
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 20625/ BW:5MHz / RB:1 / Position: high/Modulation:1616QAM
Environmental Conditions:	Humidity: 48%rH; Temperature: 20°C
Operator:	HEI

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



1.6. Spurious emissions radiated (LTE Band 7)

1.6.1. Magnetic field strength radiated (LTE Band 7)

2.07a_RMC_LTE_FDD7_BW10_RB1high_QPSK_CH20850_laying

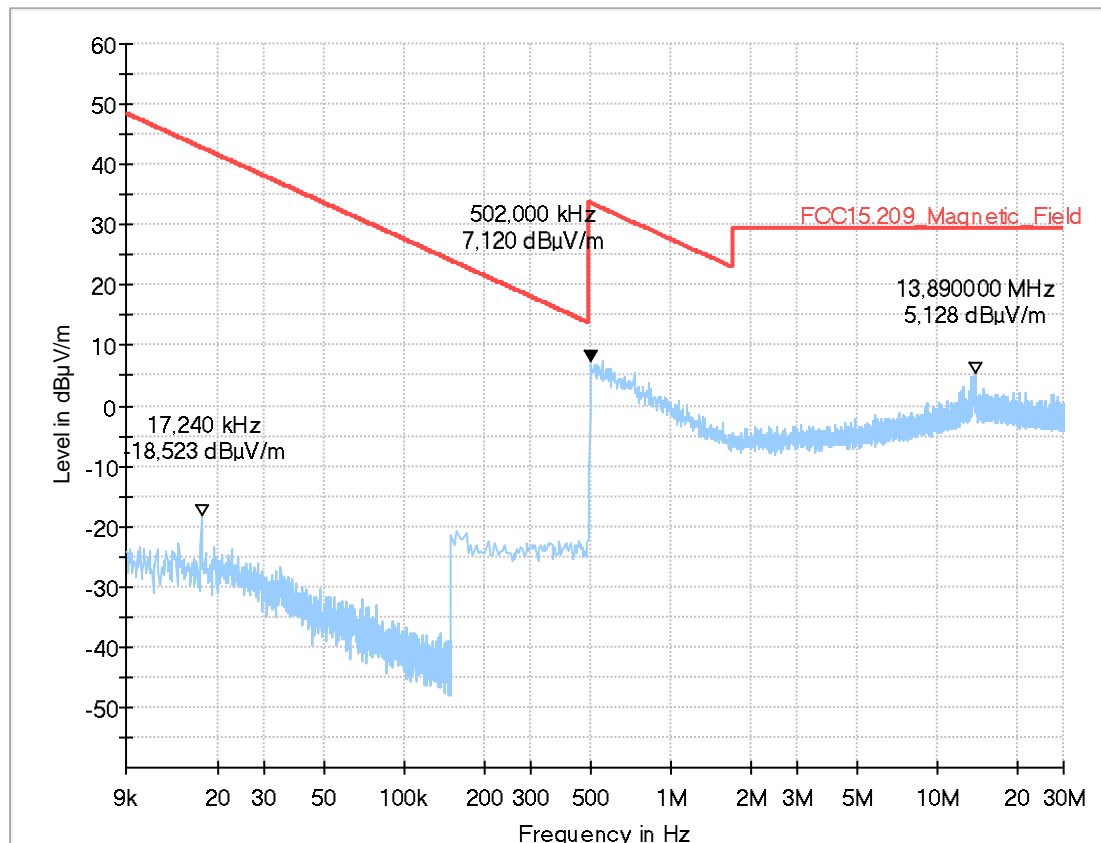
Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Operating Conditions:	RMC_LTE_FDD7_BW10_RB1high_QPSK_CH20850_laying
Operator Name:	TFra
Comment:	Laying

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-



2.07b_RMC_LTE_FDD7_BW10_RB1high_QPSK_CH20850_standing

Common Information

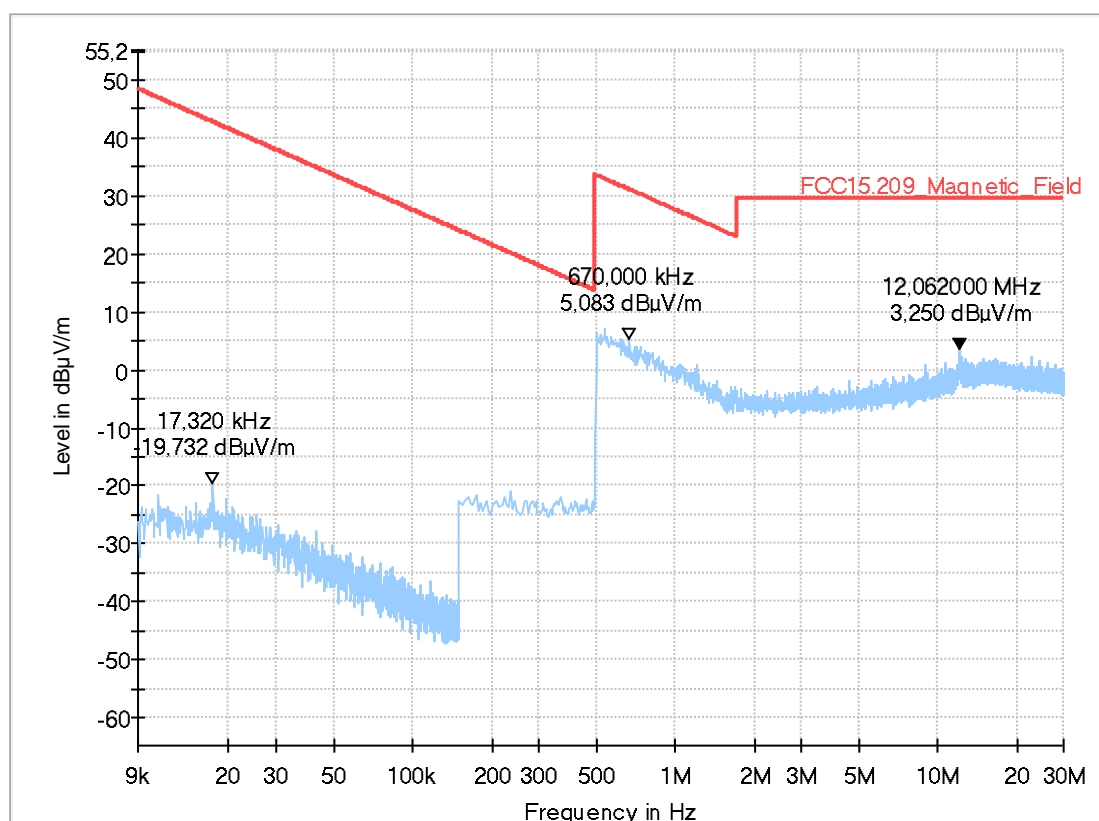
Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Operating Conditions:	RMC_LTE_FDD7_BW10_RB1high_QPSK_CH20850
Operator Name:	MBe
Comment:	Standing

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



'2.08a_RMC_LTE_FDD7_BW10_RB1low_16-16QAM_CH20800_laying

Common Information

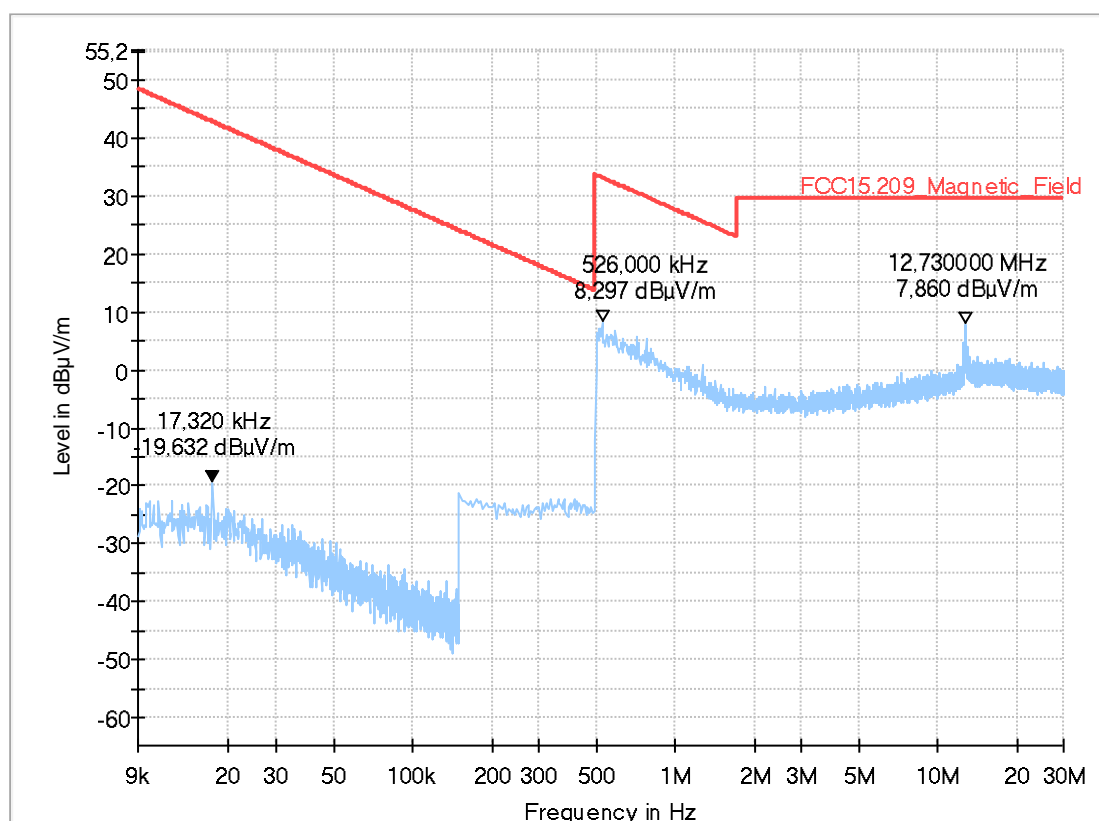
Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Operating Conditions:	RMC_LTE_FDD7_BW10_RB1low_16-16QAM_CH20800_laying
Operator Name:	MBe
Comment:	Laying

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



2.08b_RMC_LTE_FDD7_BW10_RB1low_16-16QAM_CH20800_standing

Common Information

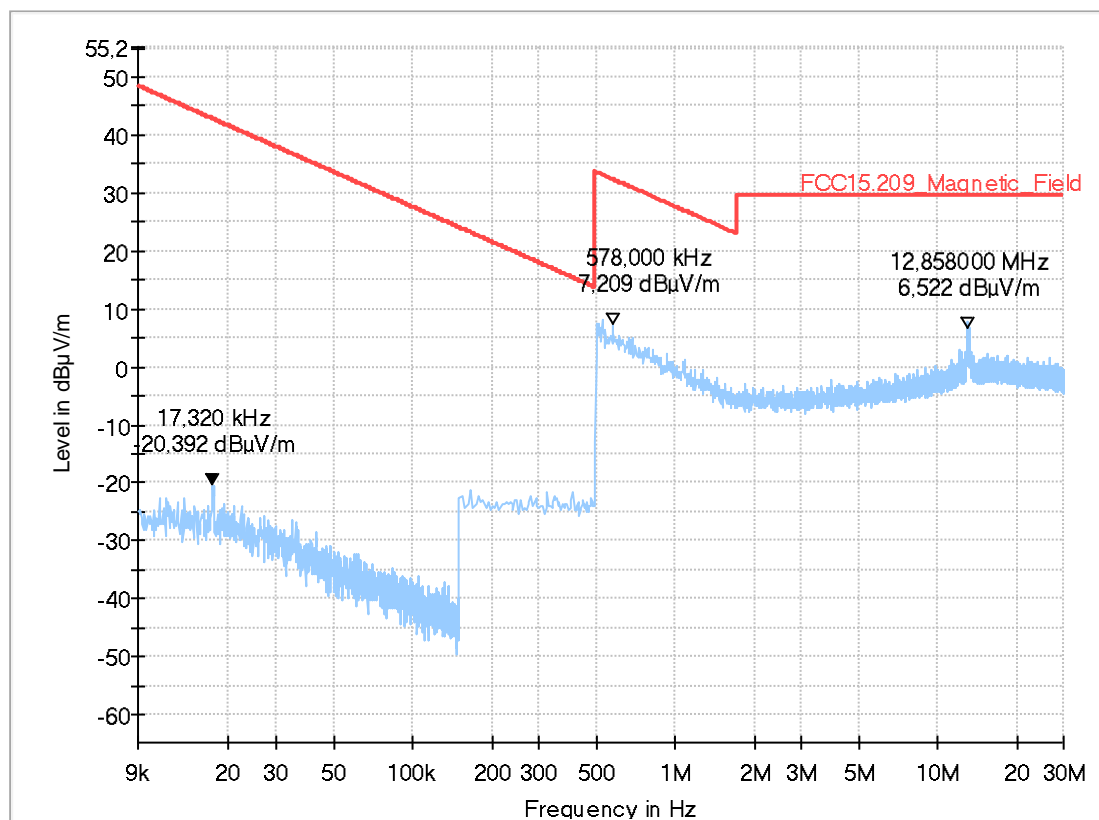
Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Operating Conditions:	RMC_LTE_FDD7_BW10_RB1low_16-16QAM_CH20800
Operator Name:	MBe
Comment:	Standing

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



1.6.2. Emissions above 30MHz (LTE Band 7)

8.07a_RSE_LTE_FDD7_BW20_RB1high_QPSK_20850_30-2.8GHz

Common Information

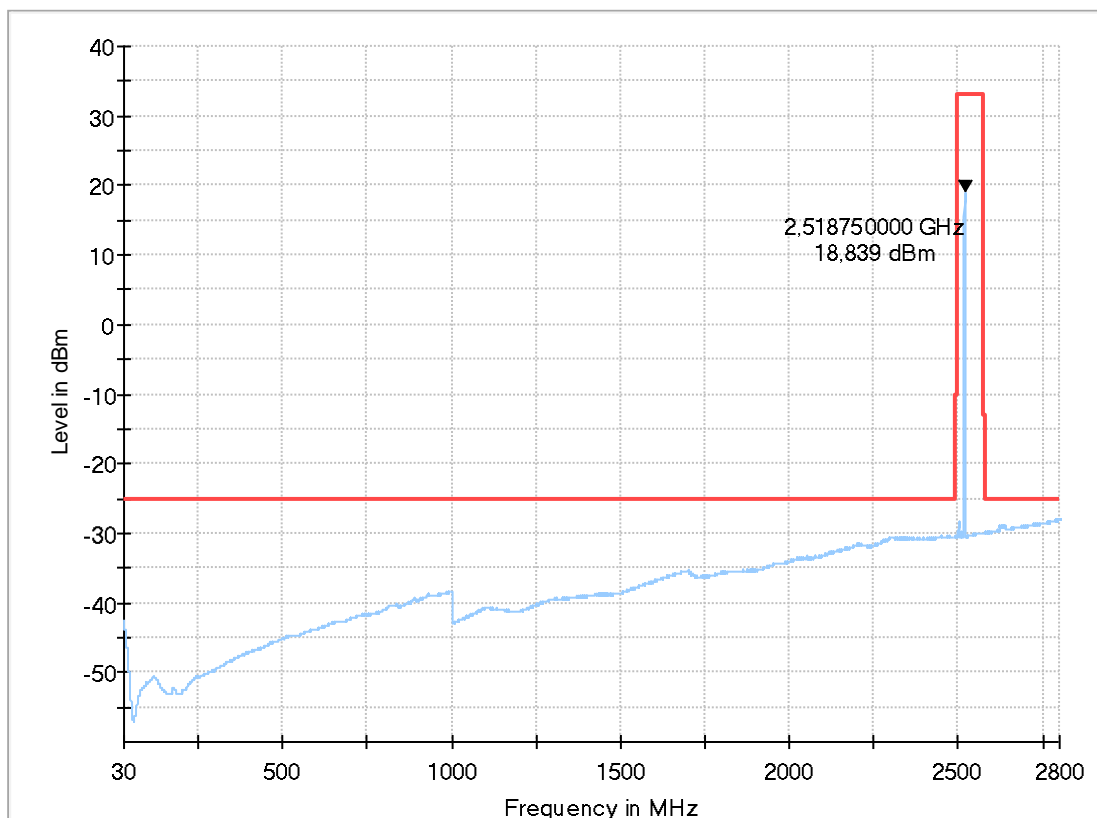
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(l)(4) Mobile stations limits
Operating Mode:	LTE_FDD7_BW20_RB1high_QPSK_20850
Environmental Conditions:	Humidity: 30%rH; Temperature: 25°C
Test SW Version:	EMC32 V9.26.0
Operator:	Klv
Remarks:	EUT - laying/standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



8.07b_RSE_LTE_FDD7_BW20_RB1high_QPSK_20850_2.8GHz-20GHz

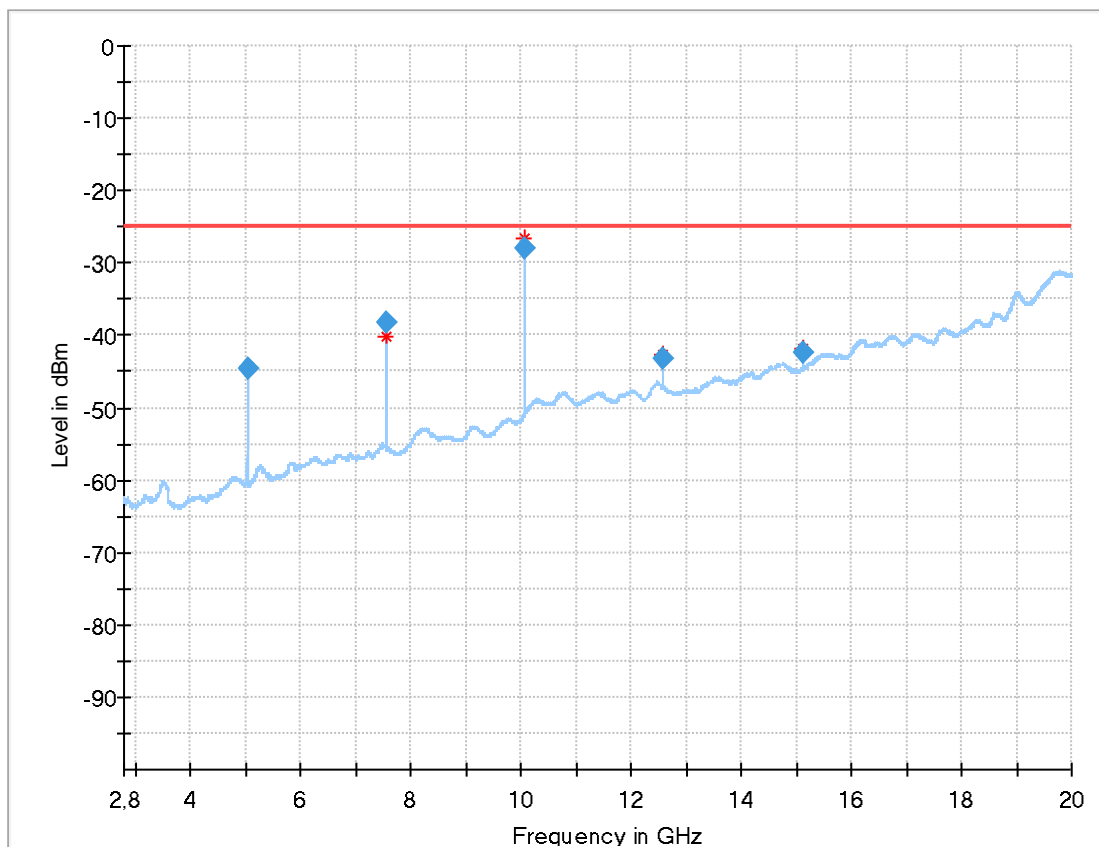
Common Information

Test Description:	Radiated Spurious Emissions LTE FDD7
Operating Conditions:	Humidity: 37%; Temperature: 22°
Operator Name:	Klv
Operating Mode:	LTE_FDD7_BW20_RB1high_QPSK_20850

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-



Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
5037.750000	-44.49	-25.00	19.49	1000.0	1000.000	155.0	H	269.0	0.0	-91.1
7556.630000	-38.15	-25.00	13.15	1000.0	1000.000	155.0	H	52.0	0.0	-83.5
10075.560000	-28.02	-25.00	3.02	1000.0	1000.000	155.0	V	130.0	90.0	-79.6
12594.450000	-43.25	-25.00	18.25	1000.0	1000.000	155.0	H	89.0	0.0	-76.0
15113.410000	-42.26	-25.00	17.26	1000.0	1000.000	155.0	V	83.0	90.0	-73.0

8.08a_RSE_LTE_FDD7_BW10_RB1low_1616QAM_CH20800_30-2.8GHz

Common Information

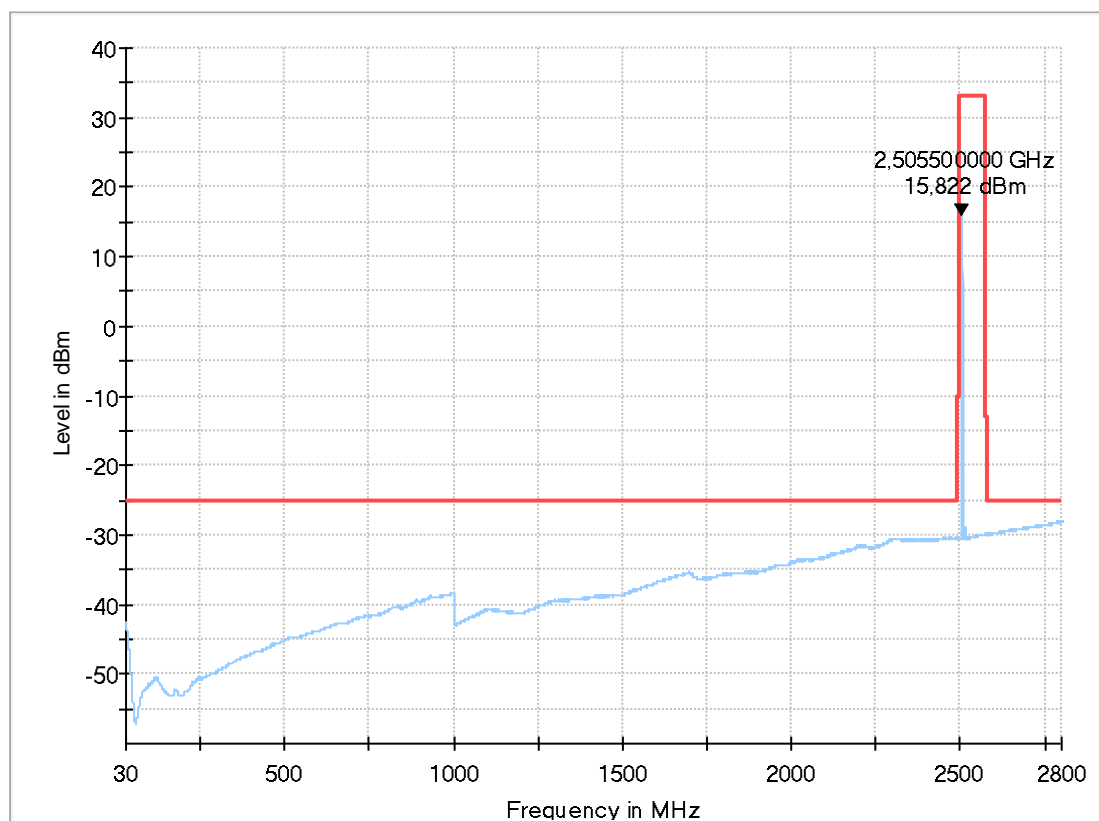
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(l)(4) Mobile stations limits
Operating Mode:	LTE_FDD7_BW10_RB1low_1616QAM_CH20800
Environmental Conditions:	Humidity: 30%rH; Temperature: 25°C
Test SW Version:	EMC32 V9.26.0
Operator:	Klv
Remarks:	EUT - laying/standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



8.08b_RSE_LTE_FDD7_BW10_RB1low_1616QAM_CH20800_2.8GHz-20GHz

Common Information

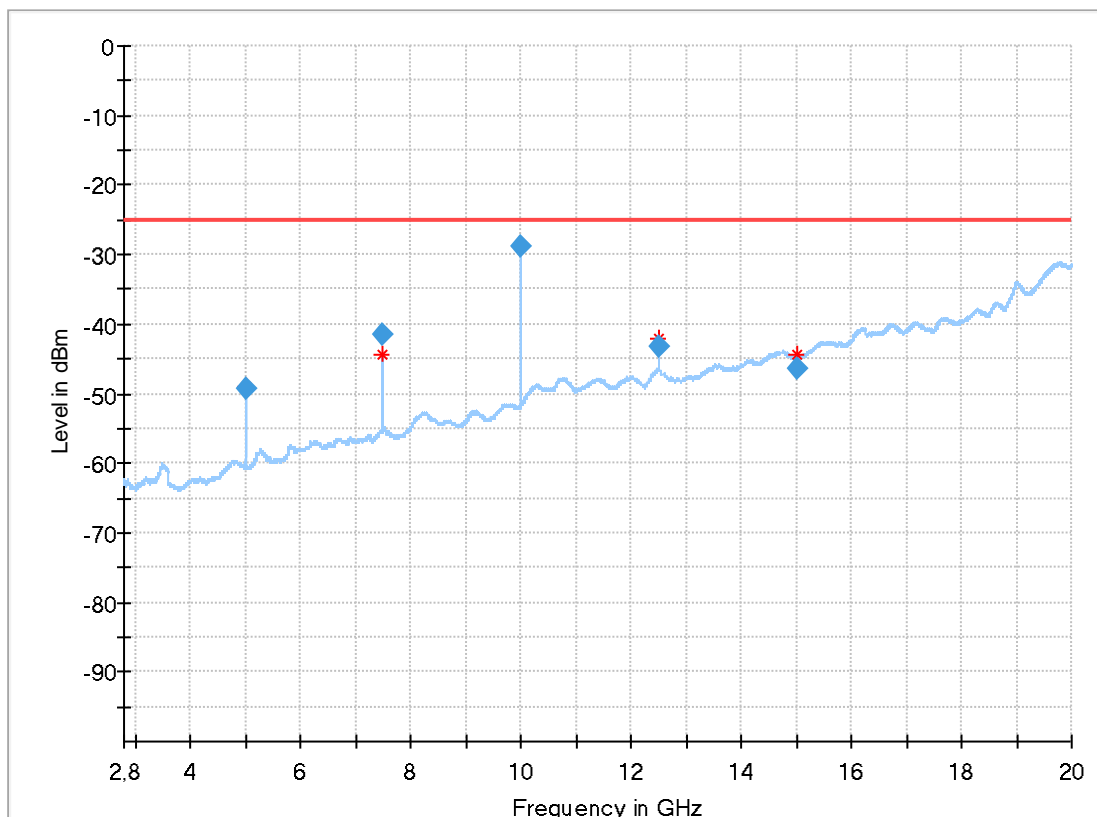
Test Description:	Radiated Spurious Emissions LTE FDD7
Operating Conditions:	Humidity: 37%; Temperature: 22°
Operator Name:	LKu, TFra
Operating Mode:	LTE_FDD7_Channel:20800_BW:10_RB:1high_Modulation:1616QAM

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
5001.152000	-49.22	-25.00	24.22	1000.0	1000.000	155.0	V	46.0	0.0	-91.2
7501.914000	-41.53	-25.00	16.53	1000.0	1000.000	155.0	H	121.0	90.0	-83.3
10002.397000	-28.94	-25.00	3.94	1000.0	1000.000	155.0	H	87.0	90.0	-80.7
12502.860000	-43.31	-25.00	18.31	1000.0	1000.000	155.0	V	89.0	0.0	-75.3
15003.459500	-46.28	-25.00	21.28	1000.0	1000.000	155.0	V	44.0	0.0	-73.4

1.7. Spurious emissions radiated (LTE Band 12)

1.7.1. Magnetic field strength radiated(LTE Band 12)

2.09a_RMC_LTE_FDD12_BW5_RB1low_QPSK_CH23095_laying

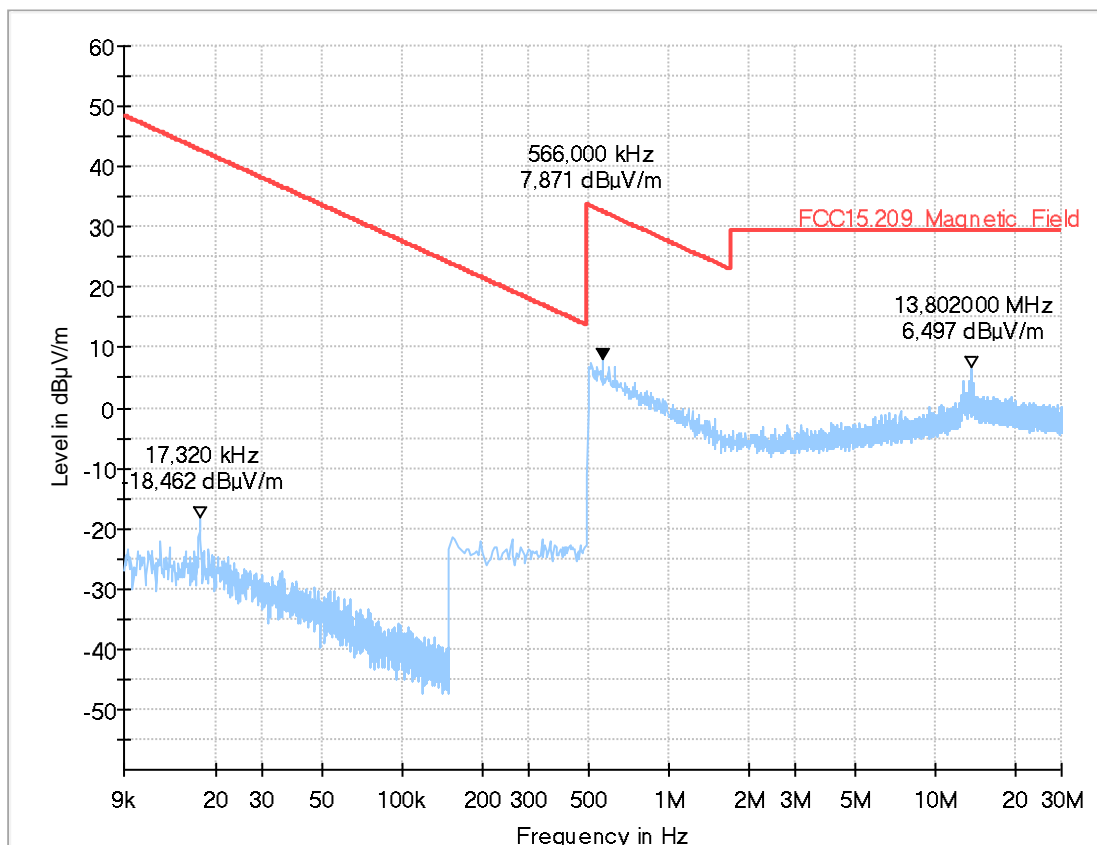
Common Information

Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Operating Conditions:	RMC_LTE_FDD12_BW5_RB1low_QPSK_CH23095_laying
Operator Name:	TFra
Comment:	Laying

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-



2.09b_RMC_LTE_FDD12_BW5_RB1low_QPSK_CH23095_standing

Common Information

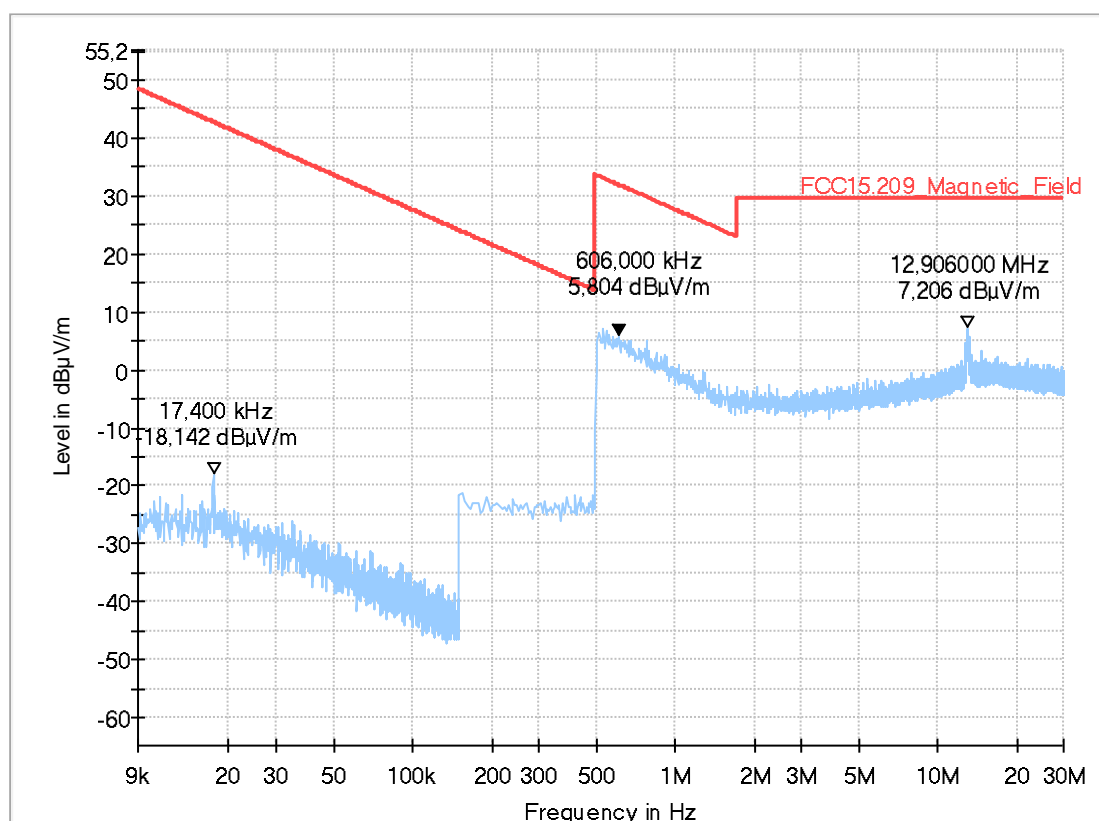
Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Operating Conditions:	RMC_LTE_FDD12_BW5_RB1low_QPSK_CH23095
Operator Name:	MBe
Comment:	Standing

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



'2.10a_RMC_LTE_FDD12_BW5_RB1low_16-16QAM_CH23060_laying

Common Information

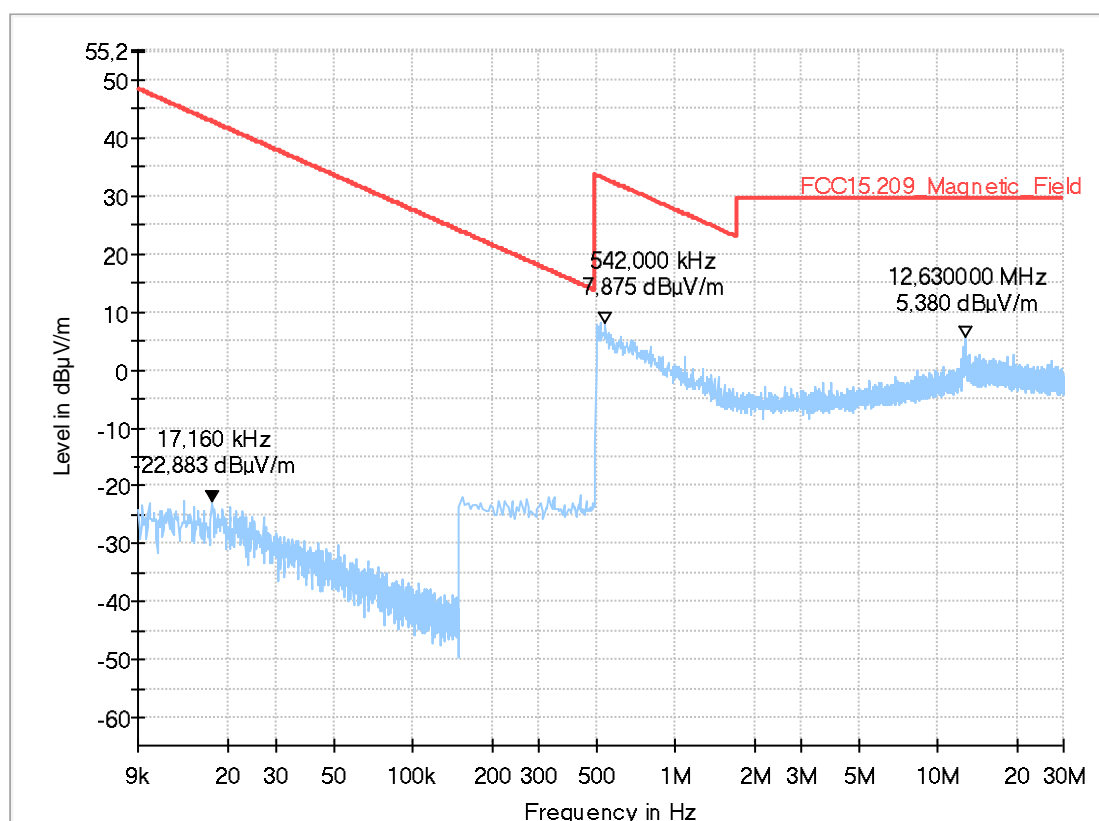
Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Operating Conditions:	RMC_LTE_FDD12_BW5_RB1low_16-16QAM_CH23060_laying
Operator Name:	MBe
Comment:	Laying

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



2.10b_RMC_LTE_FDD12_BW5_RB1low_16-16QAM_CH23060_standing

Common Information

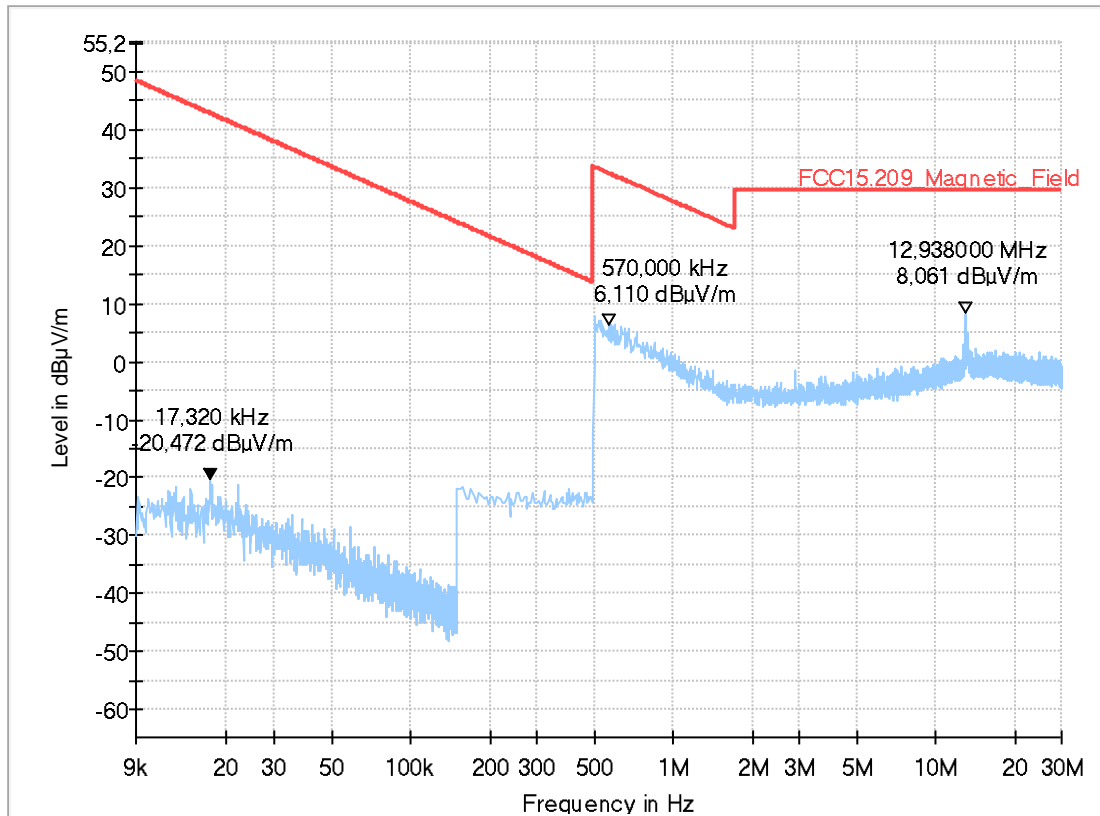
Test Description:	Magnetic Field Strength Measurement related to 30/300 m distance
Operating Conditions:	RMC_LTE_FDD12_BW5_RB1low_16-16QAM_CH23060
Operator Name:	MBe
Comment:	Laying

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC

Full Spectrum



1.7.2. Emissions above 30MHz (LTE Band 12)

8.09_RSE_LTE_FDD12_BW10_RB1low_QPSK_CH23095

Common Information

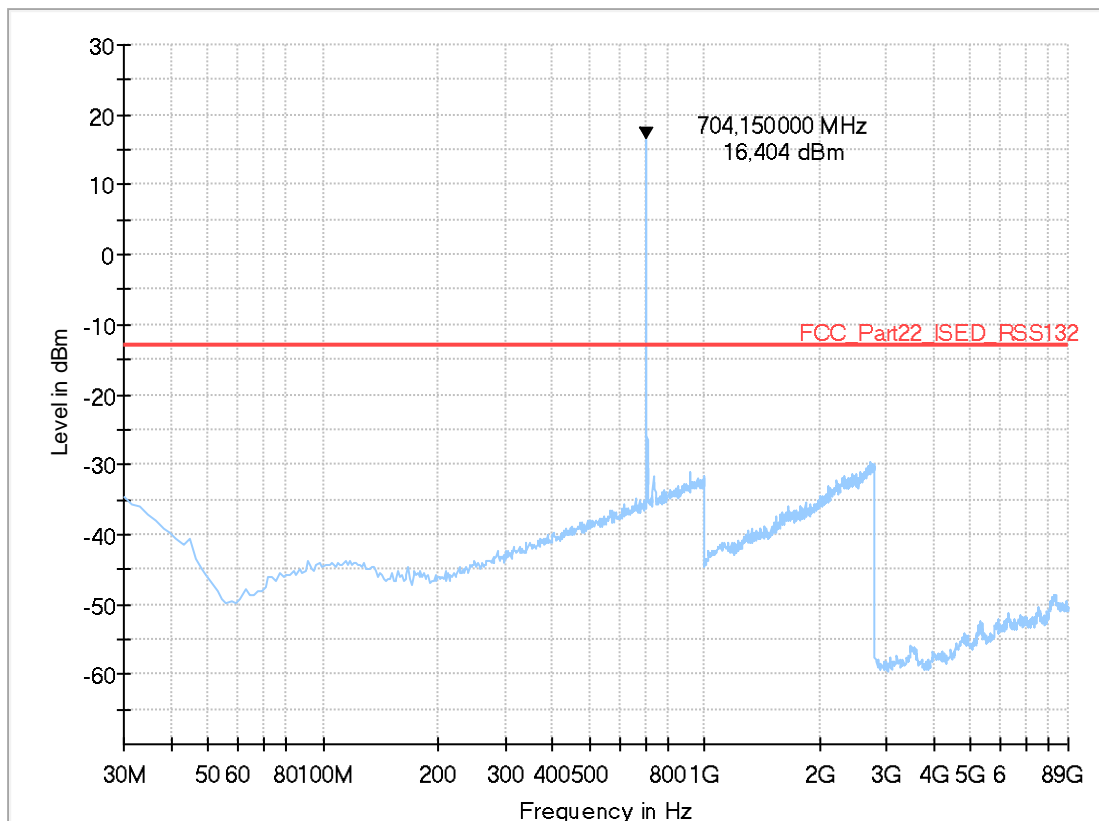
Test Description:	Radiated Spurious Emissions LTE FDDV
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 23095/ BW:10MHz / RB:1 / Position: low
Environmental Conditions:	Humidity: 48%RH; Temperature: 20°C
Operator:	HEI

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



8.10_RSE_LTE_FDD12_BW10_RB1low_1616QAM_CH23060

Common Information

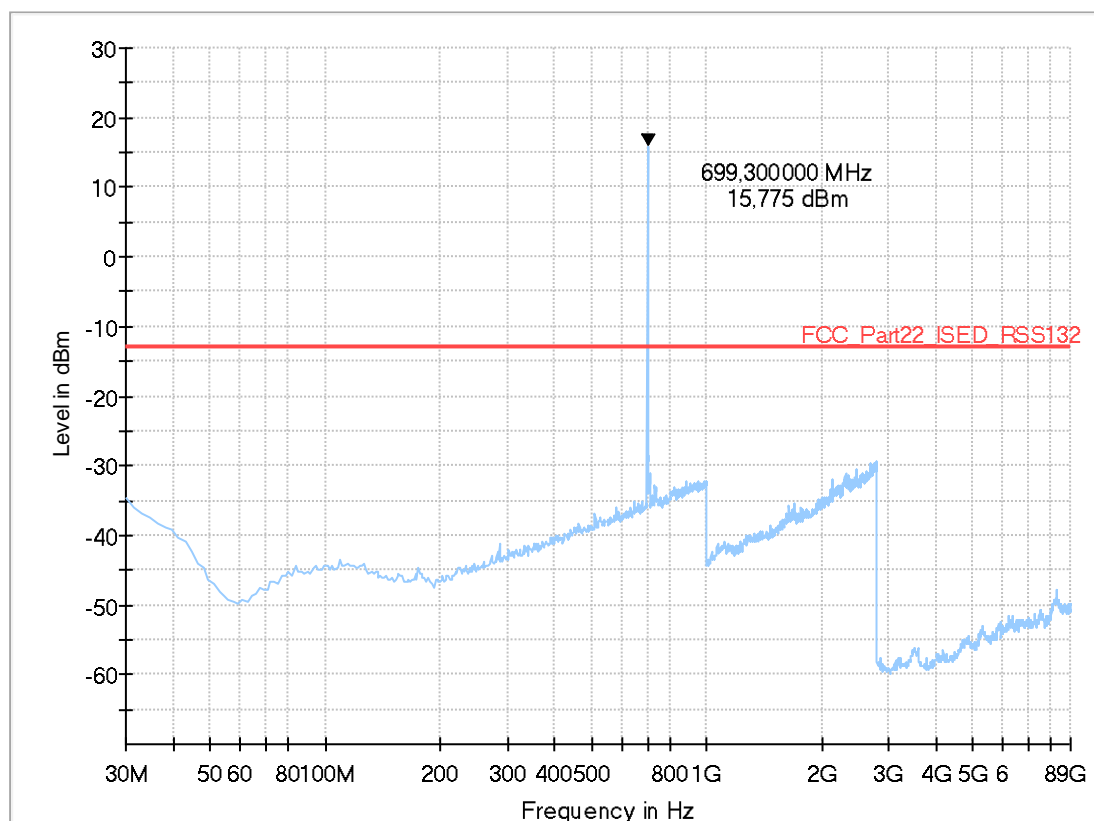
Test Description:	Radiated Spurious Emissions LTE FDDV
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 23060/ BW:10MHz / RB:1 / Position: low/Modulation:1616QAM
Environmental Conditions:	Humidity: 48%rH; Temperature: 20°C
Operator:	HEI

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)

HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



1.8. Radiated emissions – band-edge (LTE Band 2)

1.8.1. Low Band-Edge

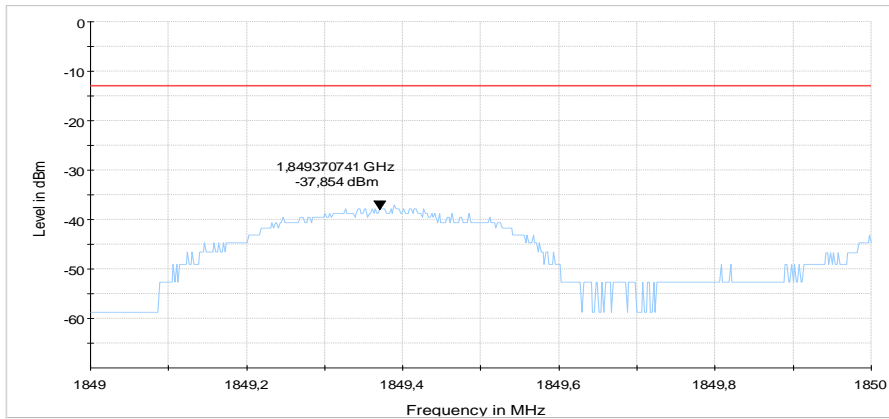


Diagram 1: 9.201a_CH18607_BW1.4_RB1low_QPSK

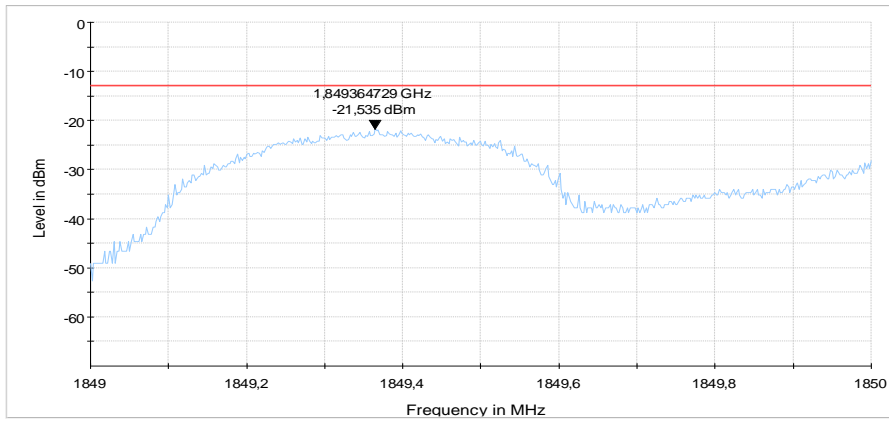


Diagram 2: 9.201b_CH18607_BW1.4_RB1low_16-QAM

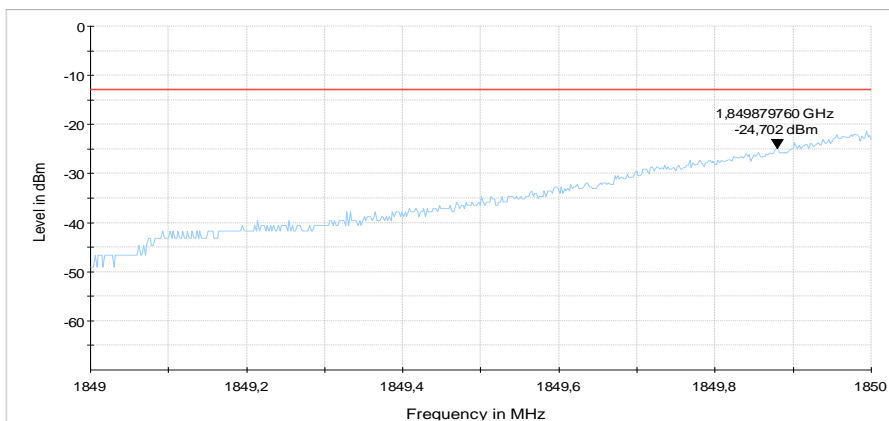
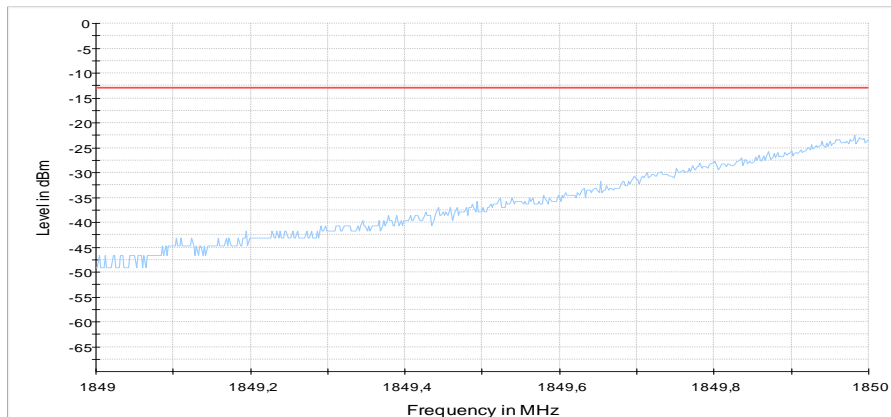
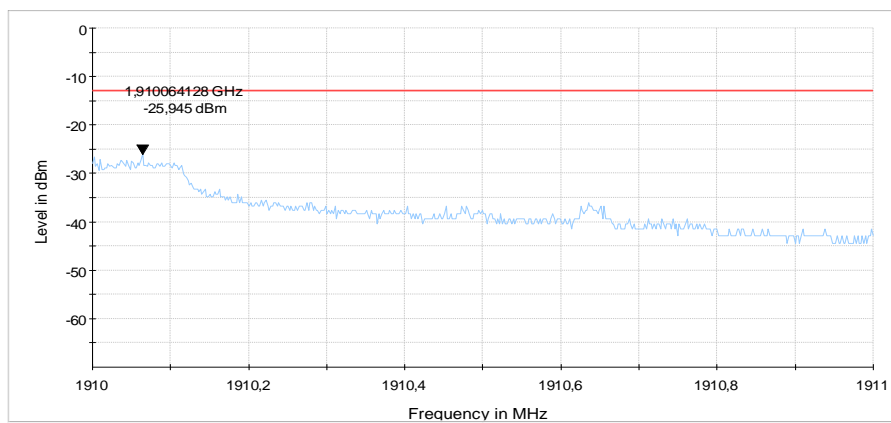
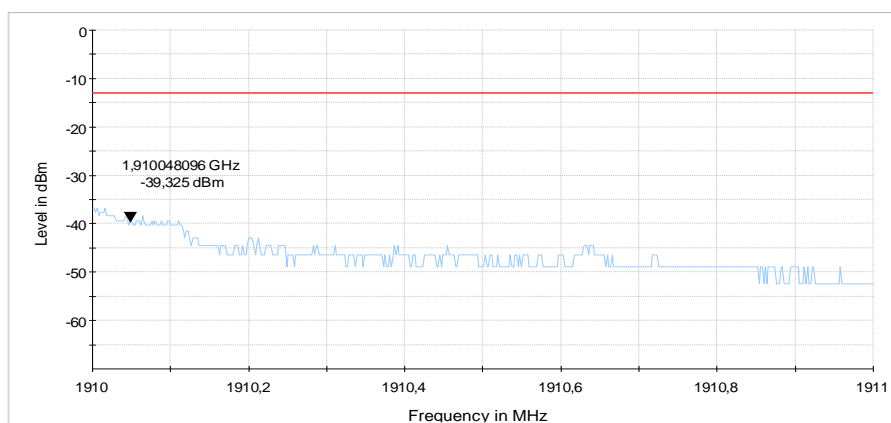
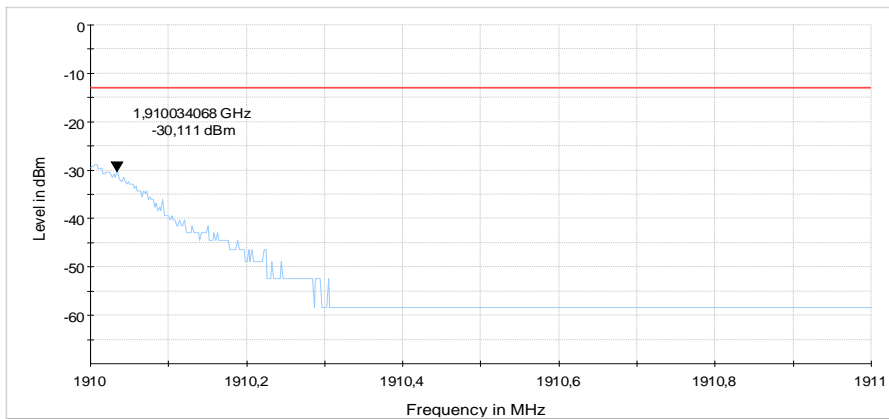
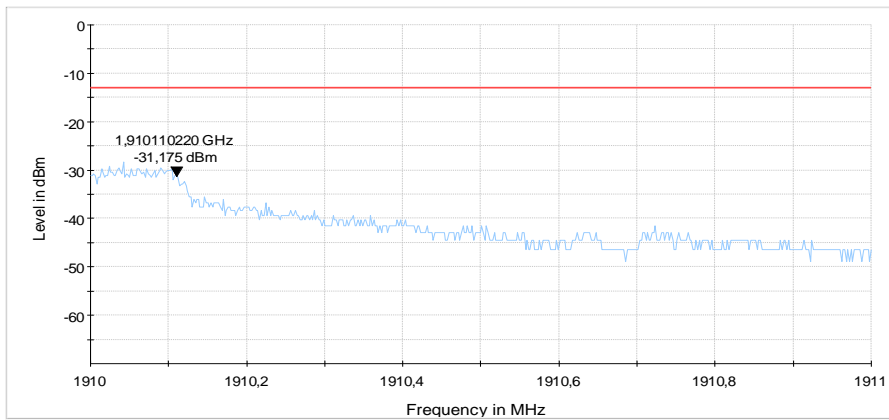
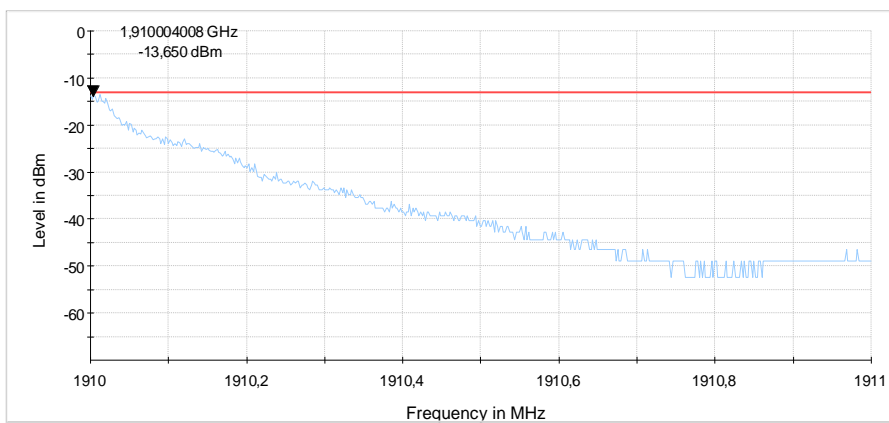
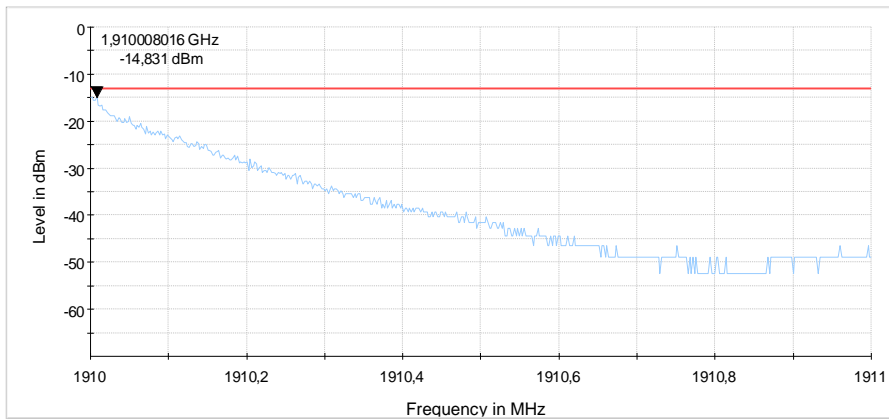
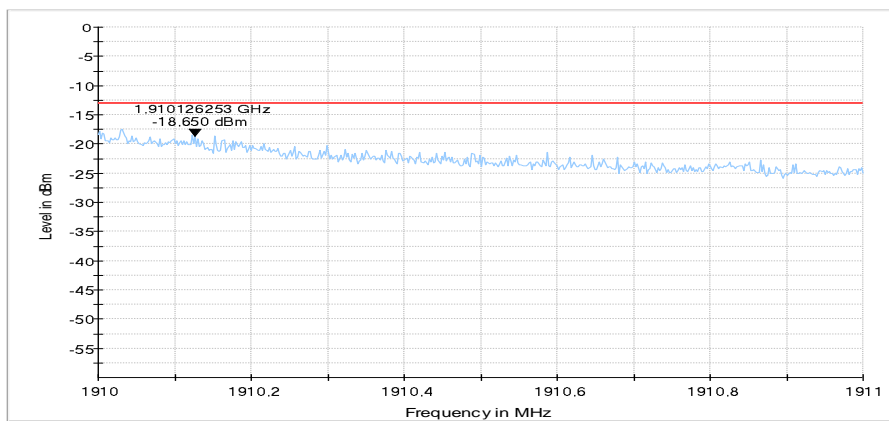
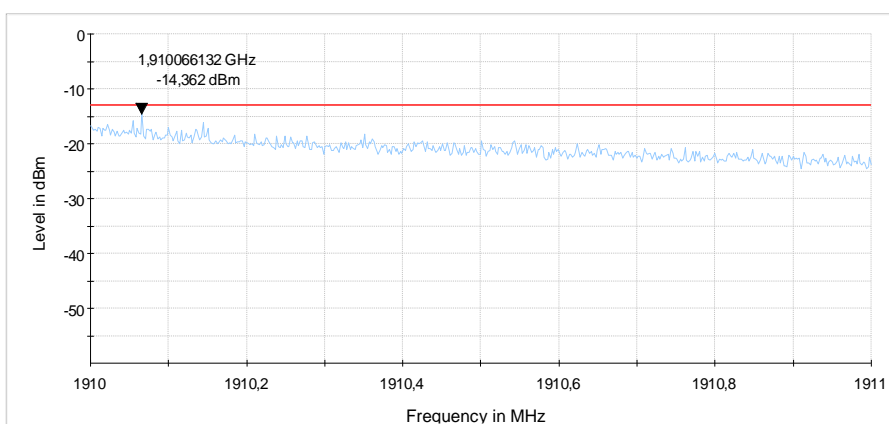


Diagram 3: 9.202a_CH18607_BW1.4_RB6low_QPSK

**Diagram 4: 9.202b_CH18607_BW1.4_RB6low_16-QAM****1.8.2. High Band-Edge****Diagram 5: 9.213a_CH19185_BW1,4_RB6high_QPSK****Diagram 6: 9.213b_CH19185_BW1,4_RB6high_16-QAM**

**Diagram 7: 9.214a_CH19185_BW1,4_RB1high_QPSK****Diagram 8: 9.214b_CH19185_BW1,4_RB1high_16-QAM****Diagram 9: 9.215a_CH19185_BW3_RB1high_QPSK**

**Diagram 10: 9.215b_CH19185_BW3_RB1high_16-QAM****Diagram 11: 9.216a_CH19185_BW3_RB15high_QPSK****Diagram 12: 9.216b_CH19185_BW3_RB15high_16-QAM**

1.9. Radiated emissions – band-edge (LTE Band 4)

1.9.1. Low Band-Edge

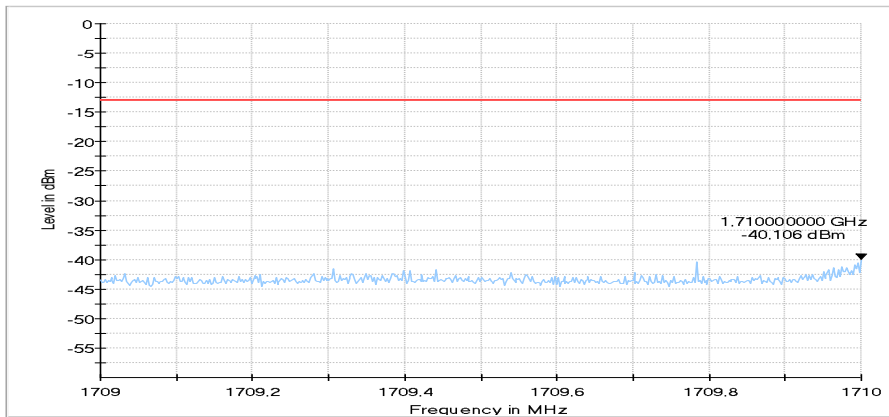


Diagram 13: 9.401a_LTE-4_Ch_19957_RB1low_BW1,4MHz_QPSK

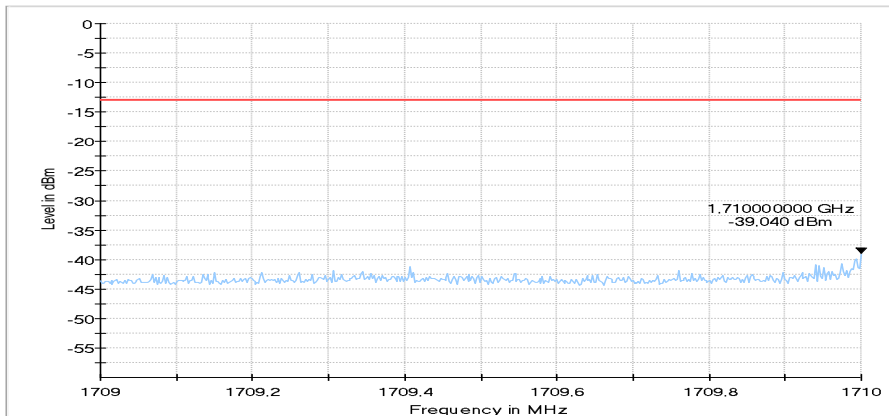


Diagram 14: 9.401b_LTE-4_Channel_19957_RB1low_BW1,4MHz_16QAM

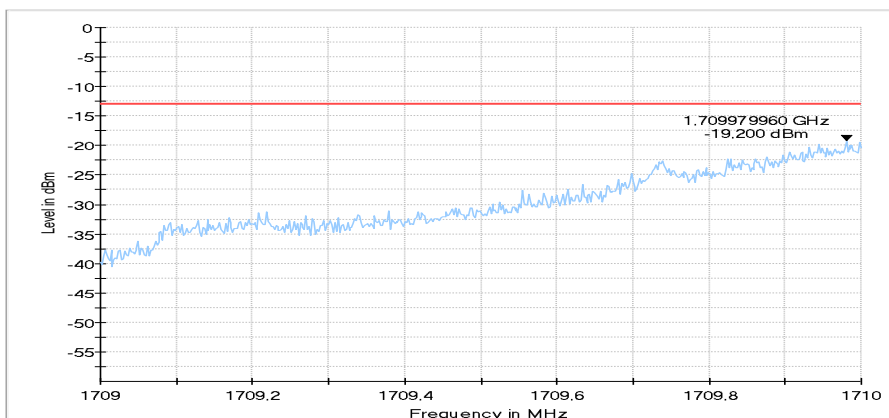
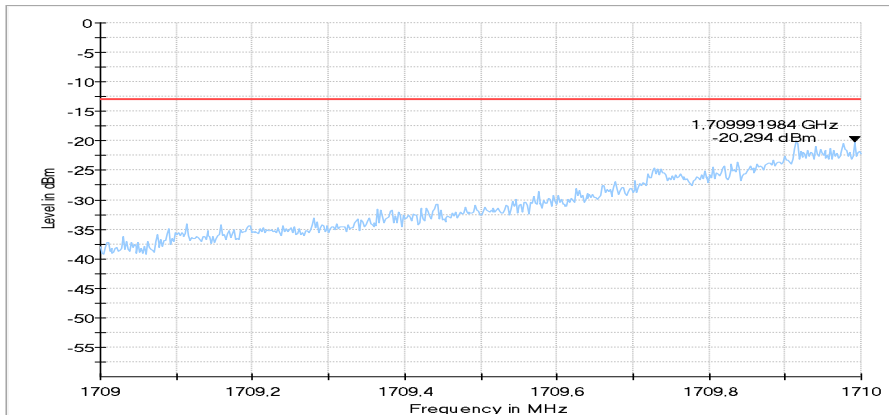
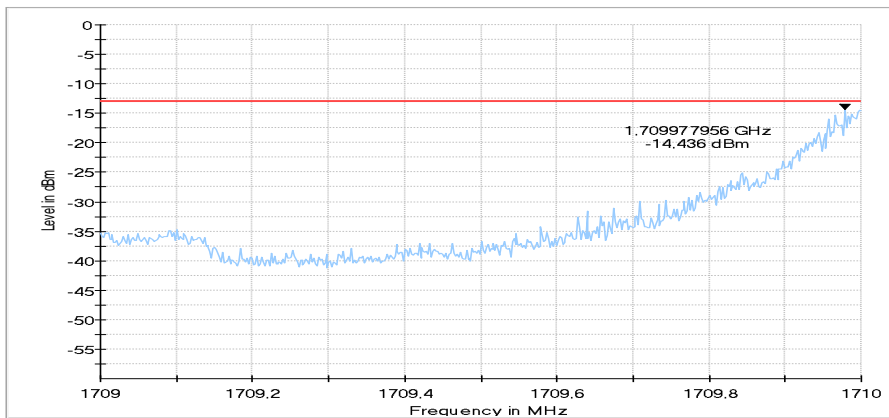
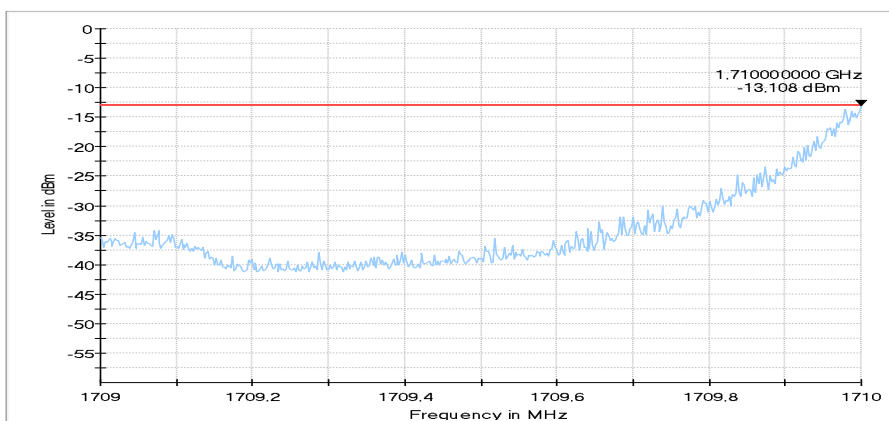


Diagram 15: 9.402a_LTE-4_Channel_19957_RB6low_BW1,4MHz_QPSK

**Diagram 16: 9.402b_LTE-4_Channel_19957_RB6low_BW1,4MHz_16QAM****Diagram 17: 9.403a_LTE-4_Channel_19965_RB1low_BW3MHz_QPSK****Diagram 18: 9.403b_LTE-4_Channel_19965_RB1low_BW3MHz_16QAM**

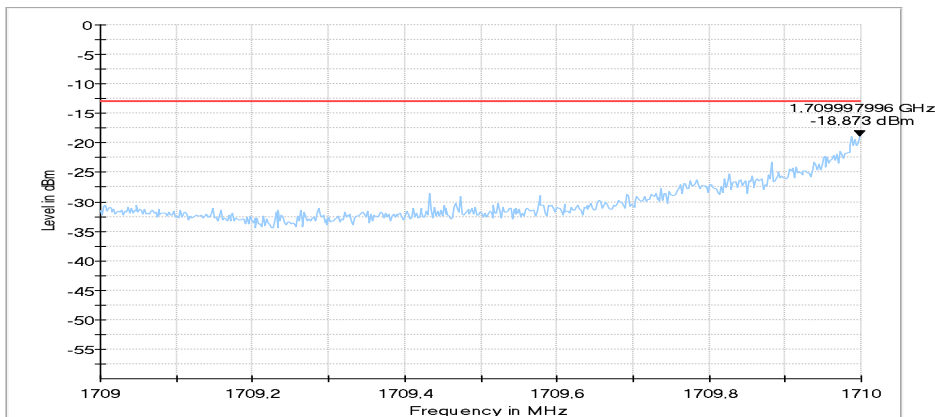


Diagram 19: 9.404a_LTE-4_Channel_19957_RB15low_BW3MHz_QPSK

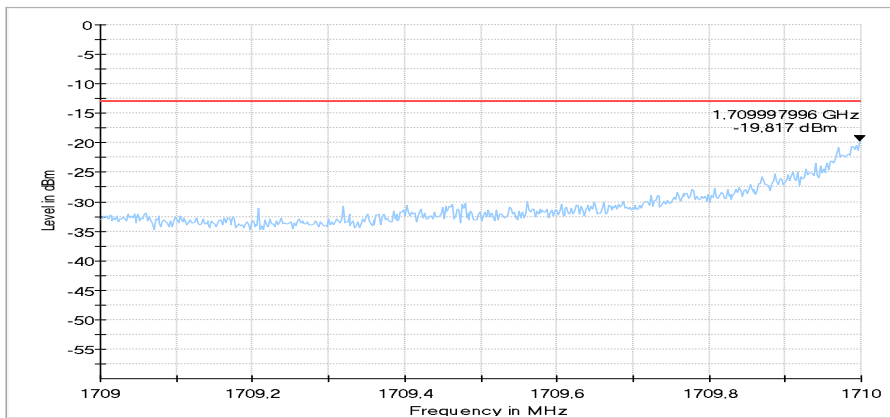


Diagram 20: 9.404b_LTE-4_Channel_19965_RB15low_BW3MHz_16QAM

1.9.2. High Band-Edge

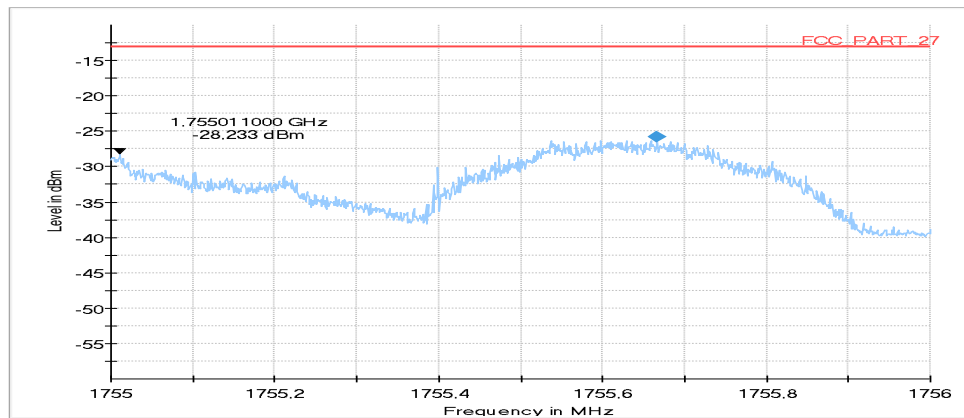
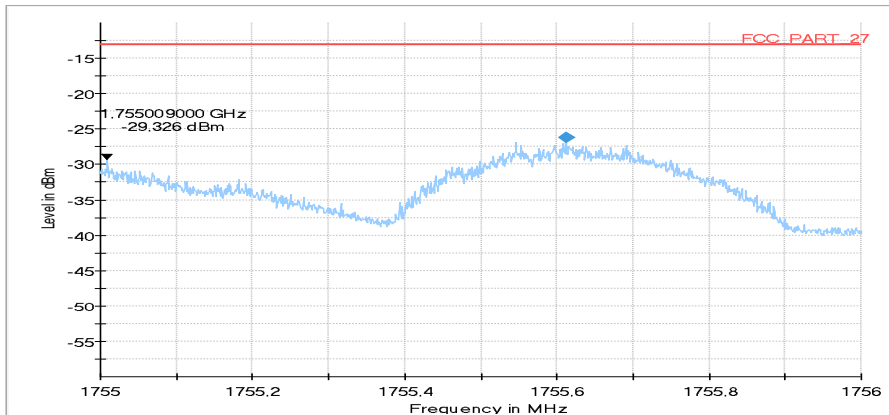
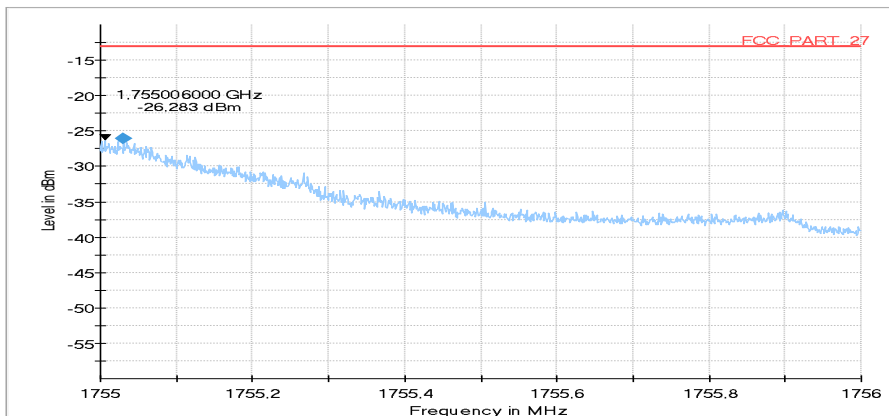
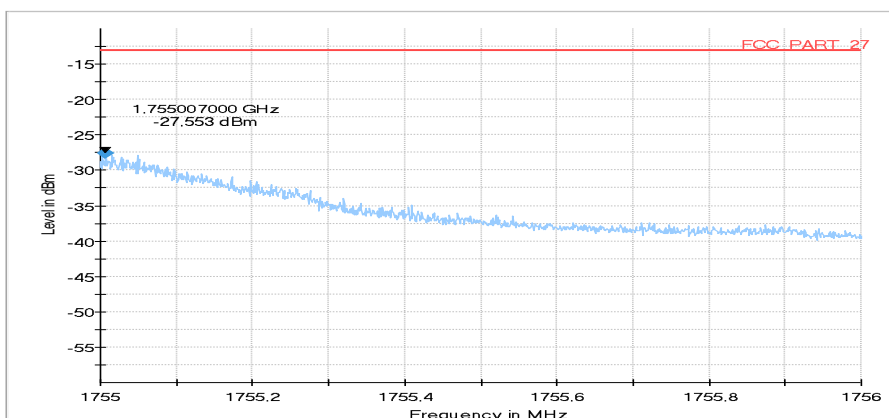
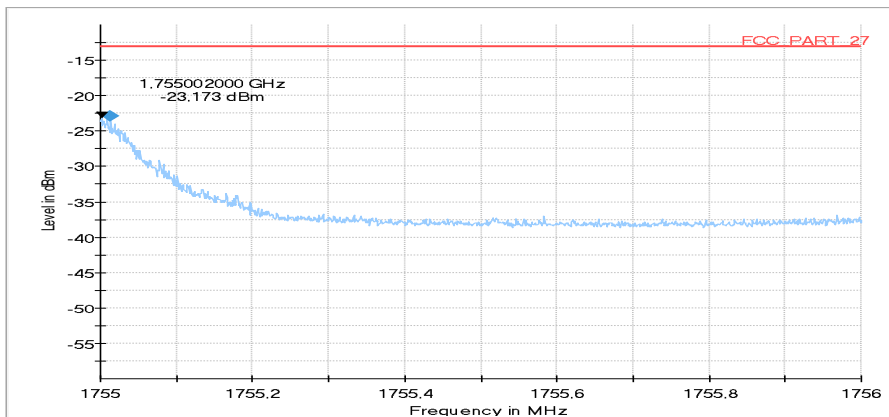
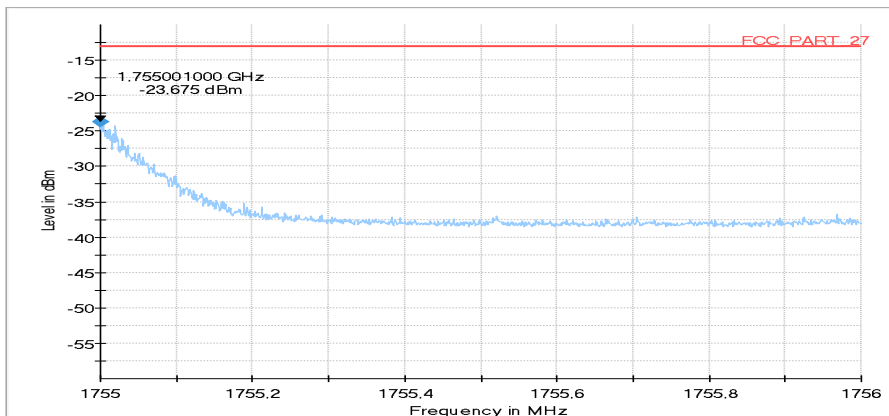
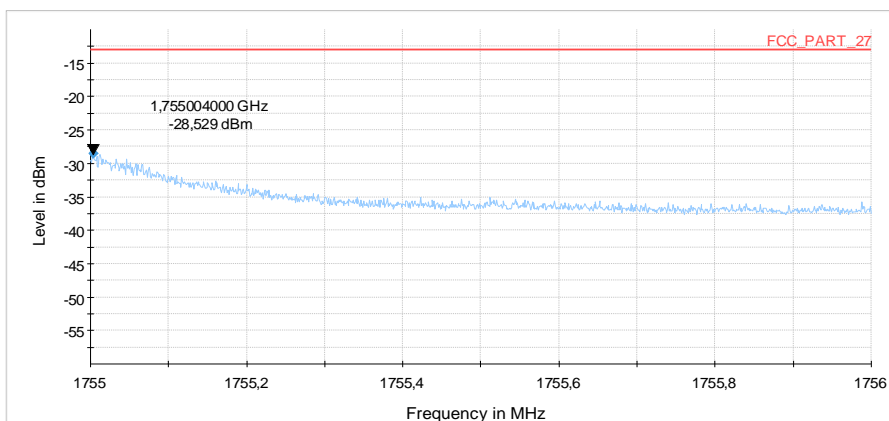
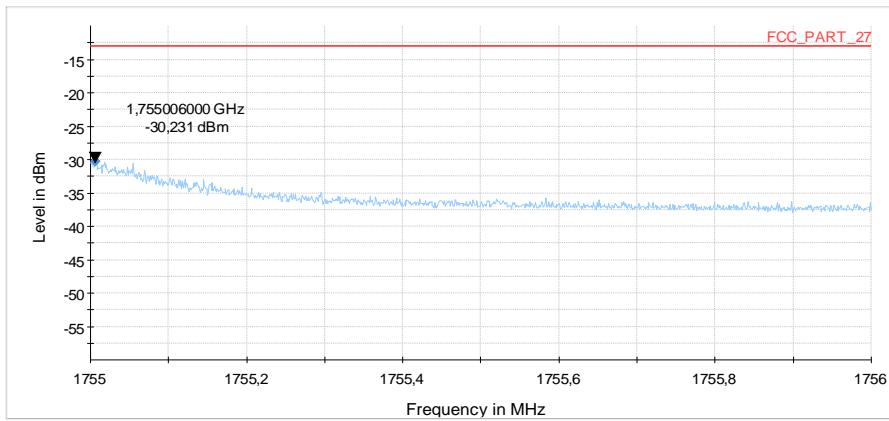


Diagram 21: 9.413a_LTE-4_Channel_20393_RB1high_BW1,4MHz_Modulation_QPSK

**Diagram 22: 9.413b_LTE-4_Channel_20393_RB1high_BW1,4MHz_Modulation_16QAM****Diagram 23: 9.414a_LTE-4_20393_RB6high_BW1,4MHz_QPSK****Diagram 24: 9.414b_LTE-4_Channel_20393_RB6high_BW1,4MHz_16QAM**

**Diagram 25: 9.415a_LTE-4_Channel_20385_RB1high_BW3MHz_QPSK****Diagram 26: 9.415b_LTE-4_Channel_20385_RB1high_BW3MHz_16QAM****Diagram 27: 9.416a_LTE-4_Channel_20385_RB15high_BW3MHz_QPSK**

**Diagram 28: 9.416b_LTE-4_Channel_20385_RB15high_BW3MHz_16QAM**

1.10. Radiated emissions – band-edge (LTE Band 5)

1.10.1. Low Band-Edge

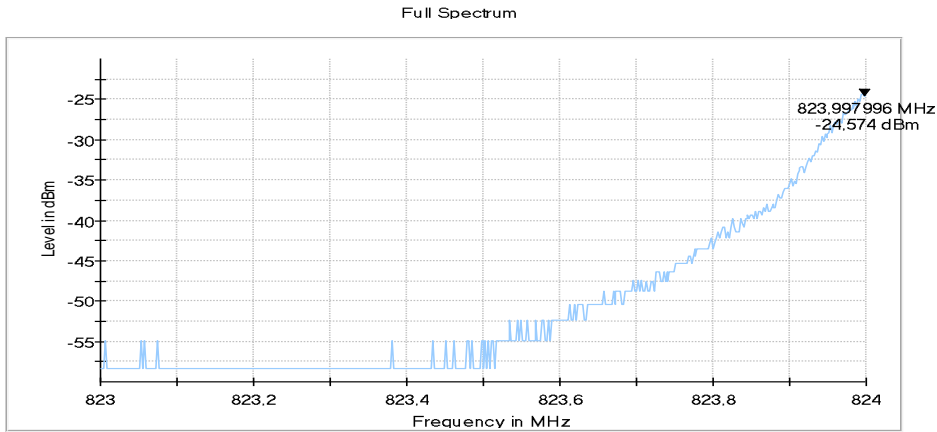


Diagram 29: 9.503a_LTE-5_channel_20415_RB1Low_BW3MHz_QPSK

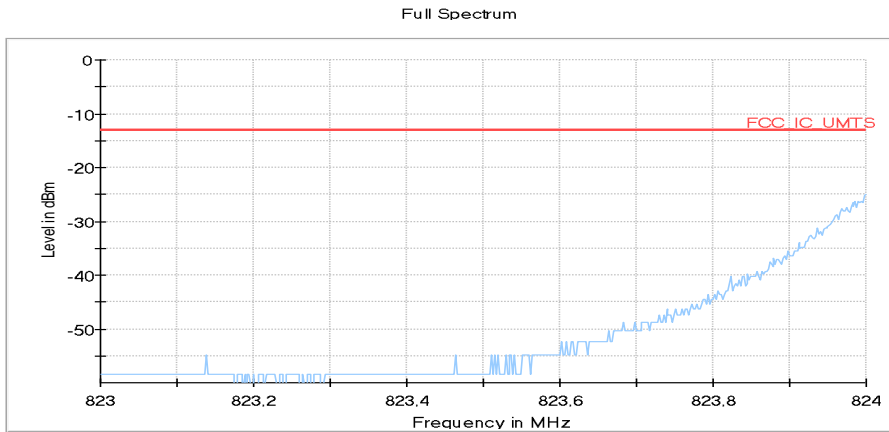


Diagram 30: 9.503b_LTE-5_channel_20415_RB1Low_BW3MHz_16QAM

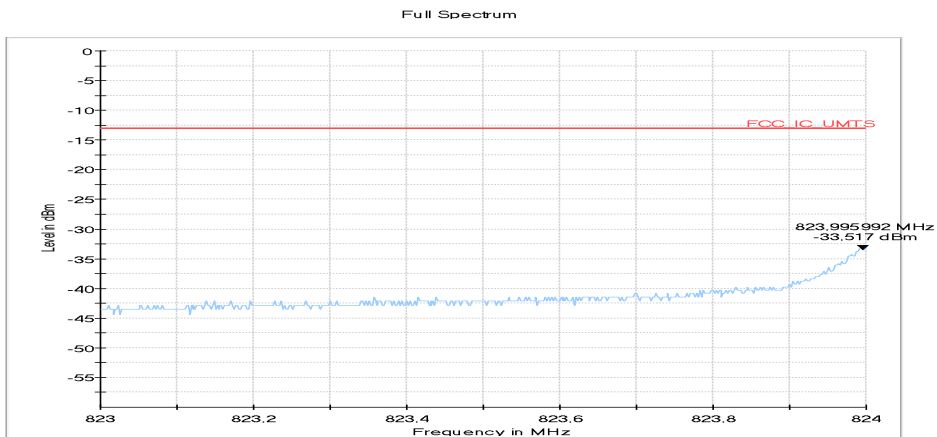
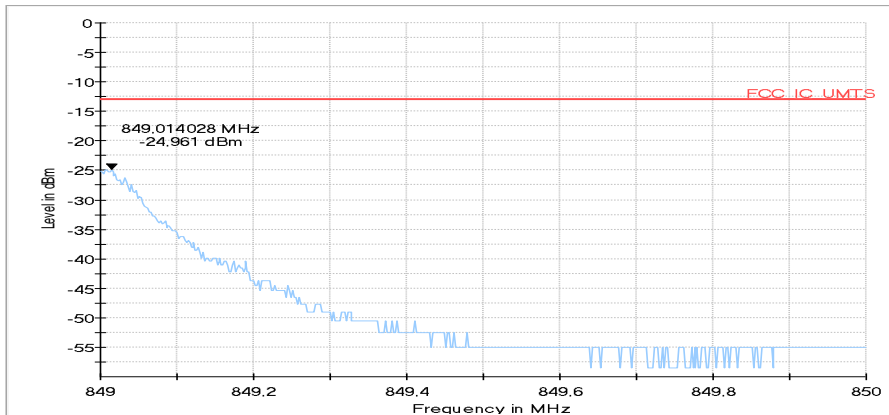
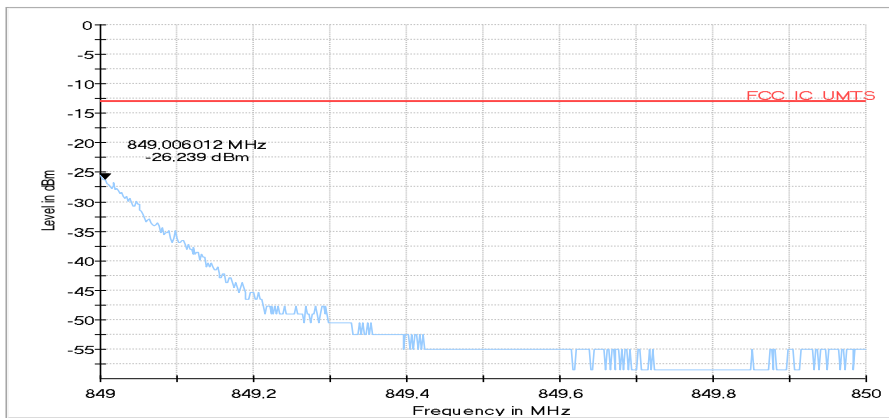
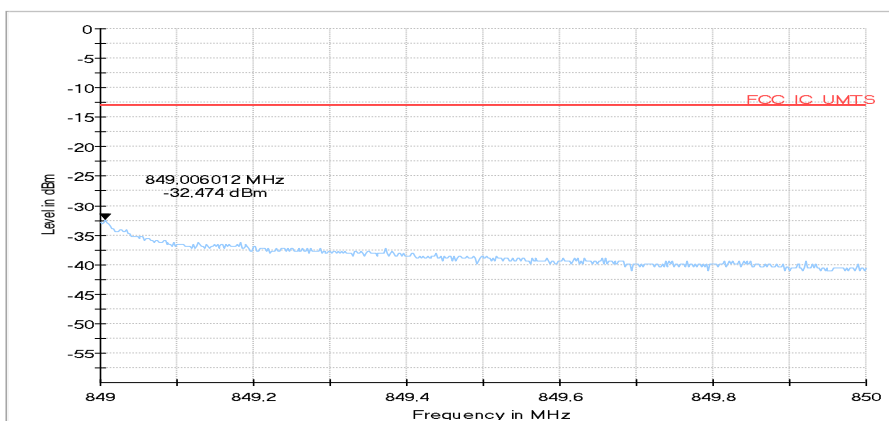
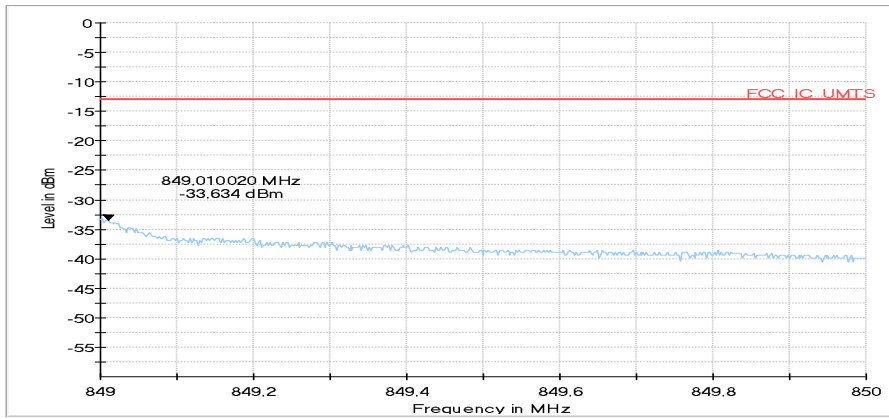


Diagram 31: 9.504b_LTE-5_channel_20415_RB15Low_BW3MHz_16-QAM

1.10.2. High Band-Edge**Diagram 32: 9.512a_LTE-5_channel_20635_RB1high_BW3MHz_QPSK****Diagram 33: 9.512b_LTE-5_channel_20635_RB1high_BW3MHz_16QAM****Diagram 34: 9.513a_LTE-5_channel_20635_RB15high_BW3MHz_QPSK**

**Diagram 35: 9.513b_LTE-5_20635_RB15high_BW3MHz_16QAM**

1.11. Radiated emissions – band-edge (LTE Band 7)

1.11.1. Low Band-Edge

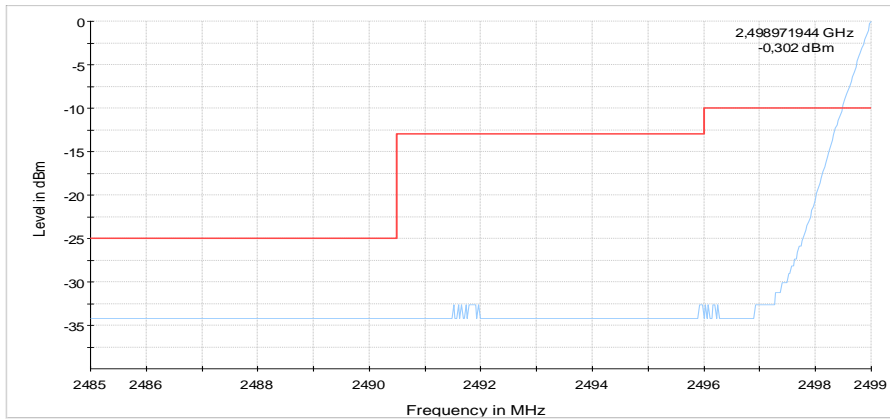


Diagram 36: 9.701a_SW1_CH20775_BW5_RB1_LOW_QPSK

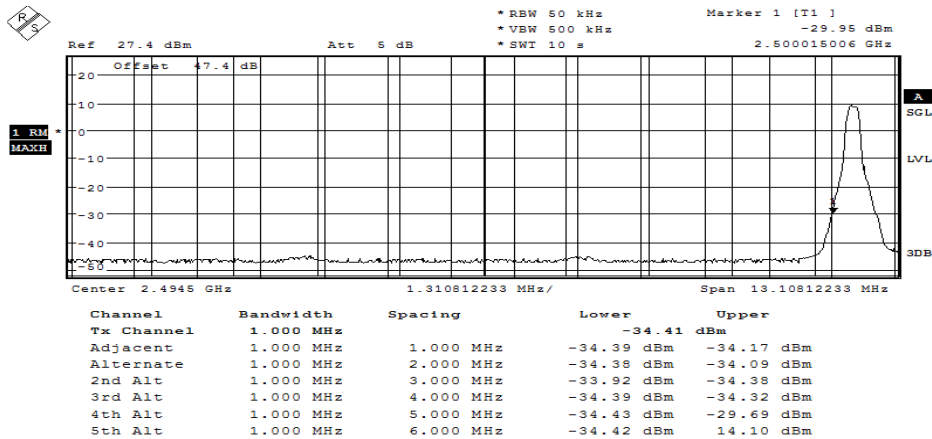


Diagram 37: 9.701a_SW1_CH20775_BW5_RB1_LOW_QPSK_intBW

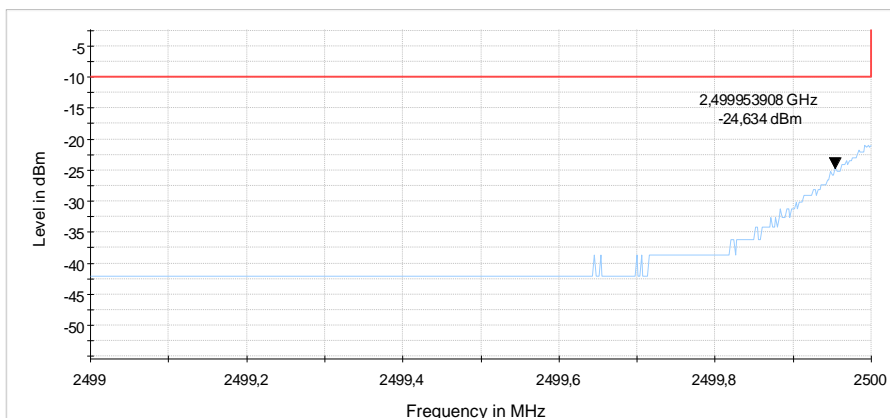


Diagram 38: 9.701a_SW2_CH20775_BW5_RB1_LOW_QPSK

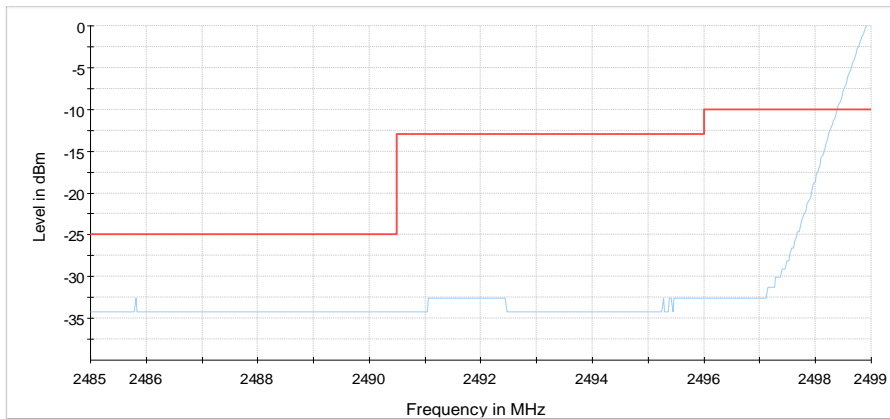


Diagram 39: 9.701b_SW1_CH20775_BW5_RB1_LOW_16_QAM

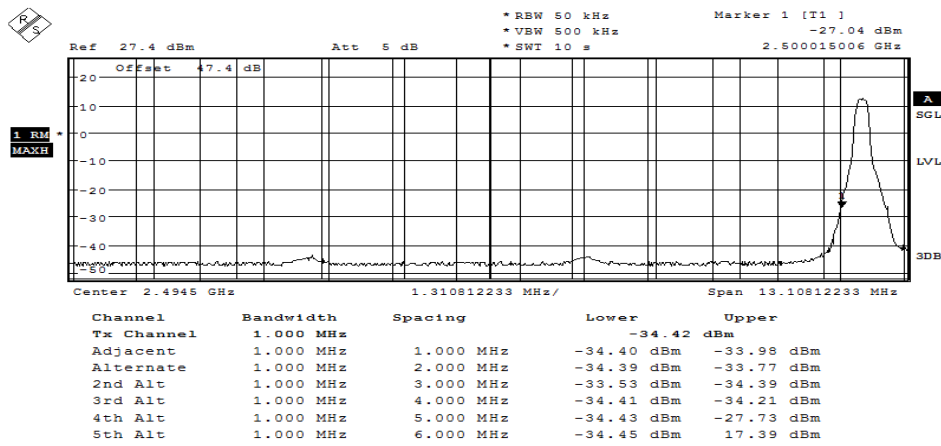


Diagram 40: 9.701b_SW1_CH20775_BW5_RB1_LOW_16_QAM_intBW

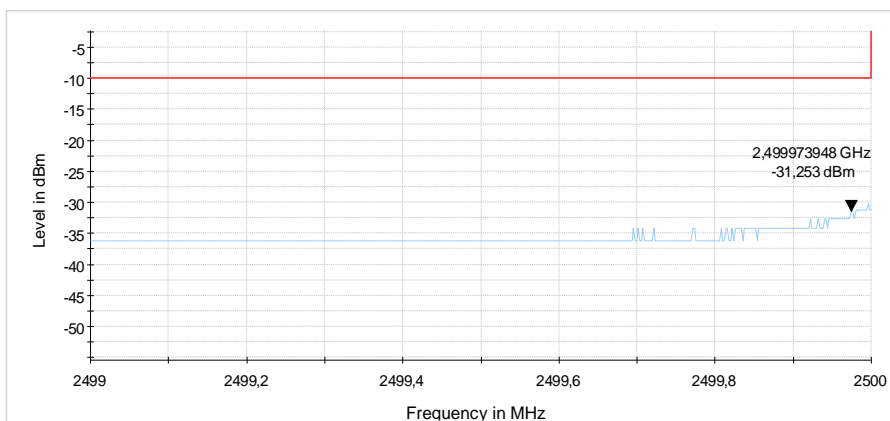


Diagram 41: 9.701b_SW2_CH20775_BW5_RB1_LOW_16-QAM

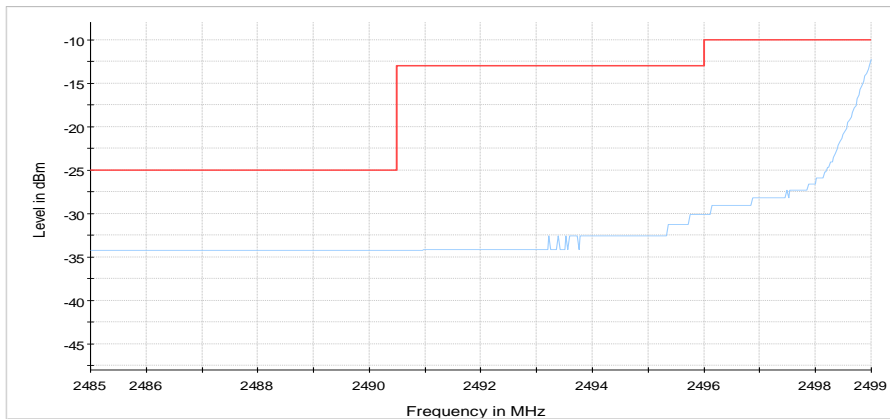


Diagram 42: 9.702a_SW1_CH20775_BW5_RB25_LOW_QPSK

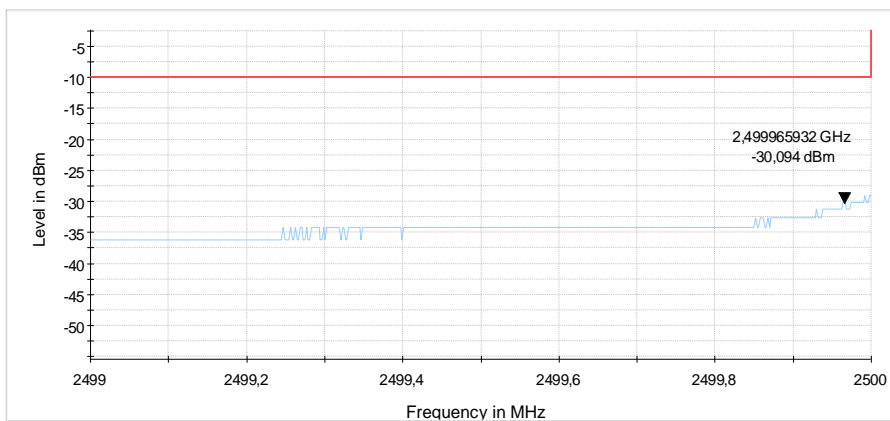


Diagram 43: 9.702a_SW2_CH20775_BW5_RB25_LOW_QPSK

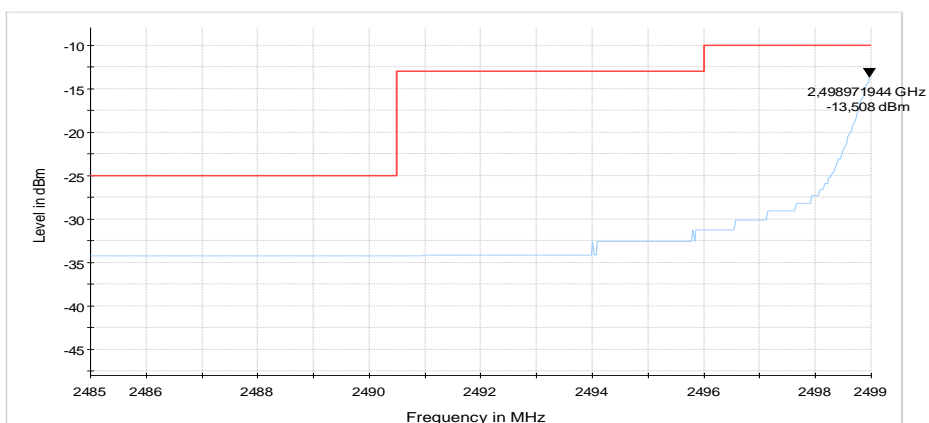


Diagram 44: 9.702b_SW1_CH20775_BW5_RB25_LOW_16-QAM

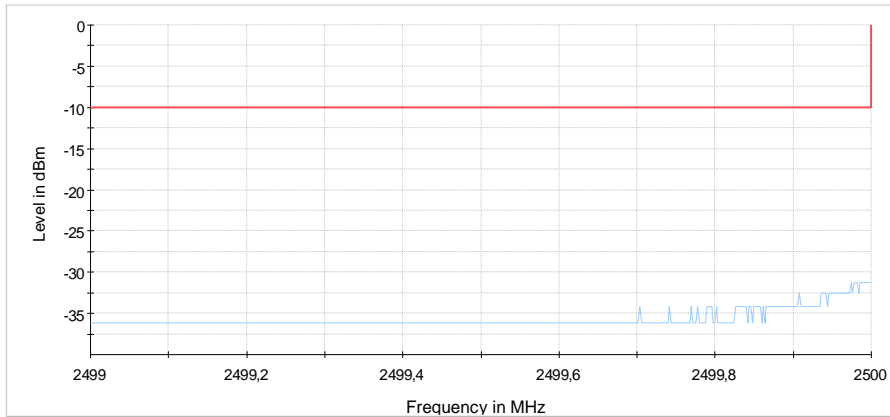


Diagram 45: 9.702b_SW2_CH20775_BW5_RB25_LOW_16-QAM

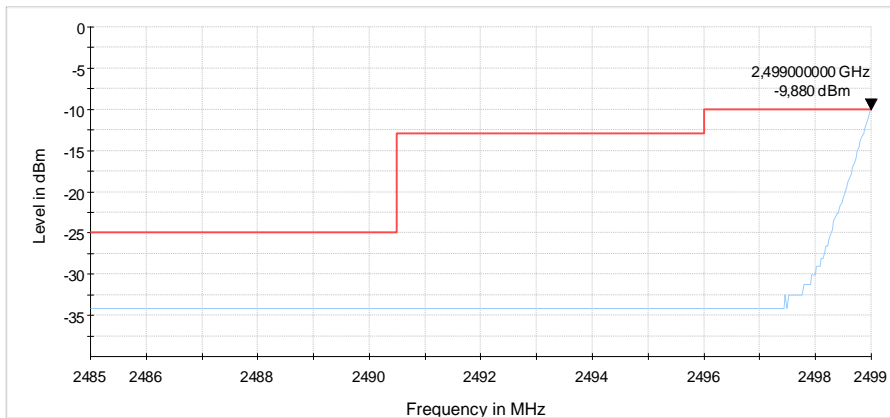


Diagram 46: 9.705a_SW1_CH20825_BW15_RB1_LOW_QPSK

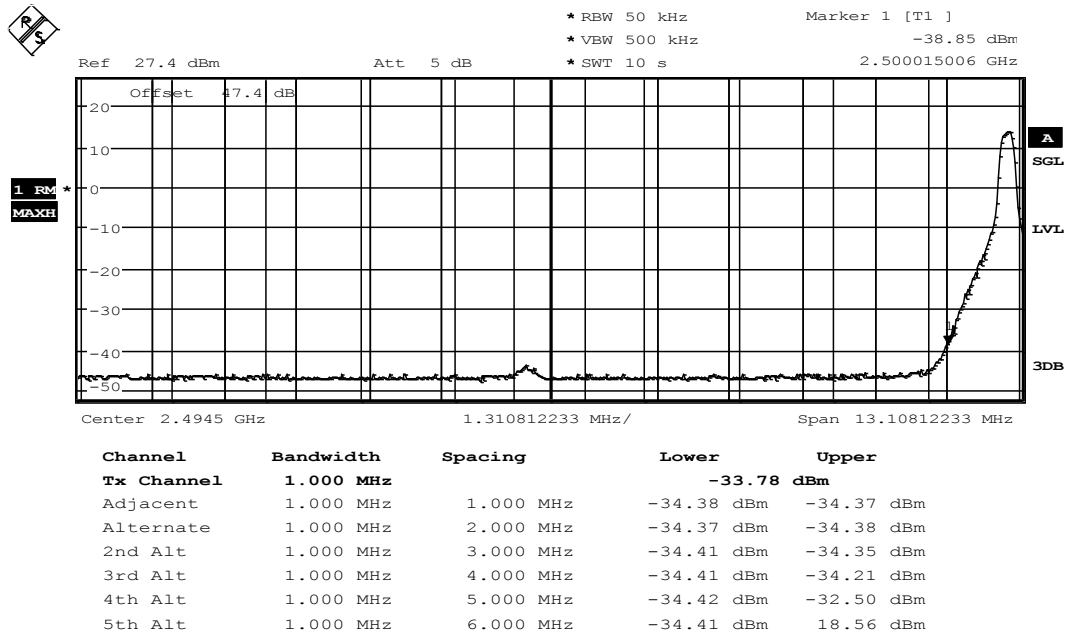
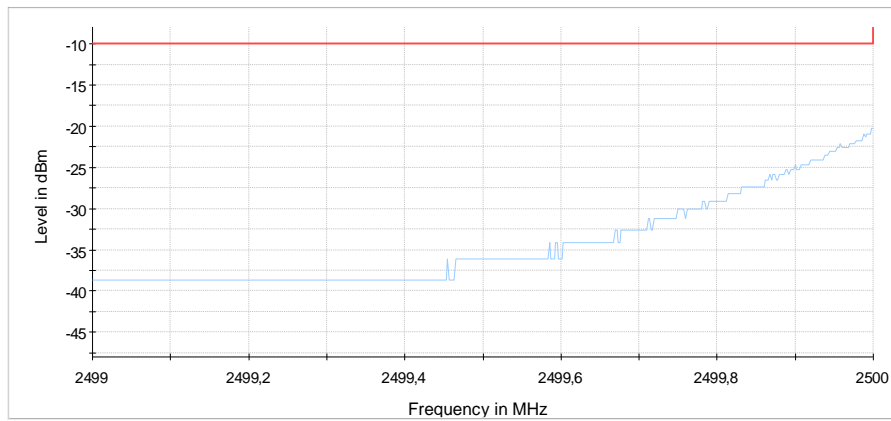


Diagram 47: 9.705a_SW1_CH20825_BW15_RB1_LOW_QPSK_intBW

**Diagram 48: 9.705a_SW2_CH20825_BW15_RB1_LOW_QPSK**

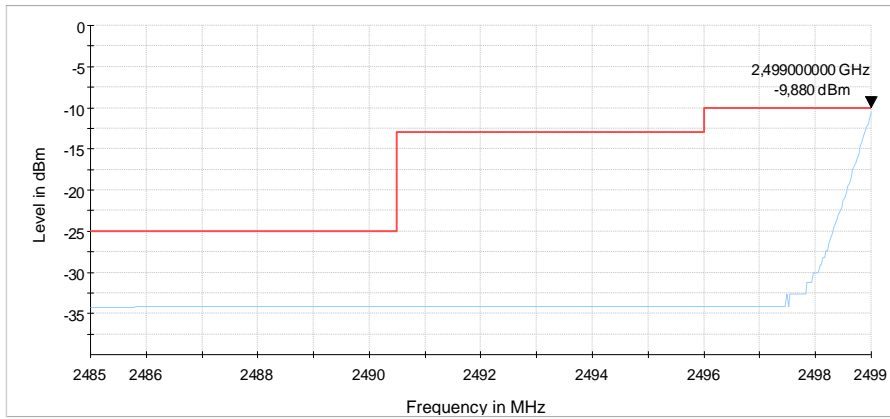


Diagram 49: 9.705b_SW1_CH20825_BW15_RB1_LOW_16-QAM

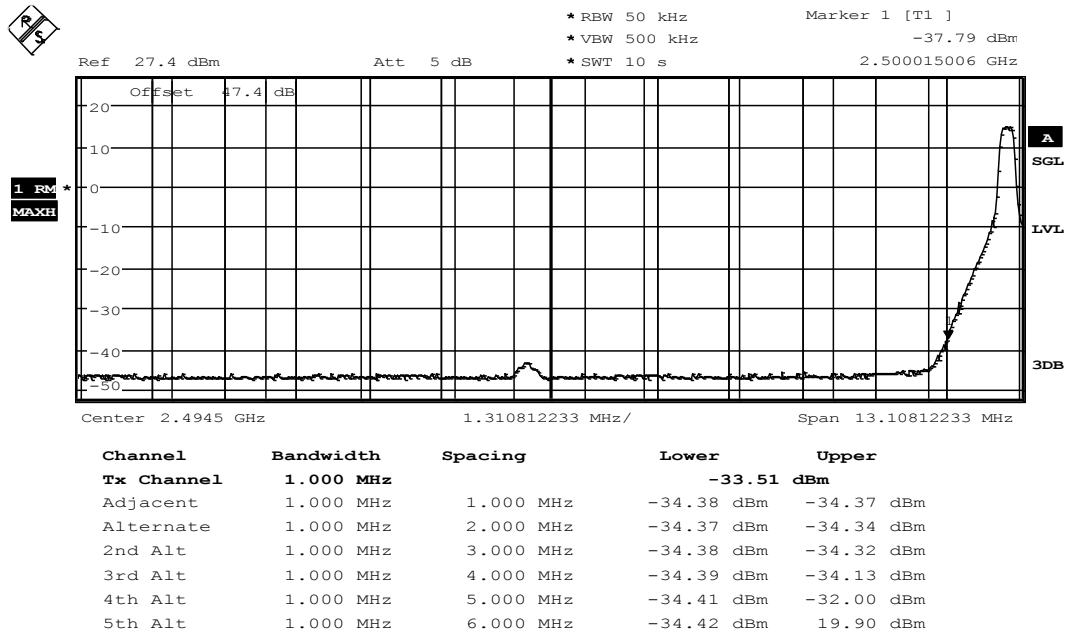


Diagram 50: 9.705b_SW1_CH20825_BW15_RB1_LOW_16-QAM_intBW

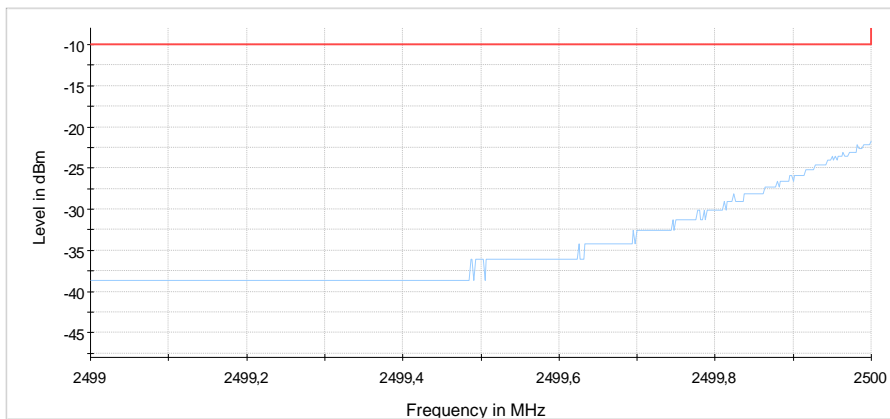


Diagram 51: 9.705b_SW2_CH20825_BW15_RB1_LOW_16-QAM

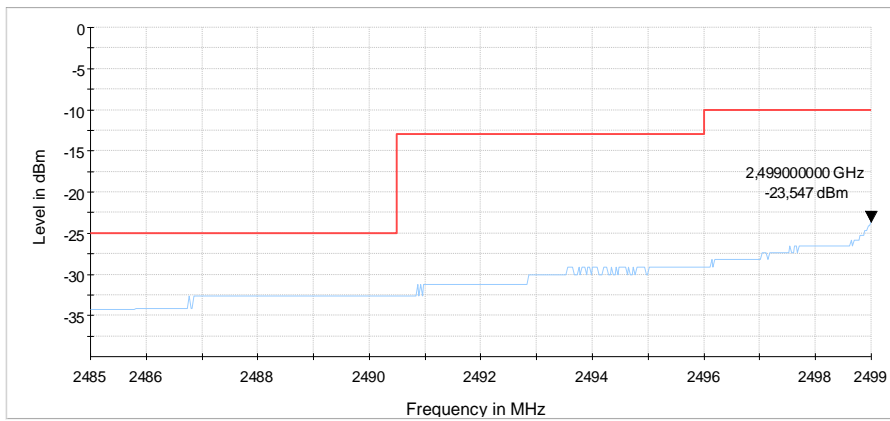
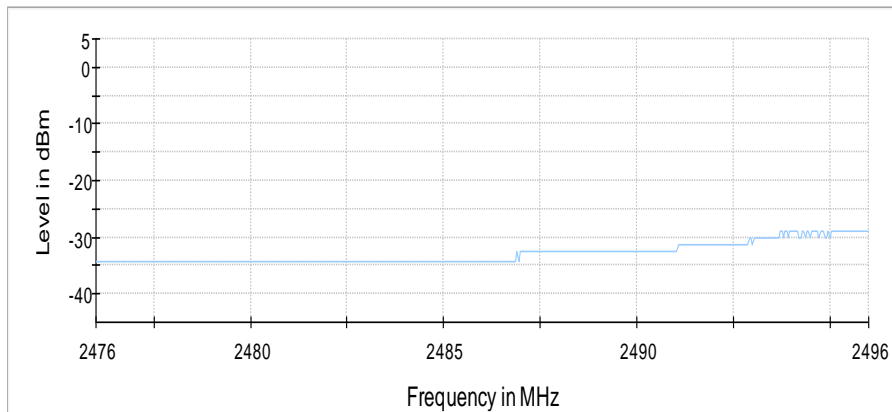
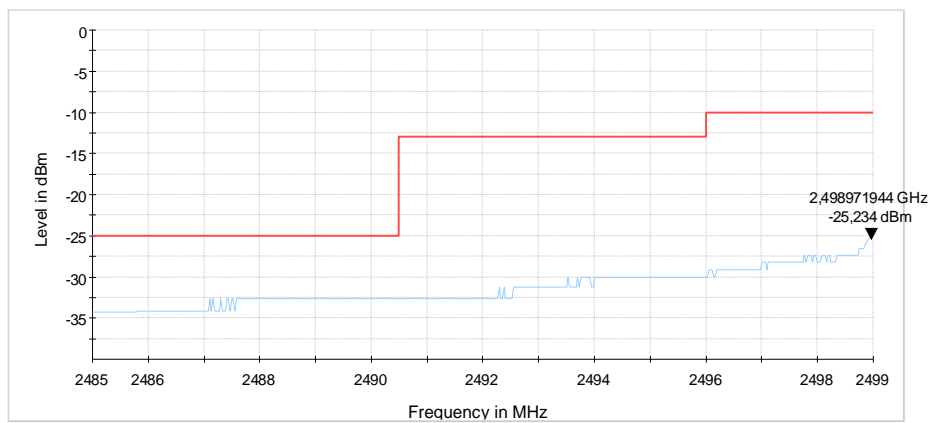
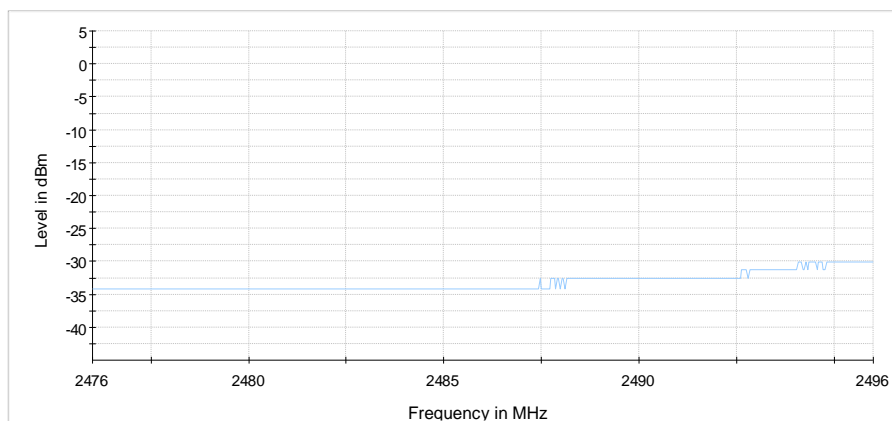


Diagram 52: 9.706a_SW1_CH20825_BW15_RB75_LOW_QPSK

**Diagram 53: 9.706a_SW2_CH20825_BW15_RB75_LOW_QPSK****Diagram 54: 9.707b_SW1_CH20825_BW15_RB75_LOW_16-QAM****Diagram 55: 9.707b_SW2_CH20825_BW15_RB75_LOW_16-QAM**

1.11.2. High Band-Edge

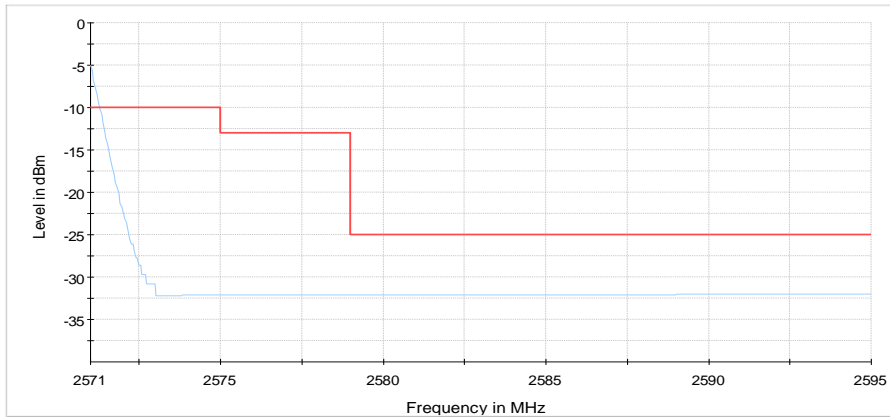


Diagram 56: 9.712a_SW1_CH21400_BW10_RB1_HIGH_QPSK

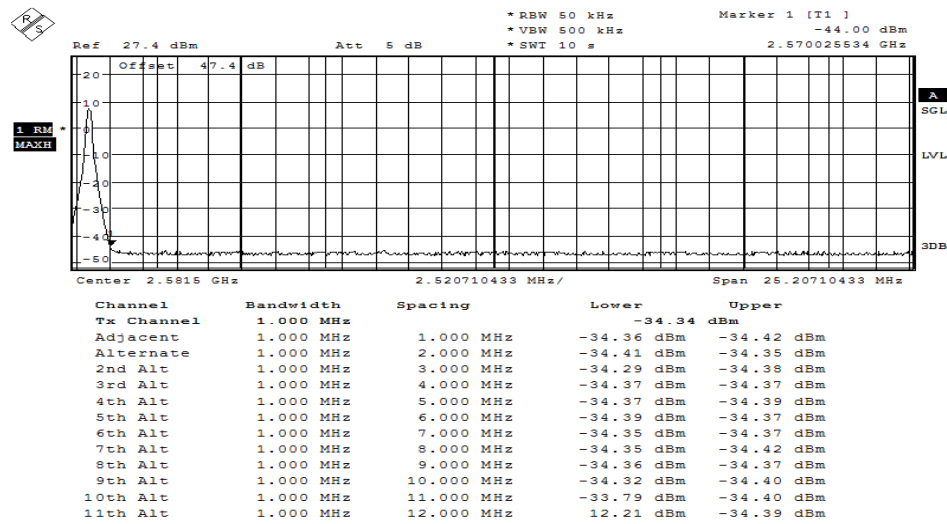


Diagram 57: 9.712a_SW1_CH21400_BW10_RB1_HIGH_QPSK_intBW

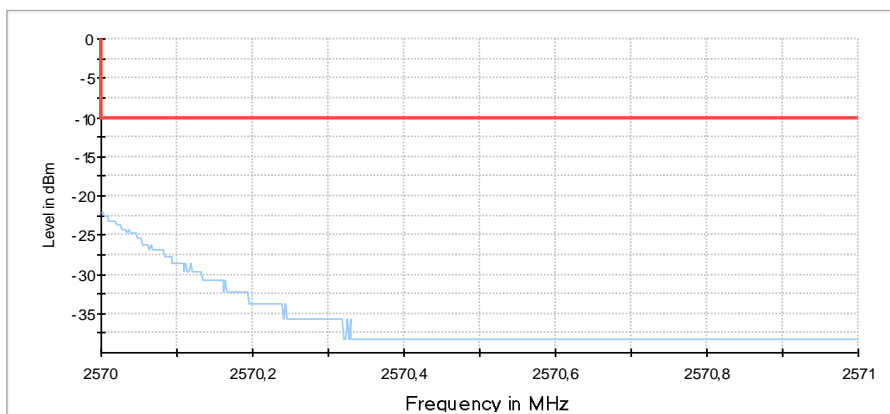


Diagram 58: 9.712a_SW2_CH21400_BW10_RB1_HIGH_QPSK

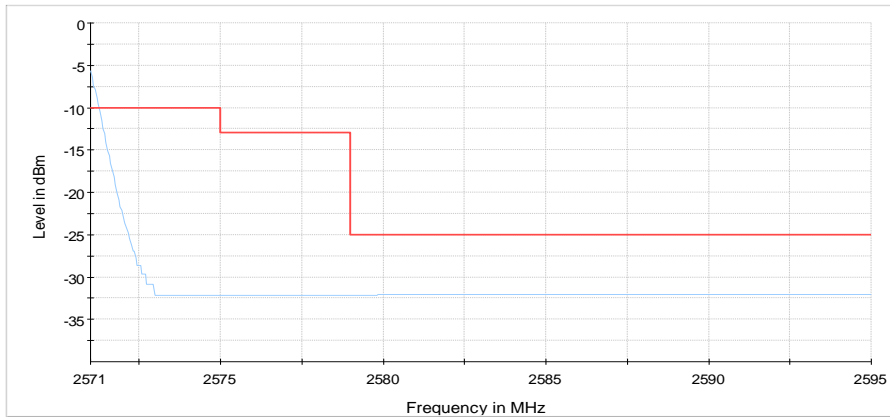


Diagram 59: 9.712b_SW1_CH21400_BW10_RB1_HIGH_16_QAM

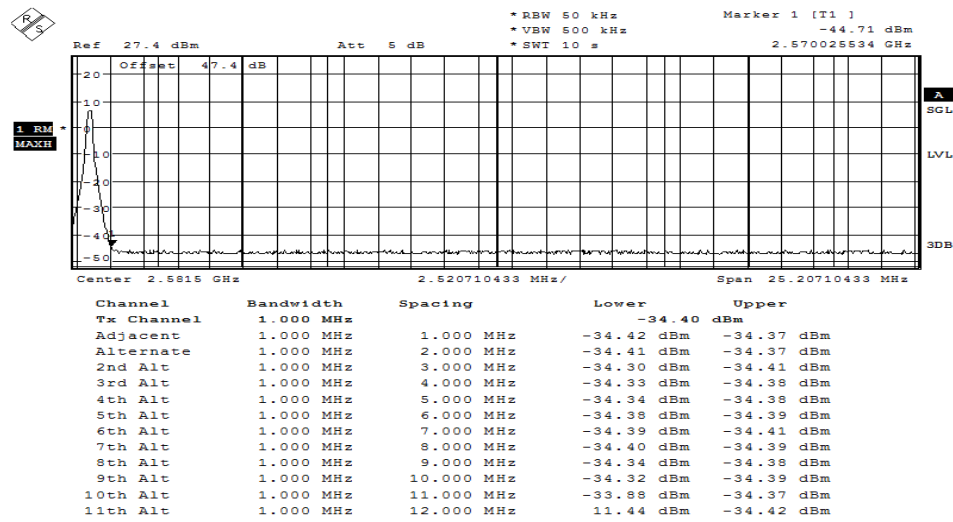


Diagram 60: 9.712b_SW1_CH21400_BW10_RB1_HIGH_16_QAM_intBW

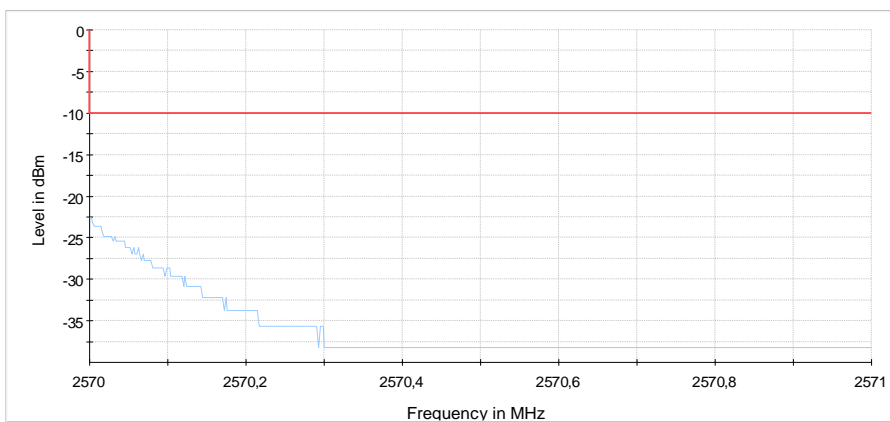


Diagram 61: 9.712b_SW2_CH21400_BW10_RB1_HIGH_16-QAM

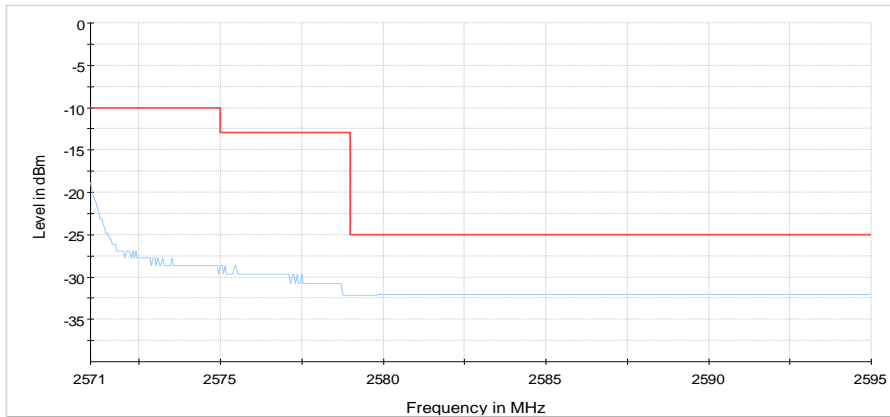


Diagram 62: 9.713a_SW1_CH21400_BW10_RB1_HIGH_QPSK

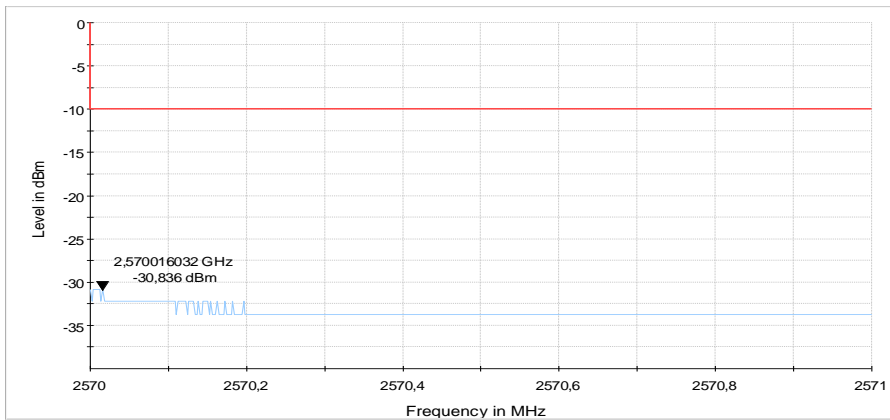


Diagram 63: 9.713a_SW2_CH21400_BW10_RB50_HIGH_QPSK

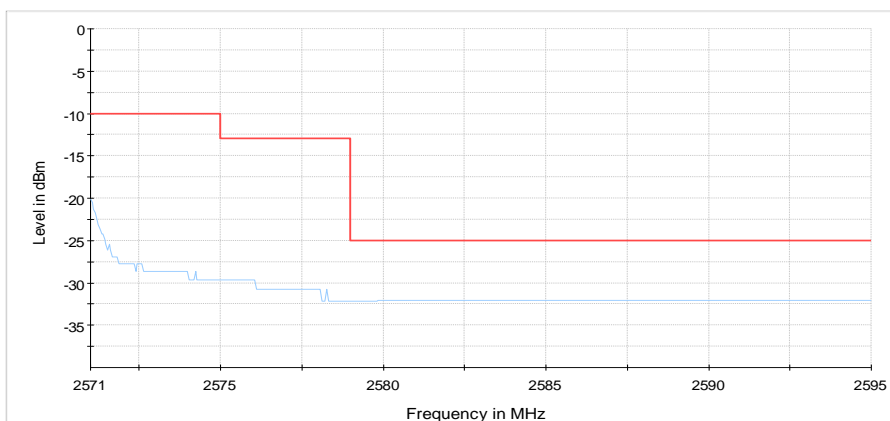
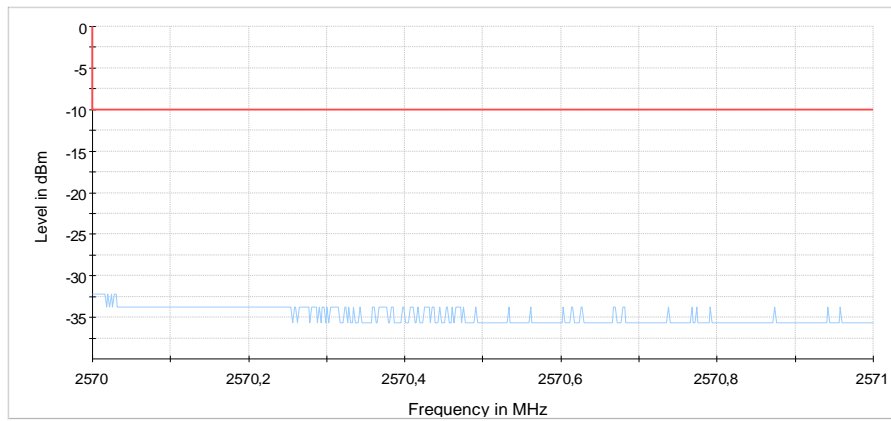
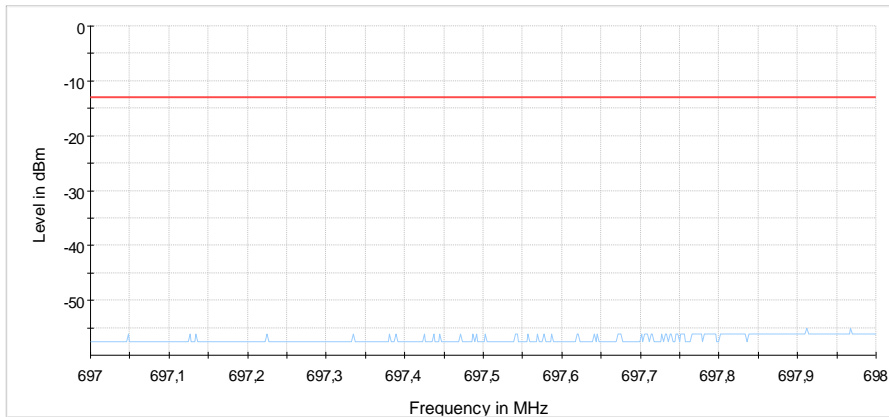
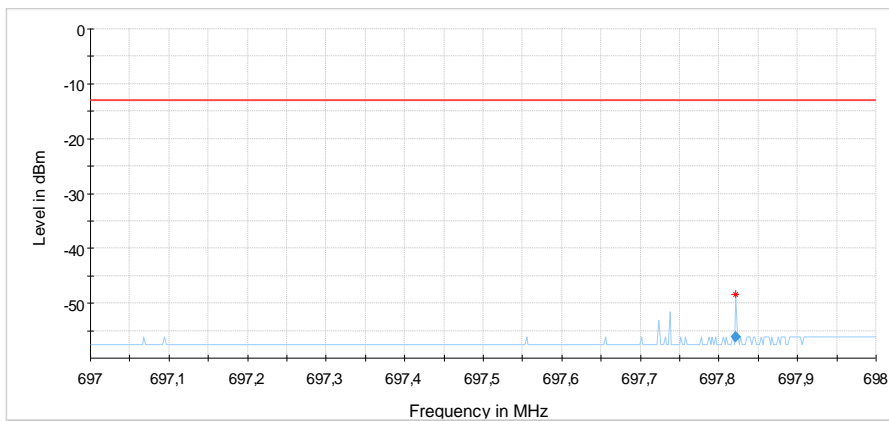
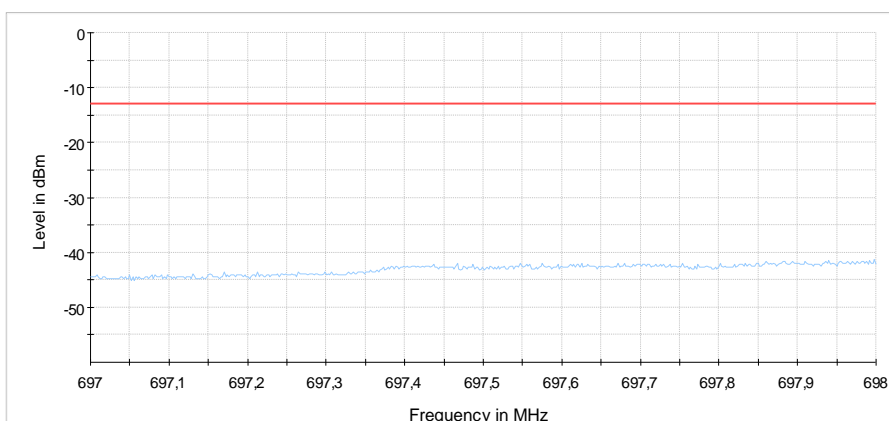


Diagram 64: 9.713b_SW1_CH21400_BW10_RB1_HIGH_16_QAM

**Diagram 65: 9.713b_SW2_CH21400_BW10_RB50_HIGH_16QAM**

1.12. Radiated emissions – band-edge (LTE Band 12)**1.12.1. Low Band-Edge****Diagram 66: 9.1203a_LTE-12_CH23025_BW3_RB1low_QPSK****Diagram 67: 9.1203b_LTE-12_CH23025_BW3_RB1low_16QAM****Diagram 68: 9.1204a_LTE-12_CH23025_BW3_RB15low_QPSK**

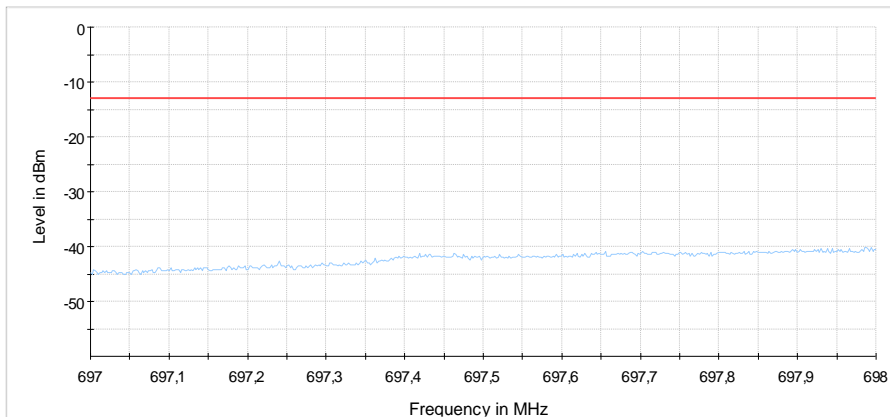


Diagram 69: 9.1204b_LTE-12_CH23025_BW3_RB15low_16QAM

1.12.2. High Band-Edge

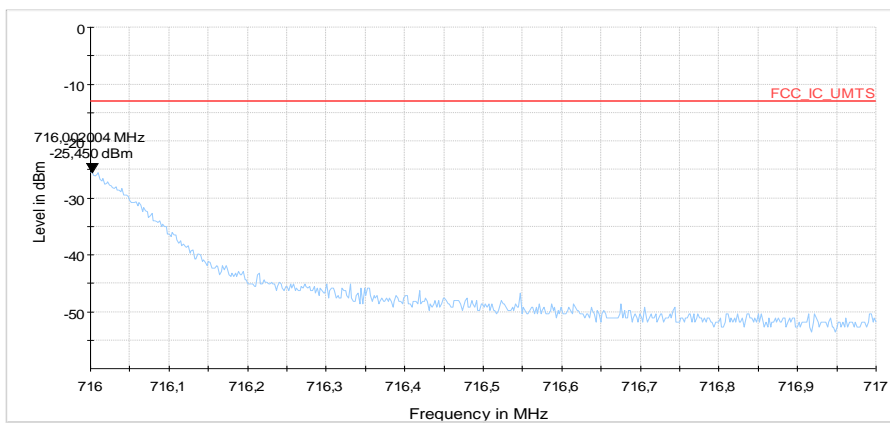


Diagram 70: 9.1210a_LTE-12_CH23165_BW3_RB1high_QPSK

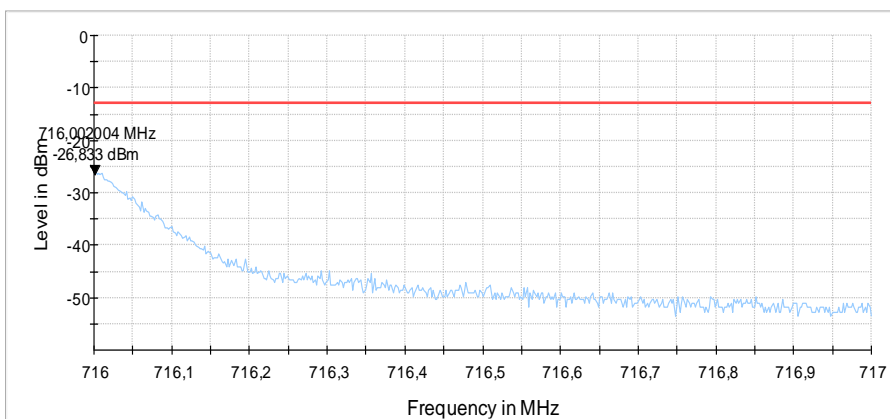
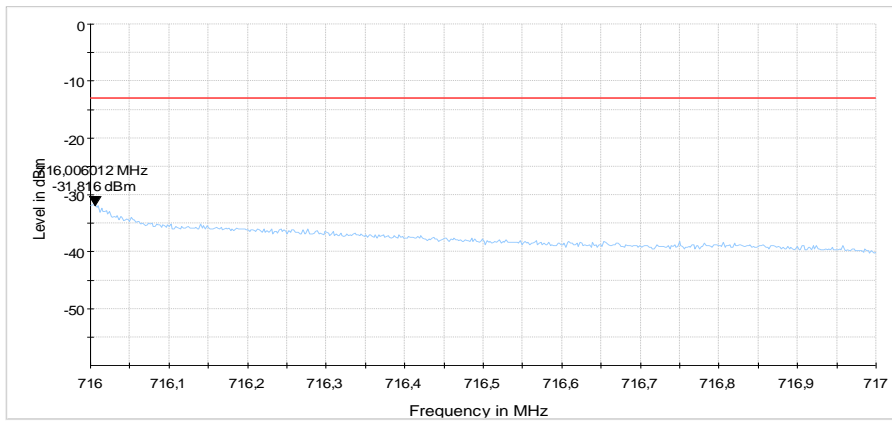
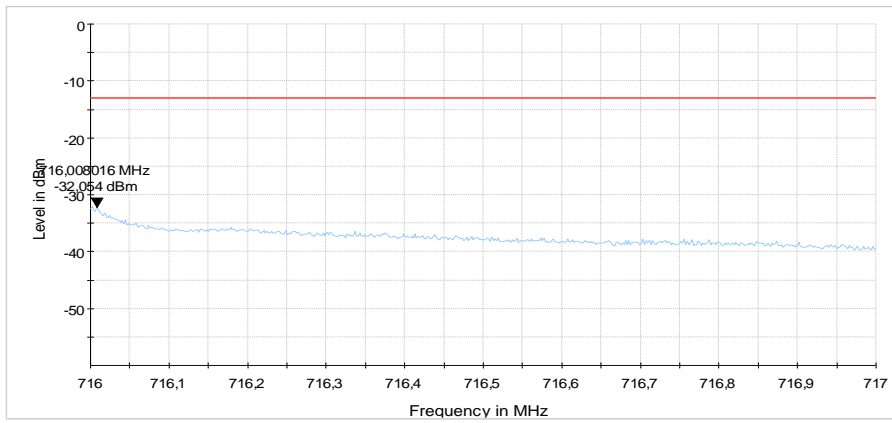


Diagram 71: 9.1211b_LTE-12_CH23165_BW3_RB1high_16QAM

**Diagram 72: 9.1212a_LTE-12_CH23165_BW3_RB15high_QPSK****Diagram 73: 9.1212b_LTE-12_CH23165_BW3_RB15high_16QAM**