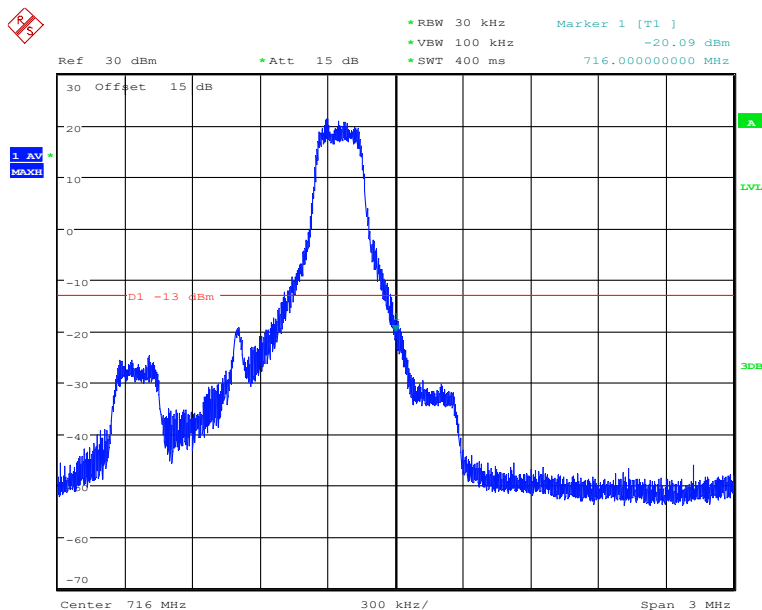
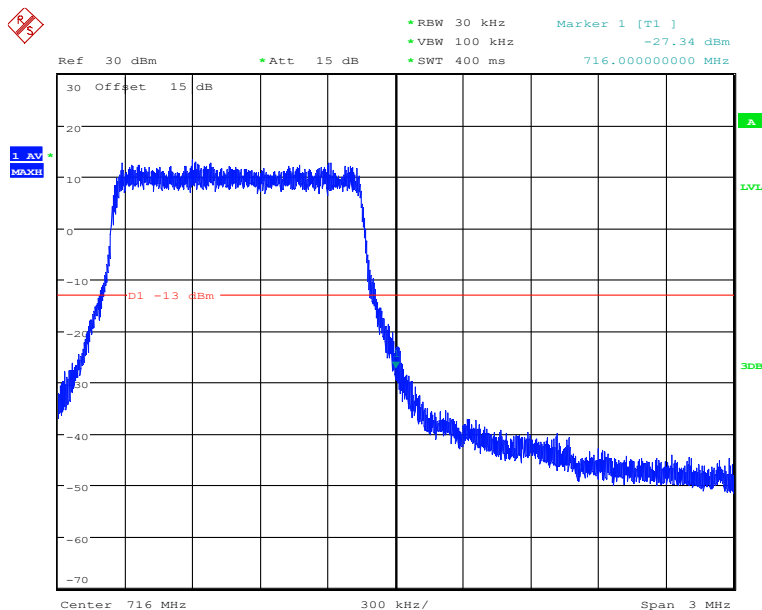


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Date: 23.FEB.2020 05:50:01

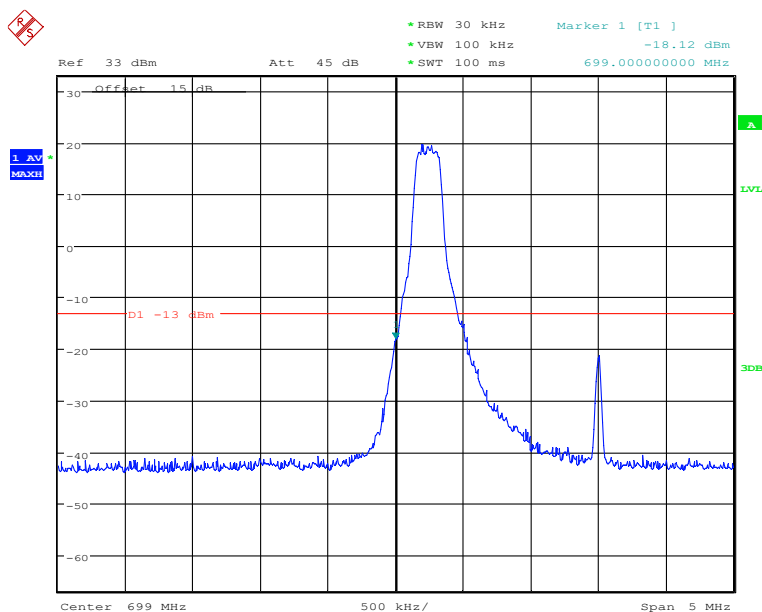
LTE Band12, 1.4MHz bandwidth, 16QAM,(1,6) Mode, Above 716MHz



Date: 23.FEB.2020 05:50:17

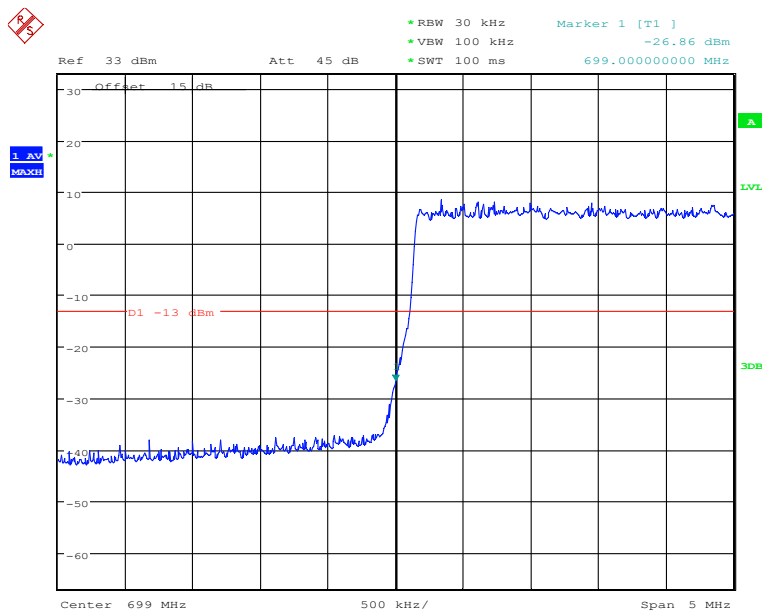
LTE Band12, 1.4MHz bandwidth, 16QAM,(6,0) Mode, Above 716MHz

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Date: 21.FEB.2020 09:24:31

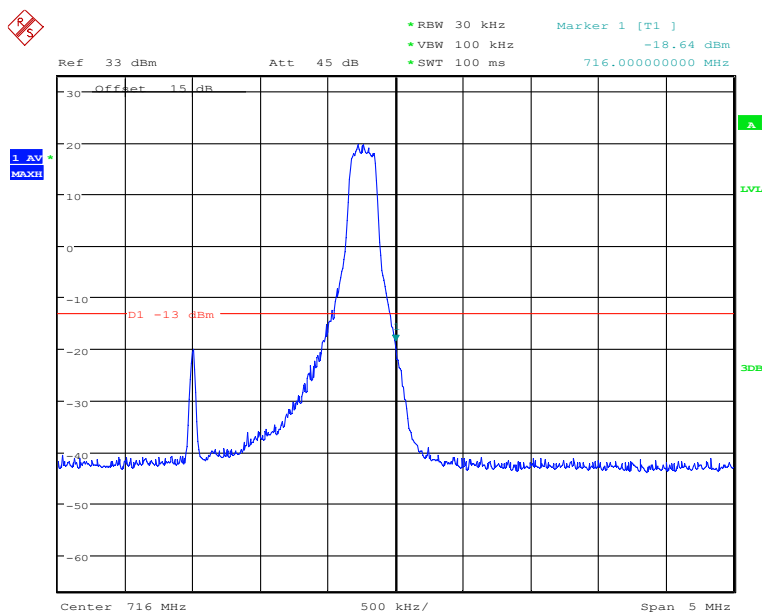
LTE Band12, 3MHz bandwidth, QPSK,(1,0) Mode , Below 698MHz



Date: 21.FEB.2020 09:25:01

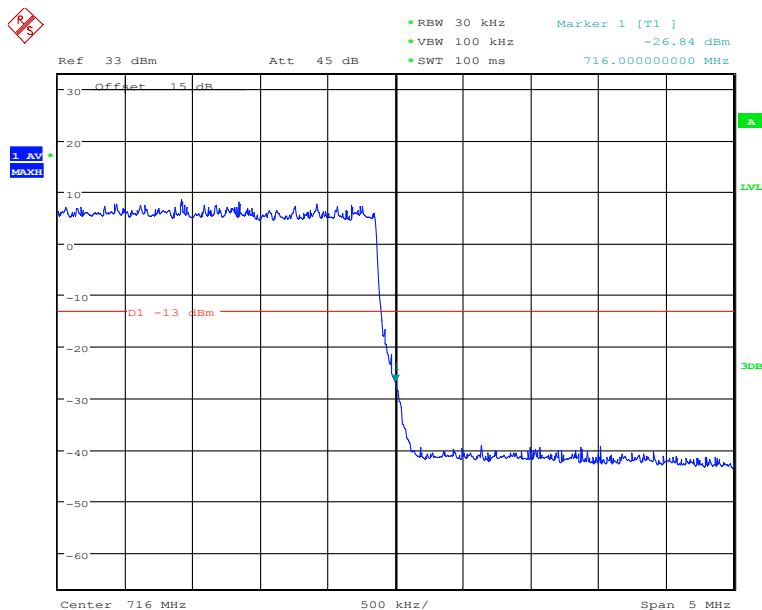
LTE Band12, 3MHz bandwidth, QPSK,(15,0) Mode , Below 698MHz

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Date: 21.FEB.2020 09:26:19

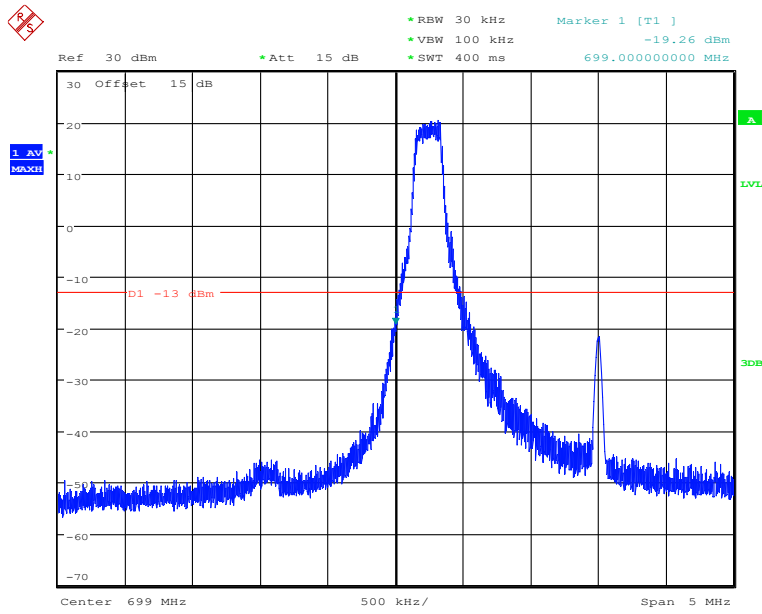
LTE Band12, 3MHz bandwidth, QPSK,(1,15) Mode, Above 716MHz



Date: 21.FEB.2020 09:26:45

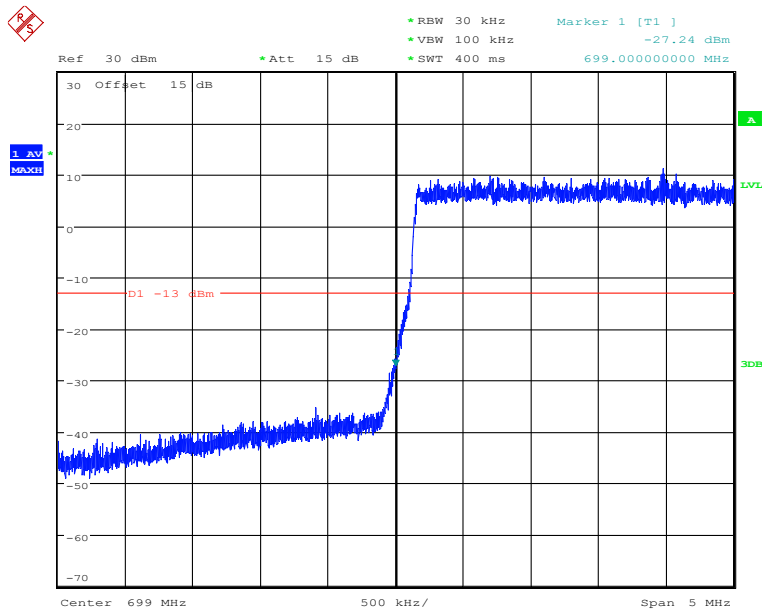
LTE Band12, 3MHz bandwidth, QPSK,(15,0) Mode, Above 716MHz

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Date: 23.FEB.2020 06:09:24

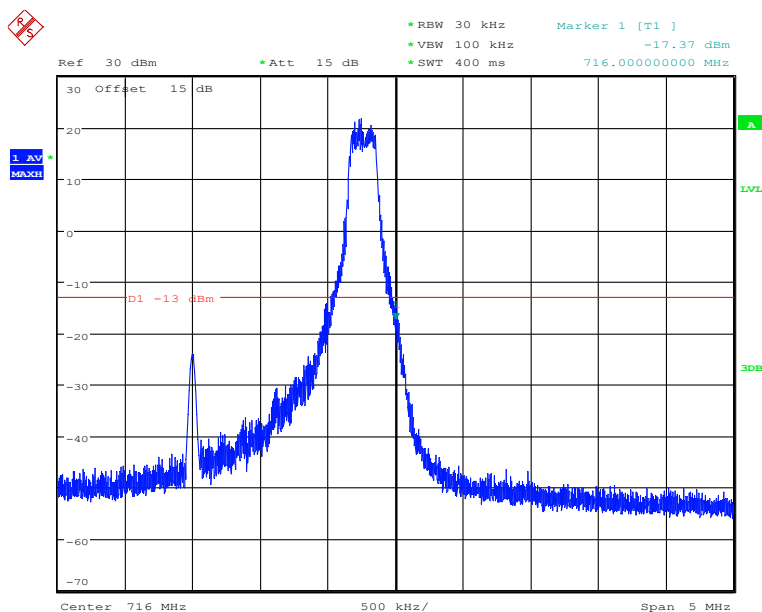
LTE Band12, 3MHz bandwidth, 16QAM,(1,0) Mode , Below 698MHz



Date: 23.FEB.2020 06:09:48

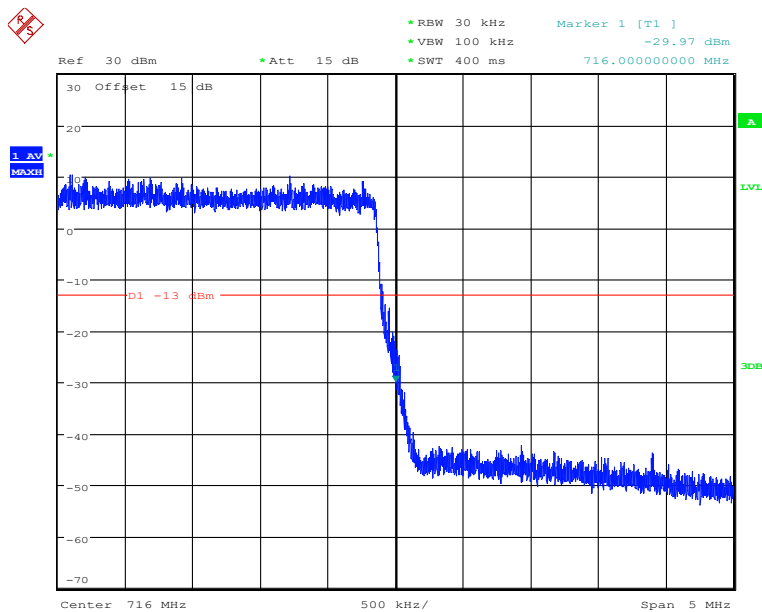
LTE Band12, 3MHz bandwidth, 16QAM,(15,0) Mode , Below 698MHz

Report No.:B19W50598-WWAN_Rev1



Date: 23.FEB.2020 05:52:36

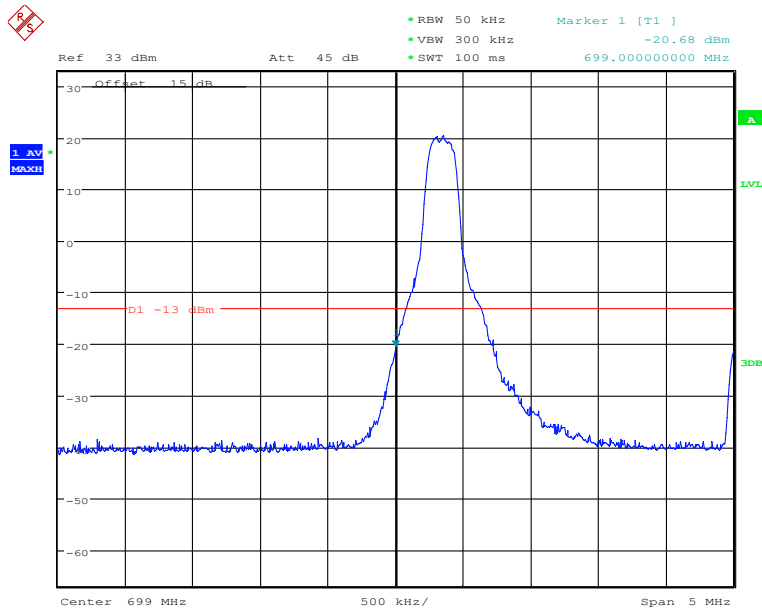
LTE Band12, 3MHz bandwidth, 16QAM,(1,15) Mode, Above 716MHz



Date: 23.FEB.2020 05:52:54

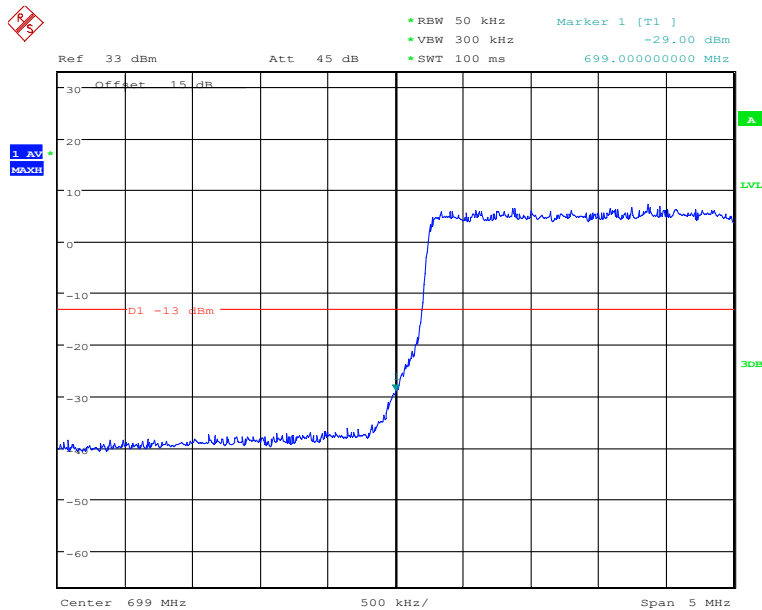
LTE Band12, 3MHz bandwidth, 16QAM,(15,0) Mode, Above 716MHz

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Date: 21.FEB.2020 09:29:45

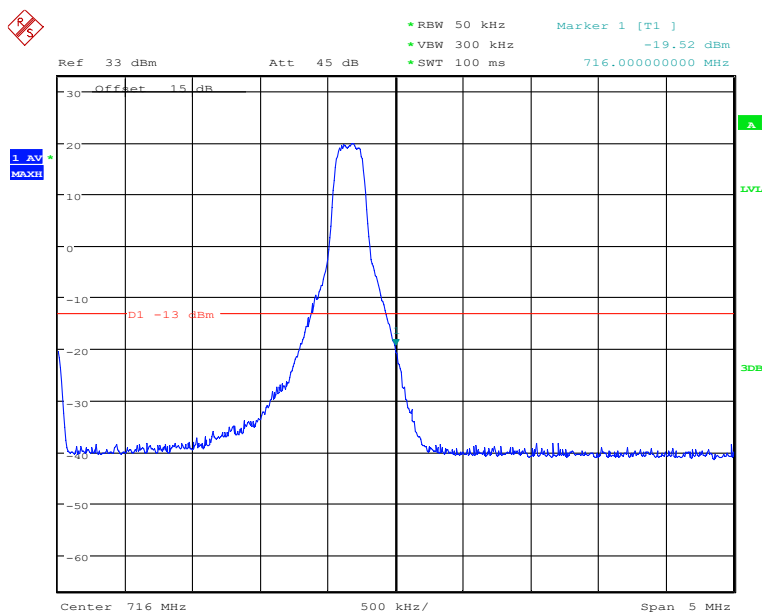
LTE Band12, 5MHz bandwidth, QPSK,(1,0) Mode , Below 698MHz



Date: 21.FEB.2020 09:30:03

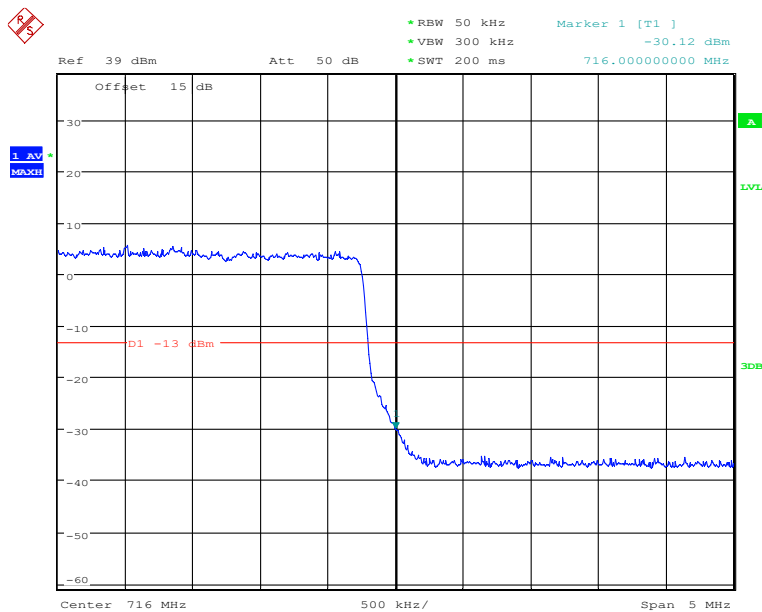
LTE Band12, 5MHz bandwidth, QPSK,(25,0) Mode , Below 698MHz

Report No.:B19W50598-WWAN_Rev1



Date: 21.FEB.2020 09:31:02

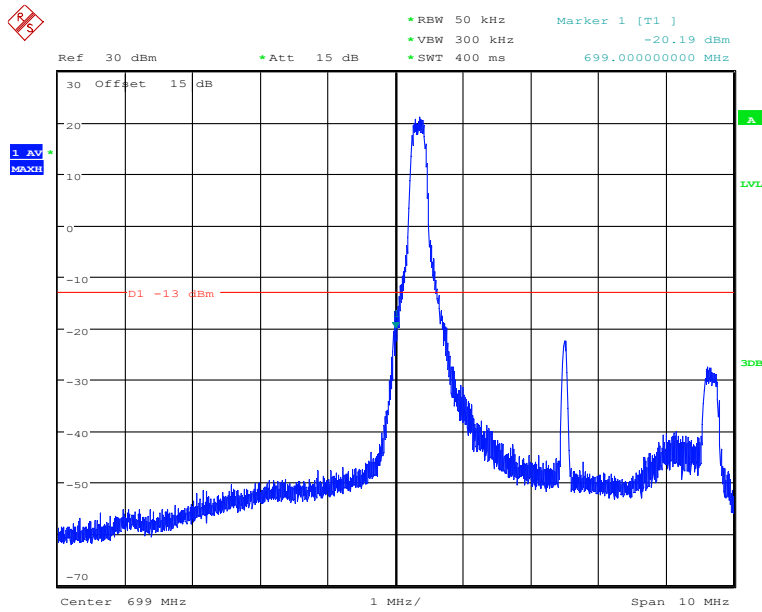
LTE Band12, 5MHz bandwidth, QPSK,(1,25) Mode, Above 716MHz



Date: 21.FEB.2020 08:53:30

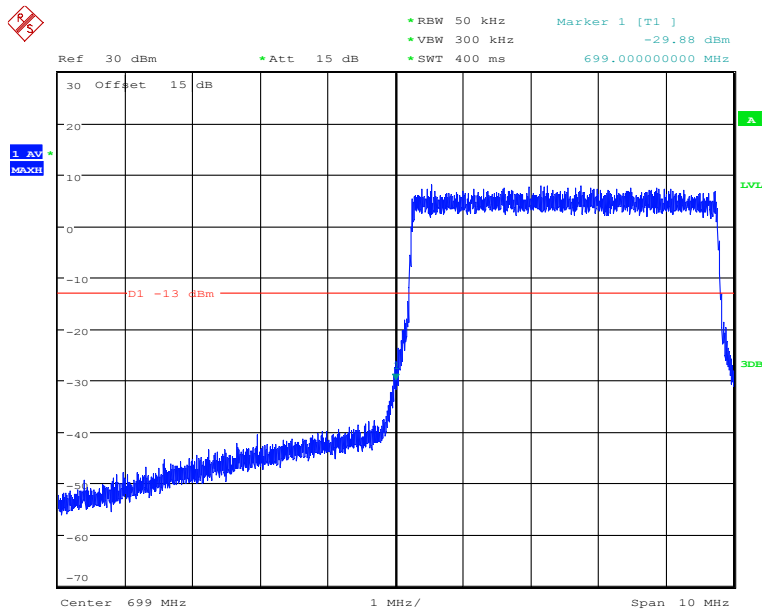
LTE Band12, 5MHz bandwidth, QPSK,(25,0) Mode, Above 716MHz

Report No.:B19W50598-WWAN_Rev1



Date: 23.FEB.2020 06:11:37

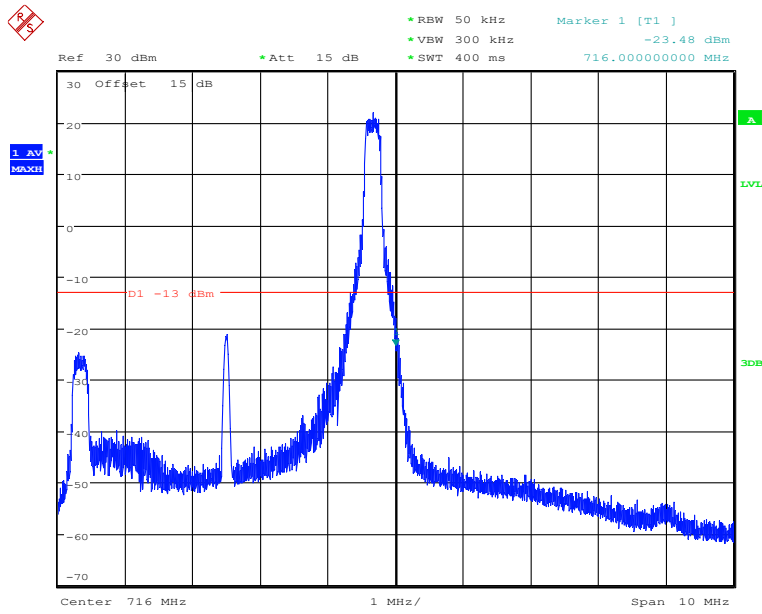
LTE Band12, 5MHz bandwidth, 16QAM,(1,0) Mode , Below 698MHz



Date: 23.FEB.2020 06:11:55

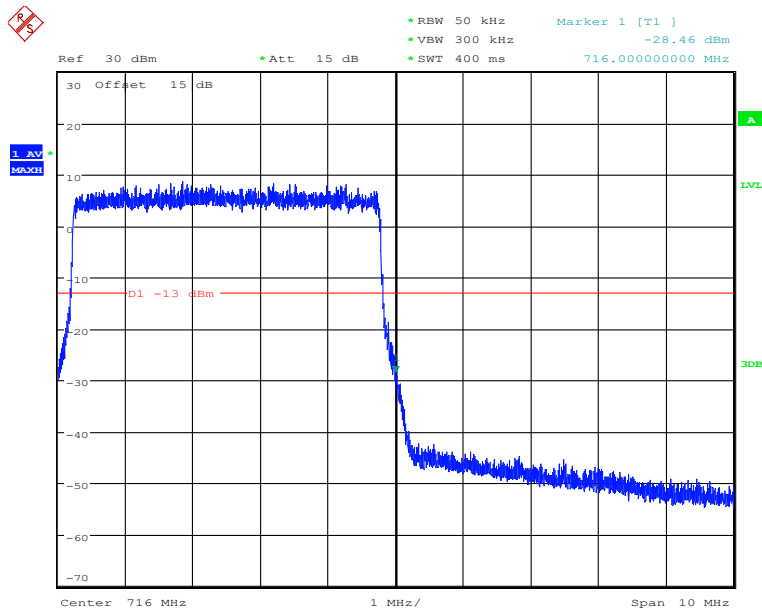
LTE Band12, 5MHz bandwidth, 16QAM,(25,0) Mode , Below 698MHz

Report No.:B19W50598-WWAN_Rev1



Date: 23.FEB.2020 06:12:57

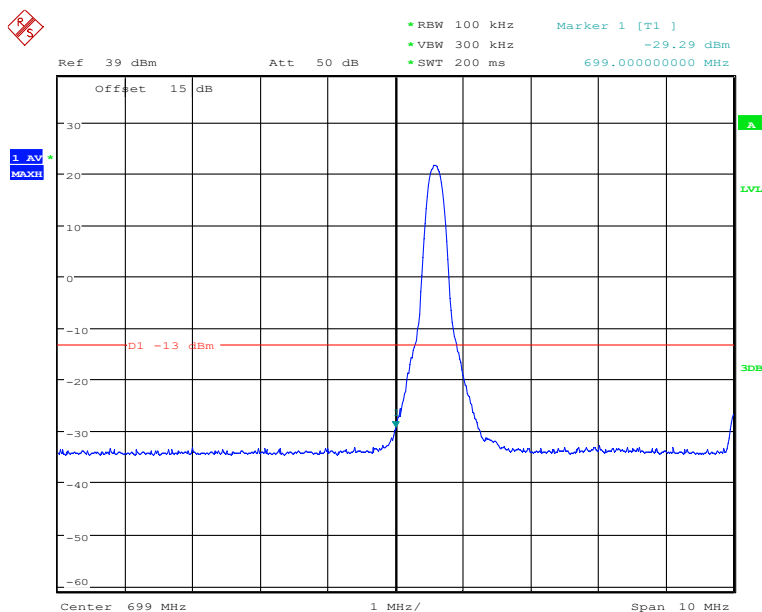
LTE Band12, 5MHz bandwidth, 16QAM,(1,25) Mode, Above 716MHz



Date: 23.FEB.2020 06:12:40

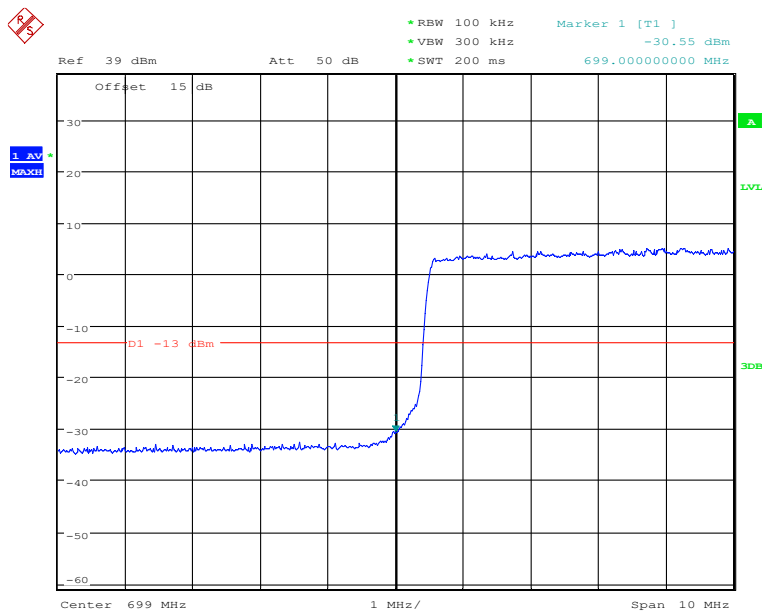
LTE Band12, 5MHz bandwidth, 16QAM,(25,0) Mode, Above 716MHz

Report No.:B19W50598-WWAN_Rev1



Date: 21.FEB.2020 08:58:23

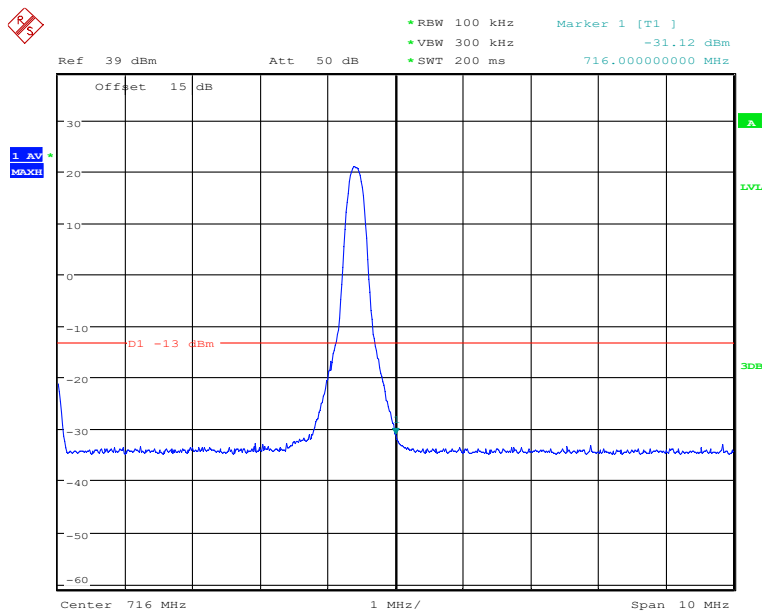
LTE Band12, 10MHz bandwidth, QPSK,(1,0) Mode , Below 698MHz



Date: 21.FEB.2020 08:58:48

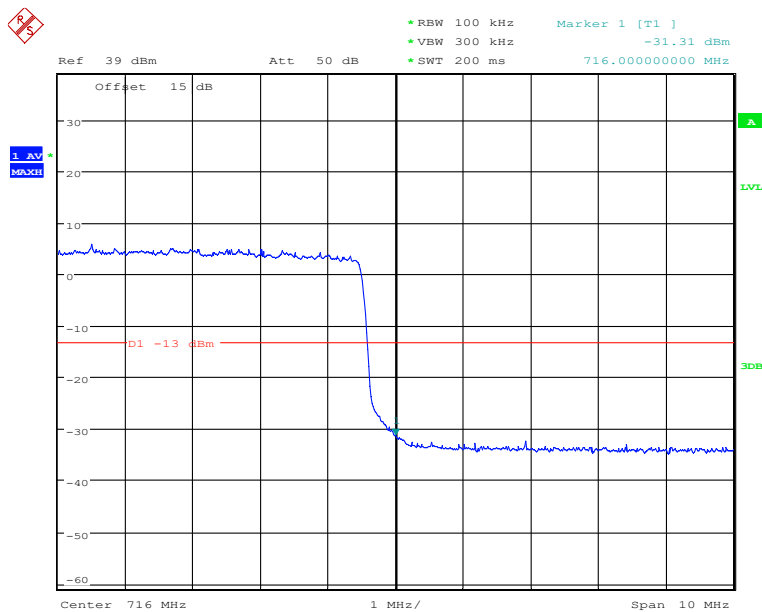
LTE Band12, 10MHz bandwidth, QPSK,(50,0) Mode , Below 698MHz

Report No.:B19W50598-WWAN_Rev1



Date: 21.FEB.2020 08:56:41

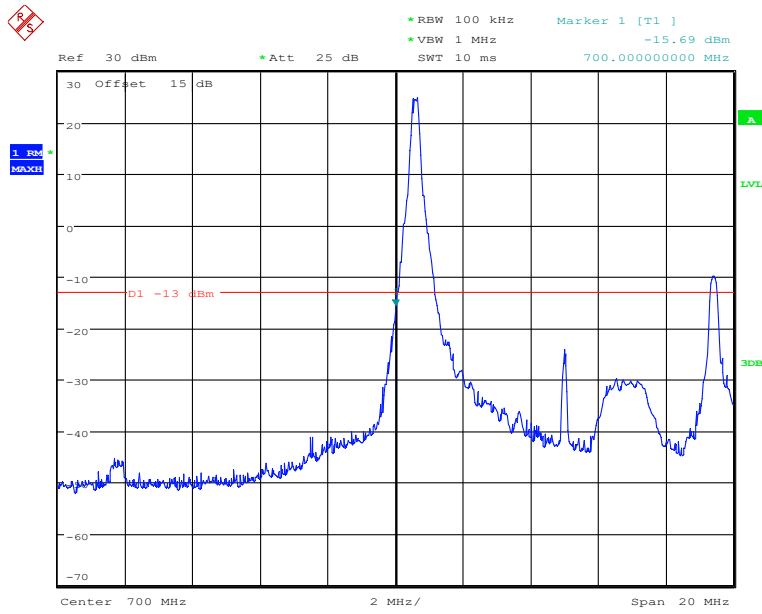
LTE Band12, 10MHz bandwidth, QPSK,(1,50) Mode, Above 716MHz



Date: 21.FEB.2020 08:57:01

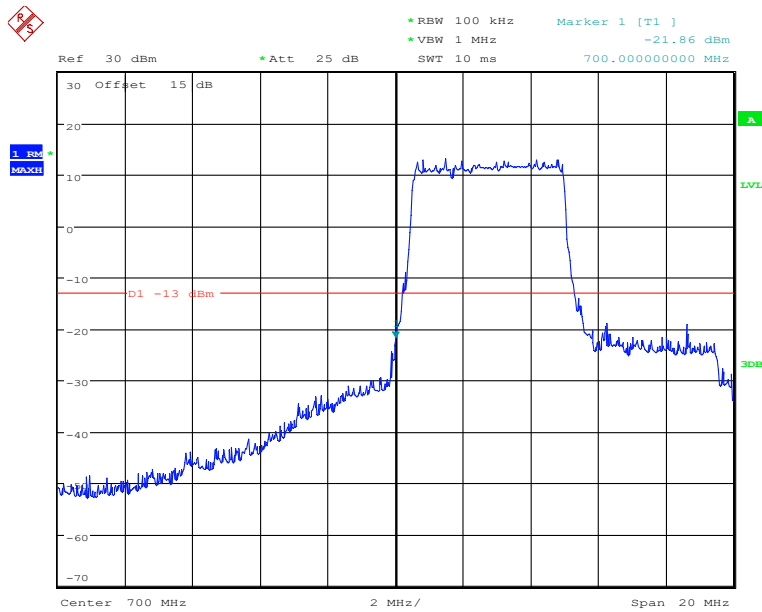
LTE Band12, 10MHz bandwidth, QPSK,(50,0) Mode, Above 716MHz

Report No.:B19W50598-WWAN_Rev1



Date: 25.FEB.2020 02:29:16

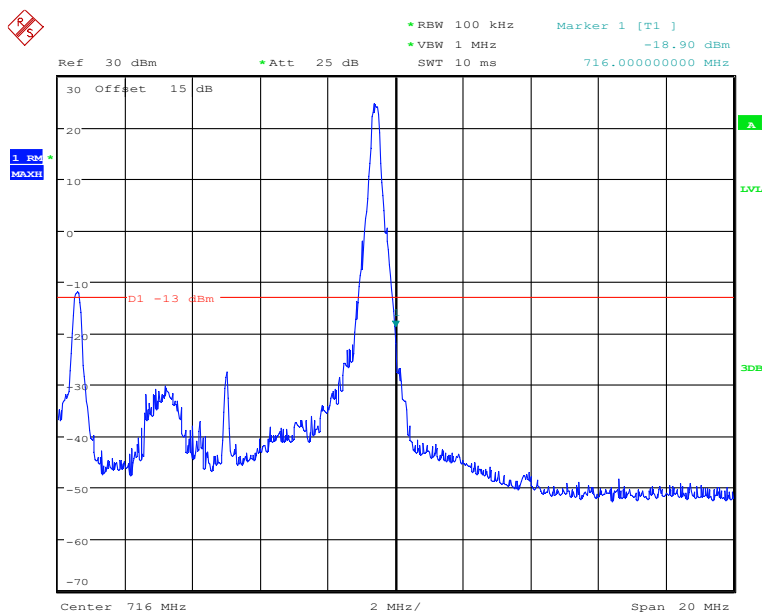
LTE Band12, 10MHz bandwidth, 16QAM,(1,0) Mode , Below 698MHz



Date: 25.FEB.2020 02:29:39

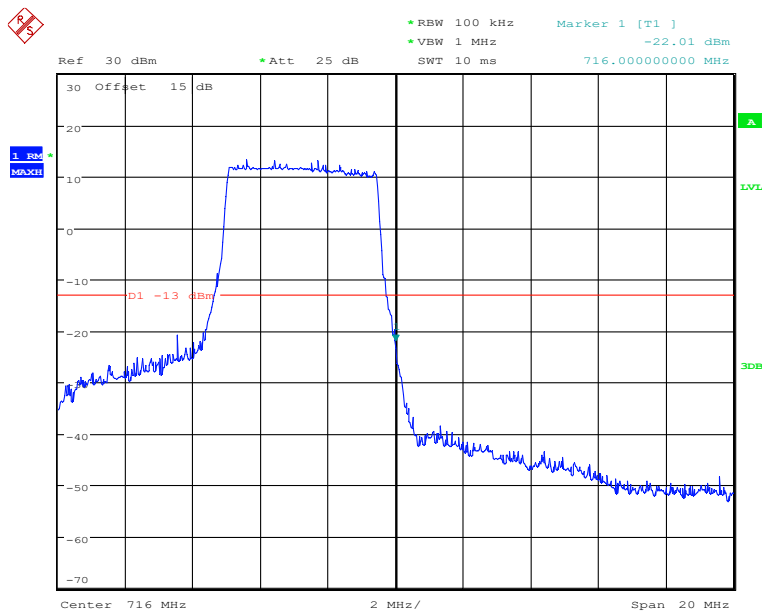
LTE Band12, 10MHz bandwidth, 16QAM,(50,0) Mode , Below 698MHz

Report No.:B19W50598-WWAN_Rev1



Date: 25.FEB.2020 02:30:46

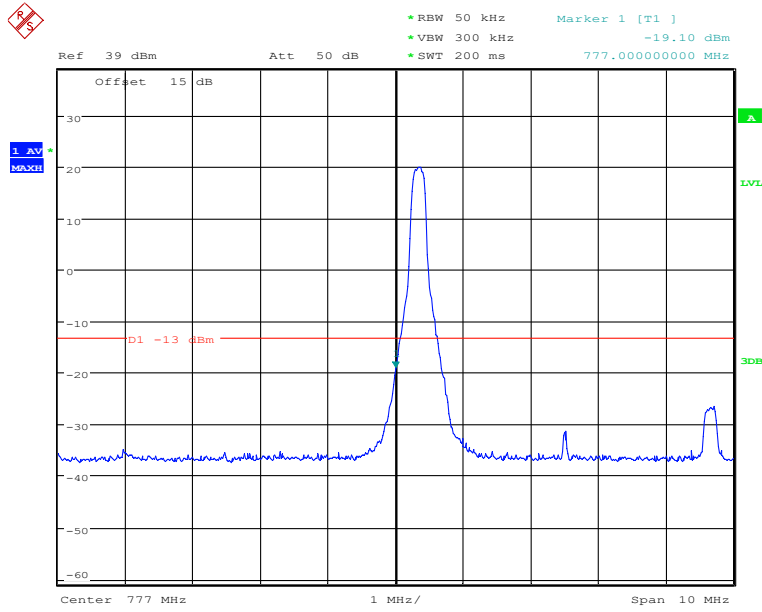
LTE Band12, 10MHz bandwidth, 16QAM,(1,50) Mode, Above 716MHz



Date: 25.FEB.2020 02:30:24

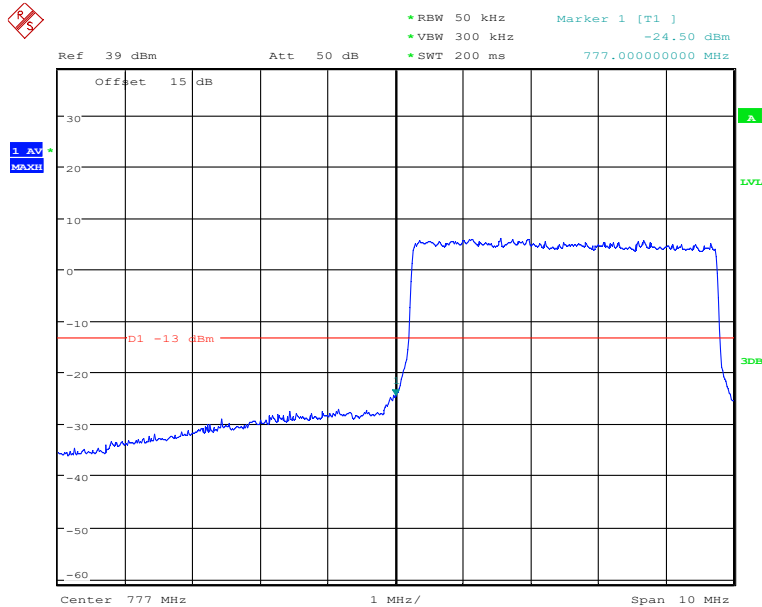
LTE Band12, 10MHz bandwidth, 16QAM,(50,0) Mode, Above 716MHz

5.5.8 LTE B13 Band Edge Results



Date: 21.FEB.2020 09:01:42

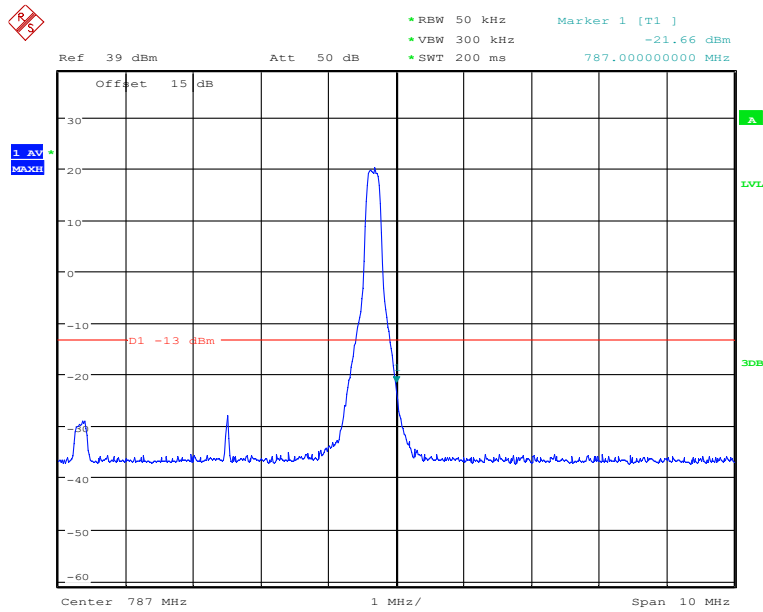
LTE Band13, 5MHz bandwidth, QPSK,(1,0) Mode , Below 776MHz



Date: 21.FEB.2020 09:02:32

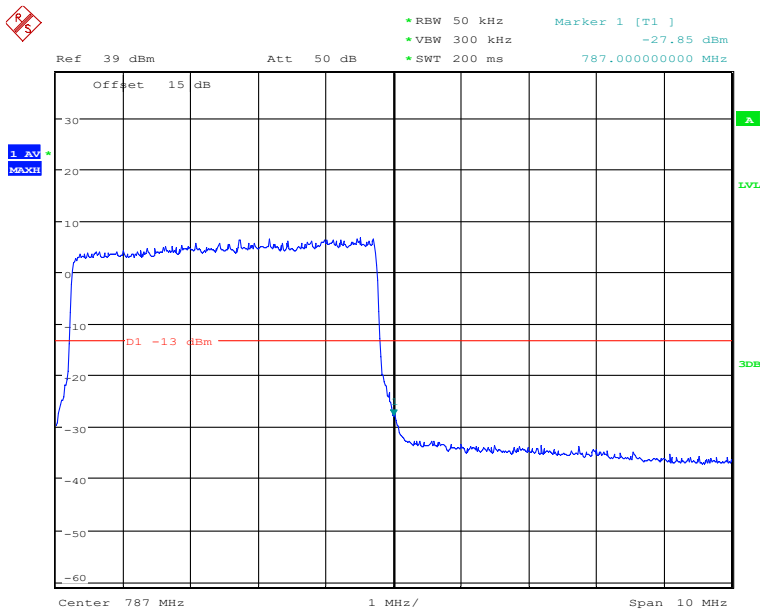
LTE Band13, 5MHz bandwidth, QPSK,(25,0) Mode , Below 776MHz

Report No.:B19W50598-WWAN_Rev1



Date: 21.FEB.2020 09:03:57

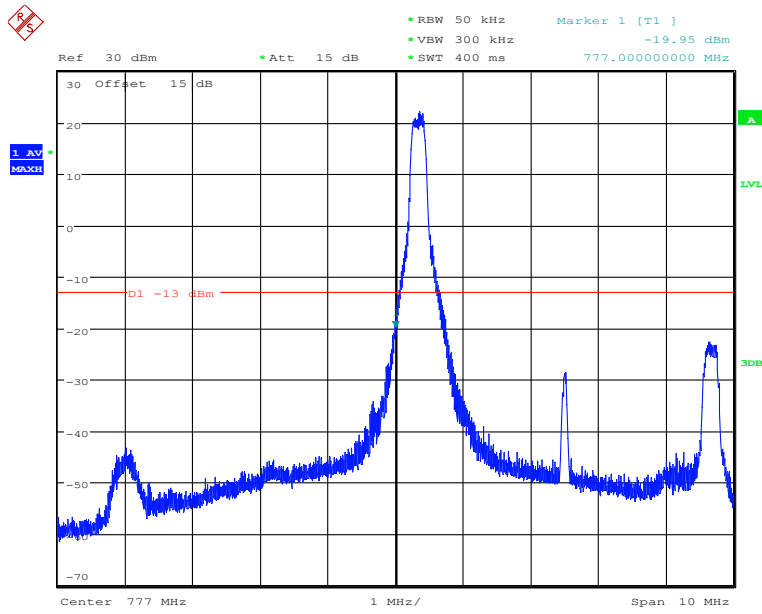
LTE Band13, 5MHz bandwidth, QPSK,(1,25) Mode, Above 788MHz



Date: 21.FEB.2020 09:04:21

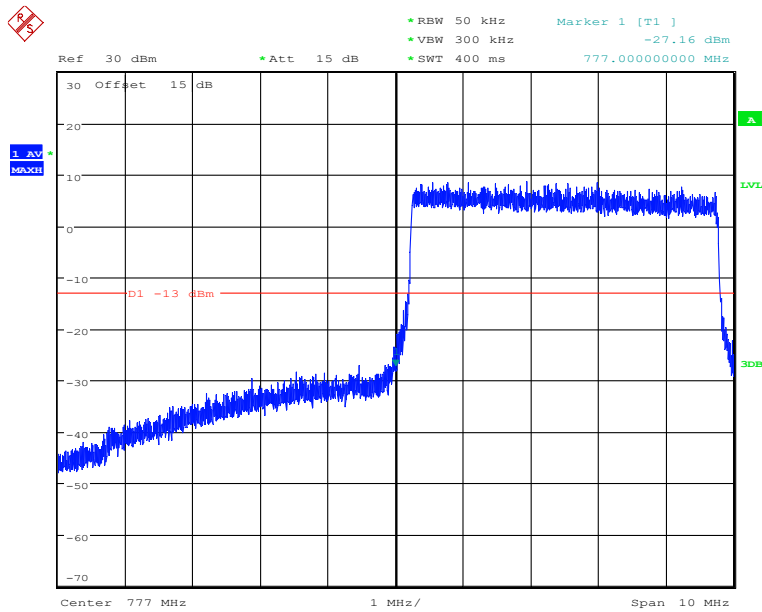
LTE Band13, 5MHz bandwidth, QPSK,(25,0) Mode, Above 788MHz

Report No.:B19W50598-WWAN_Rev1



Date: 23.FEB.2020 06:14:47

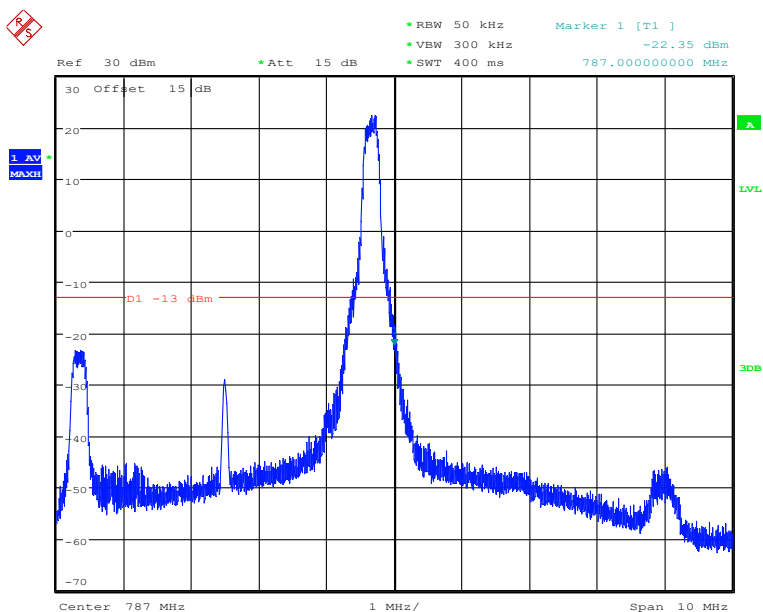
LTE Band13, 5MHz bandwidth, 16QAM,(1,0) Mode , Below 776MHz



Date: 23.FEB.2020 06:14:59

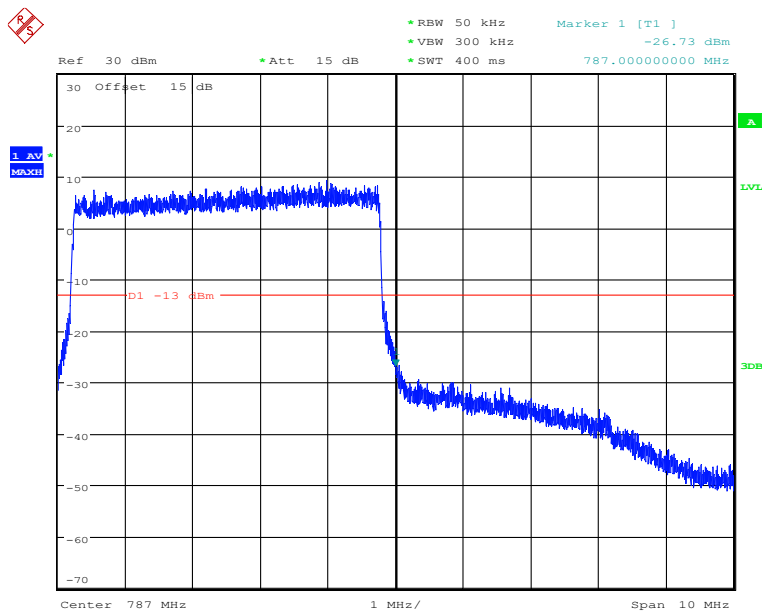
LTE Band13, 5MHz bandwidth, 16QAM,(25,0) Mode , Below 776MHz

Report No.:B19W50598-WWAN_Rev1



Date: 23.FEB.2020 06:17:28

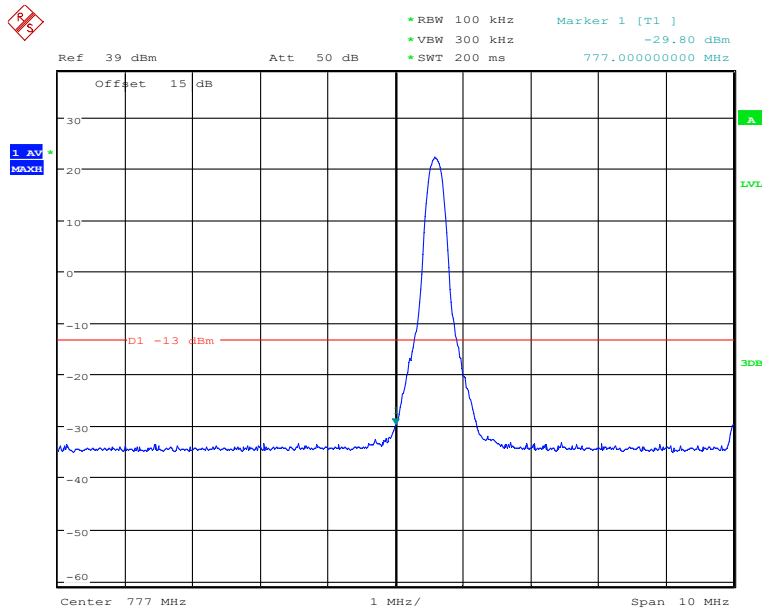
LTE Band13, 5MHz bandwidth, 16QAM,(1,25) Mode, Above 788MHz



Date: 23.FEB.2020 06:17:07

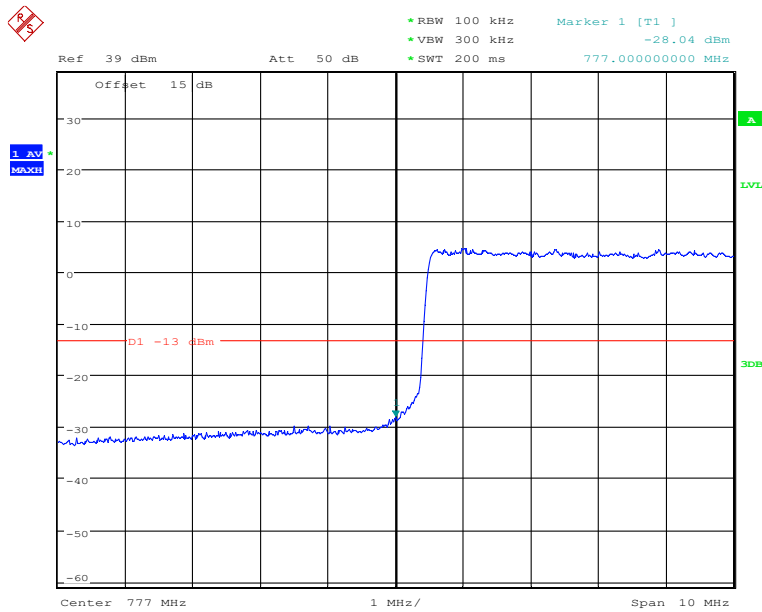
LTE Band13, 5MHz bandwidth, 16QAM,(25,0) Mode, Above 788MHz

Report No.:B19W50598-WWAN_Rev1



Date: 21.FEB.2020 09:09:24

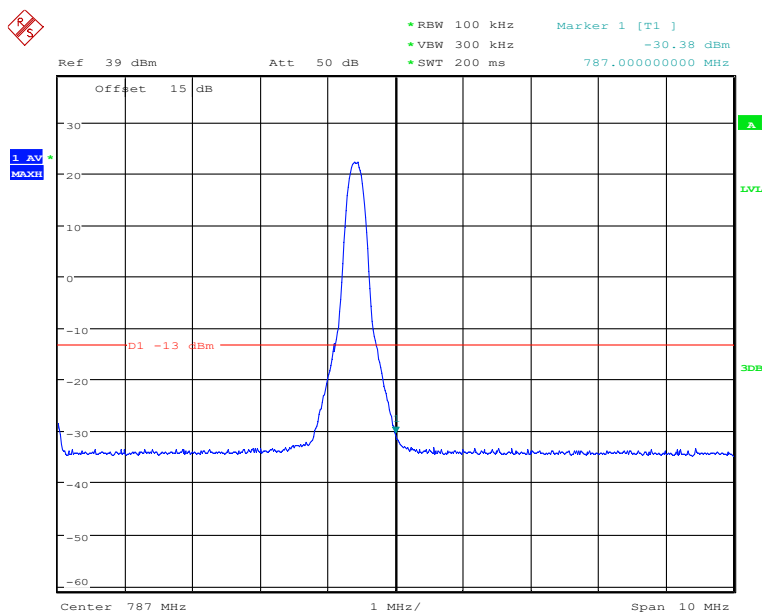
LTE Band13, 10MHz bandwidth, QPSK,(1,0) Mode , Below 776MHz



Date: 21.FEB.2020 09:09:40

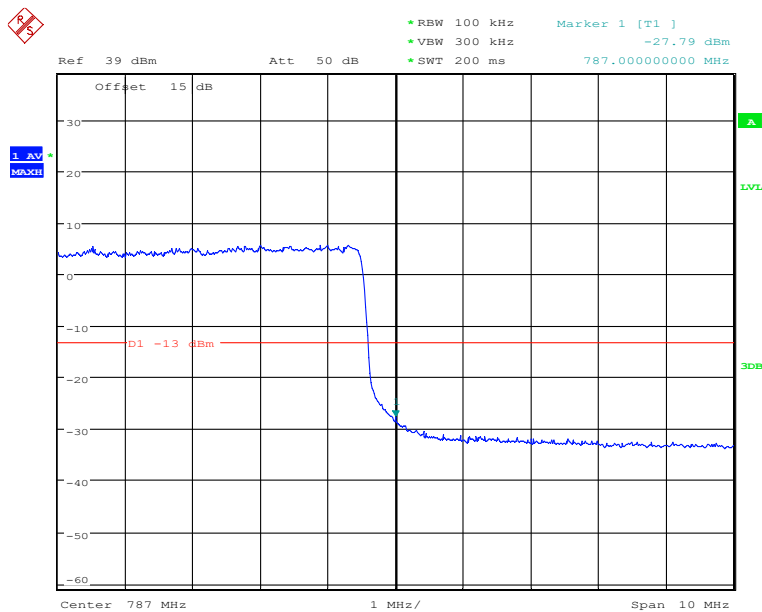
LTE Band13, 10MHz bandwidth, QPSK,(50,0) Mode , Below 776MHz

Report No.:B19W50598-WWAN_Rev1



Date: 21.FEB.2020 09:06:07

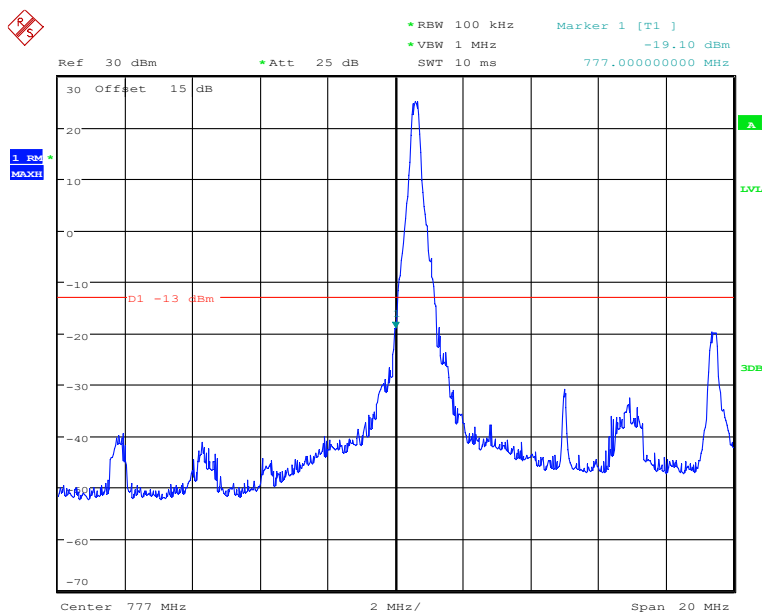
LTE Band13, 10MHz bandwidth, QPSK,(1,50) Mode, Above 788MHz



Date: 21.FEB.2020 09:06:29

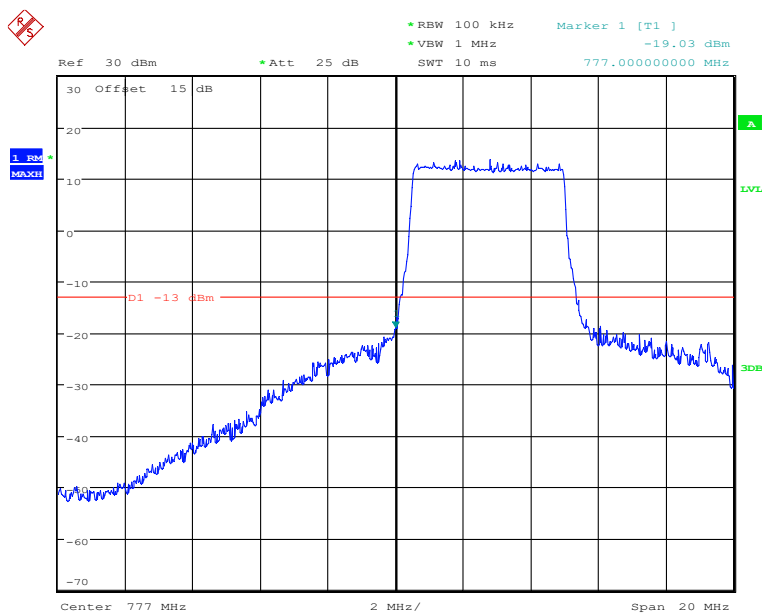
LTE Band13, 10MHz bandwidth, QPSK,(50,0) Mode, Above 788MHz

Report No.:B19W50598-WWAN_Rev1



Date: 25.FEB.2020 02:33:16

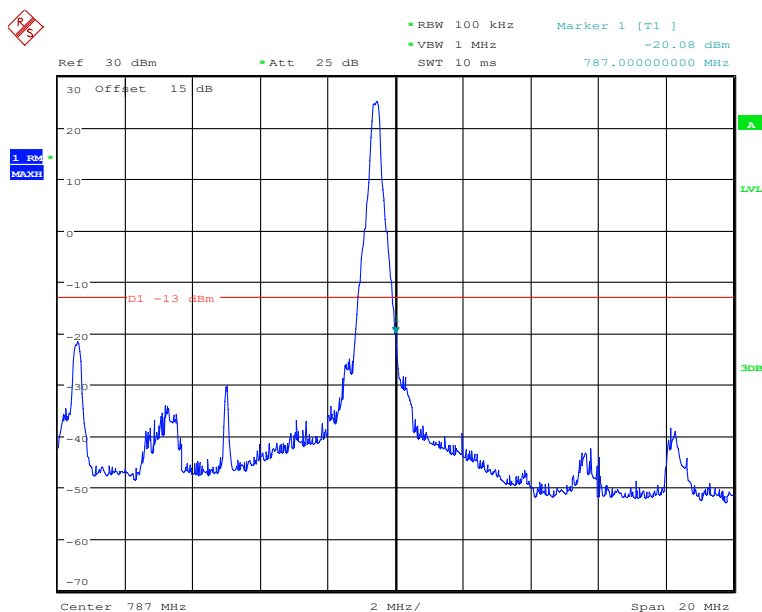
LTE Band13, 10MHz bandwidth, 16QAM,(1,0) Mode , Below 776MHz



Date: 25.FEB.2020 02:32:51

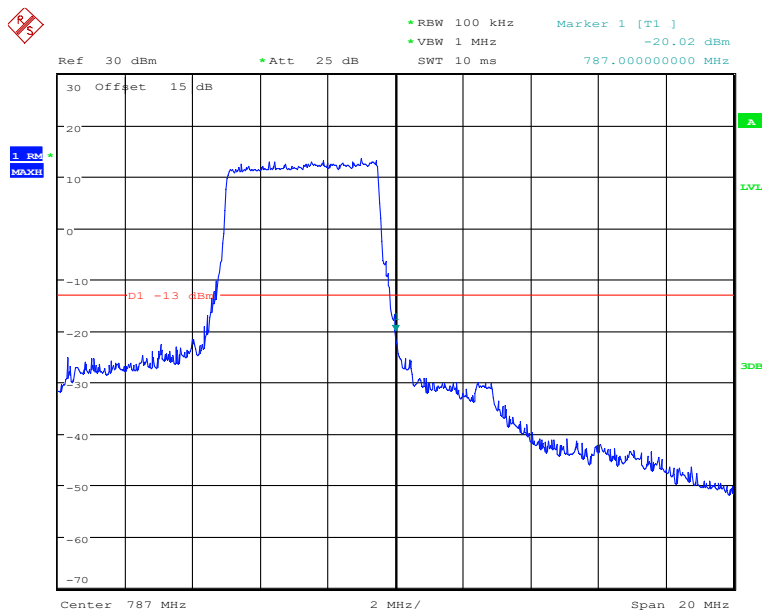
LTE Band13, 10MHz bandwidth, 16QAM,(50,0) Mode , Below 776MHz

Report No.:B19W50598-WWAN_Rev1



Date: 25.FEB.2020 02:31:34

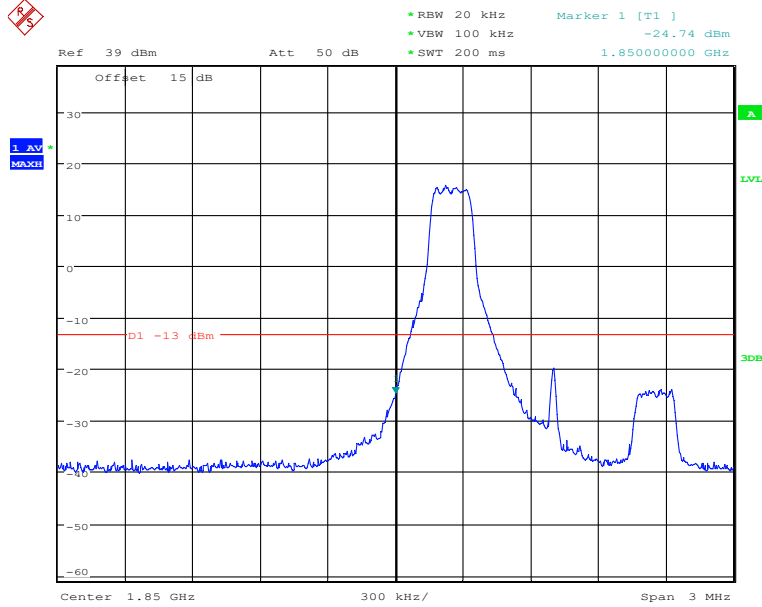
LTE Band13, 10MHz bandwidth, 16QAM,(1,50) Mode, Above 788MHz



Date: 25.FEB.2020 02:32:01

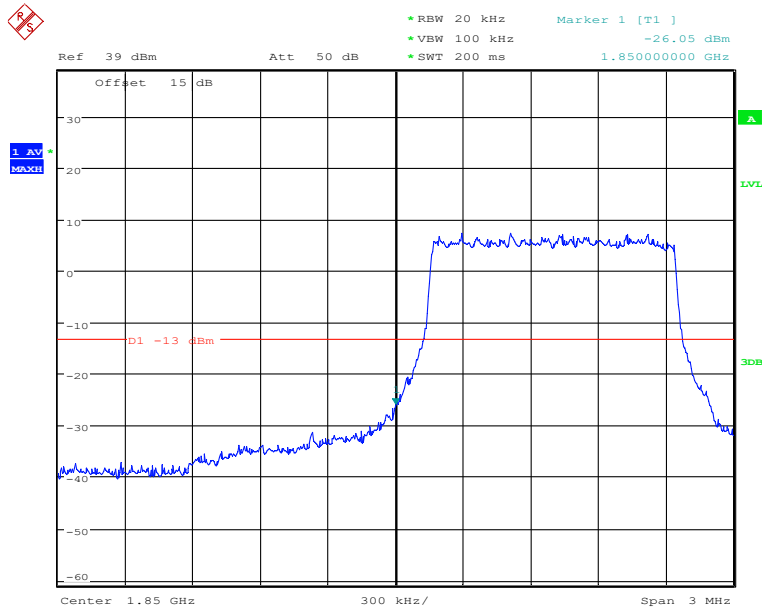
LTE Band13, 10MHz bandwidth, 16QAM,(50,0) Mode, Above 788MHz

5.5.9 LTE B25 Band Edge Results



Date: 21.FEB.2020 09:13:01

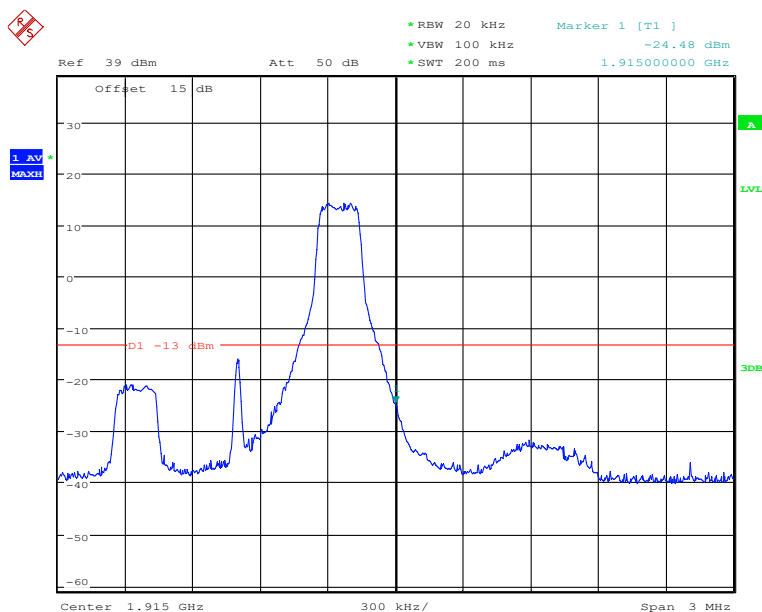
LTE Band25, 1.4MHz bandwidth, QPSK,(1,0) Mode , Below 1850MHz



Date: 21.FEB.2020 09:13:20

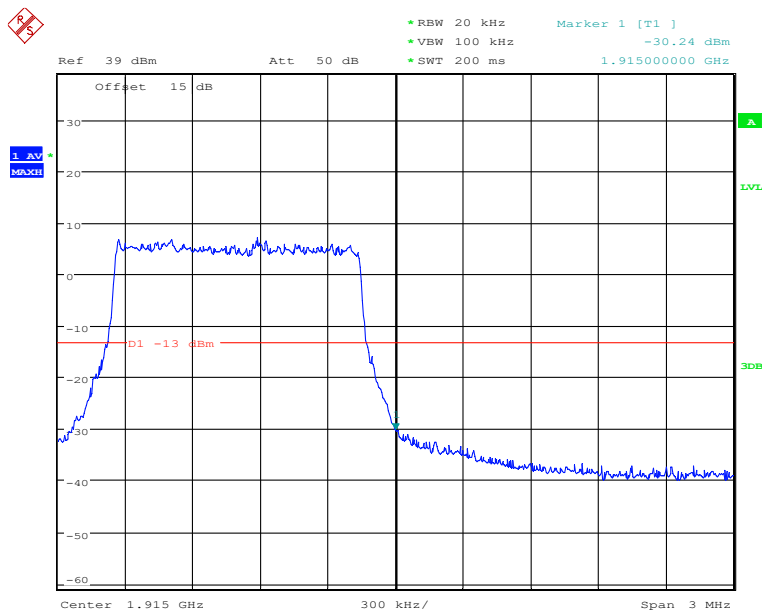
LTE Band25, 1.4MHz bandwidth, QPSK,(6,0) Mode , Below 1850MHz

Report No.:B19W50598-WWAN_Rev1



Date: 21.FEB.2020 09:14:55

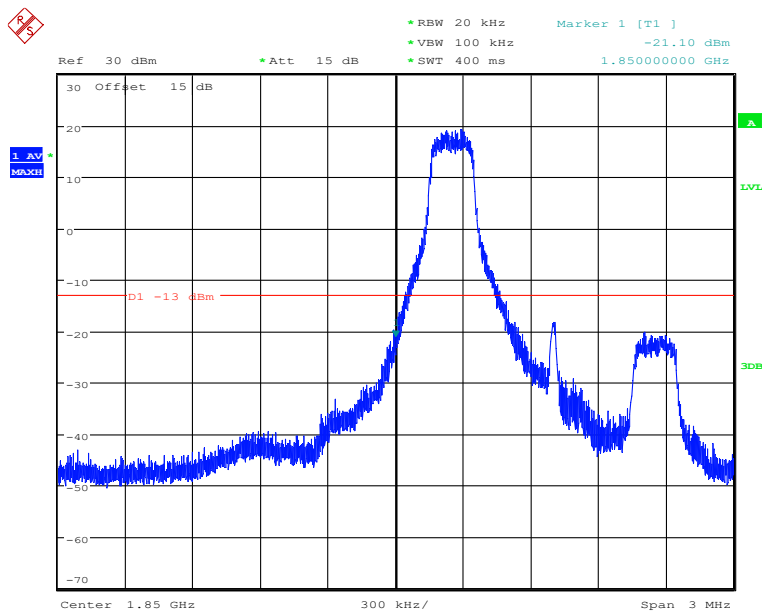
LTE Band25, 1.4MHz bandwidth, QPSK,(1,6) Mode, Above 1915MHz



Date: 21.FEB.2020 09:15:14

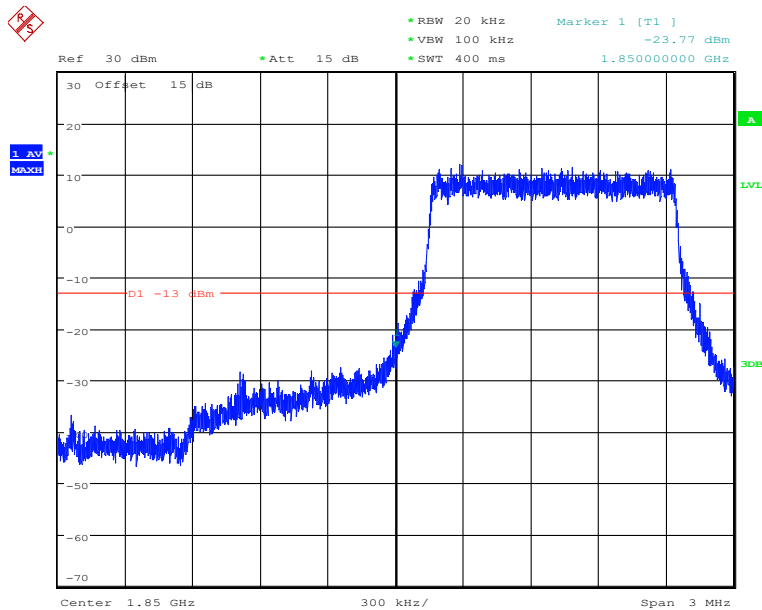
LTE Band25, 1.4MHz bandwidth, QPSK,(6,0) Mode, Above 1915MHz

Report No.:B19W50598-WWAN_Rev1



Date: 23.FEB.2020 06:18:55

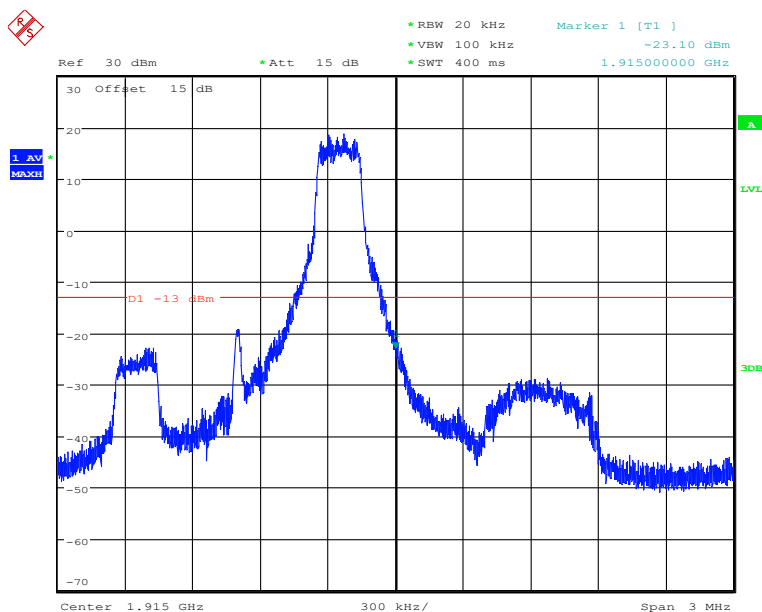
LTE Band25, 1.4MHz bandwidth, 16QAM,(1,0) Mode , Below 1850MHz



Date: 23.FEB.2020 06:19:10

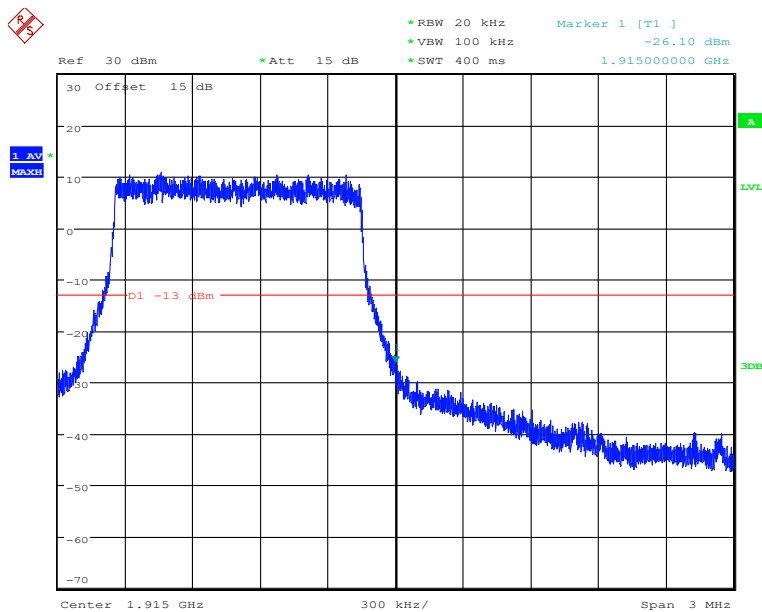
LTE Band25, 1.4MHz bandwidth, 16QAM,(6,0) Mode , Below 1850MHz

Report No.:B19W50598-WWAN_Rev1



Date: 23.FEB.2020 06:20:06

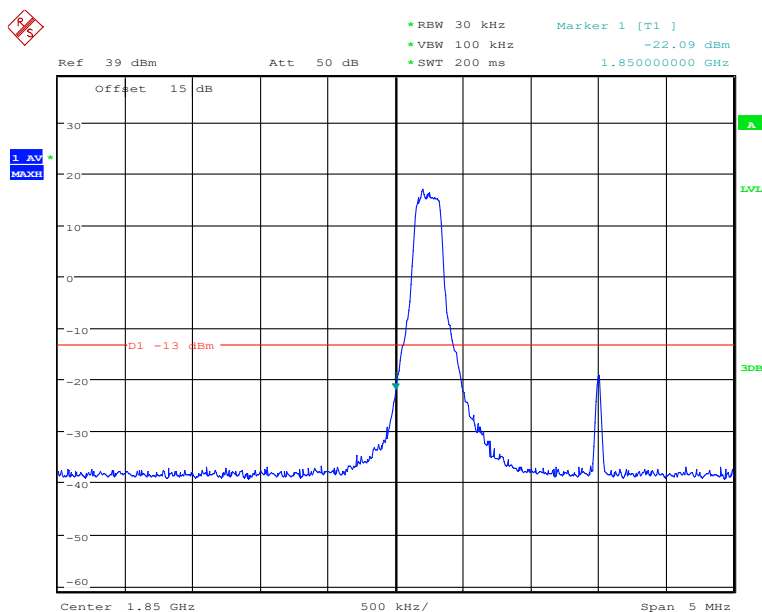
LTE Band25, 1.4MHz bandwidth, 16QAM,(1,6) Mode, Above 1915MHz



Date: 23.FEB.2020 06:19:43

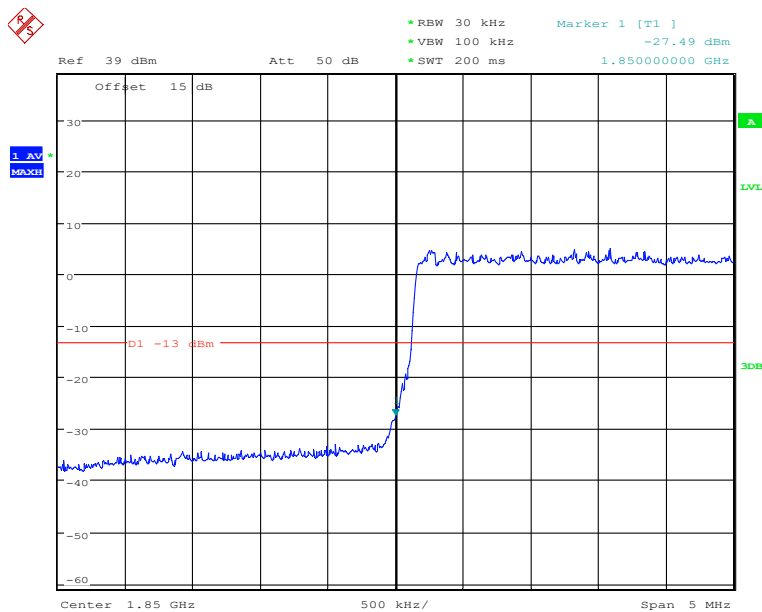
LTE Band25, 1.4MHz bandwidth, 16QAM,(6,0) Mode, Above 1915MHz

Report No.:B19W50598-WWAN_Rev1



Date: 21.FEB.2020 09:19:27

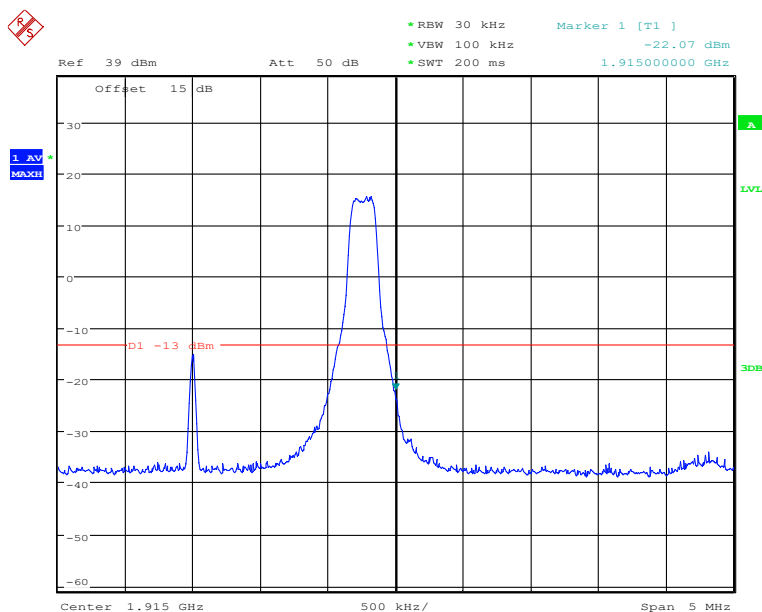
LTE Band25, 3MHz bandwidth, QPSK,(1,0) Mode , Below 1850MHz



Date: 21.FEB.2020 09:19:44

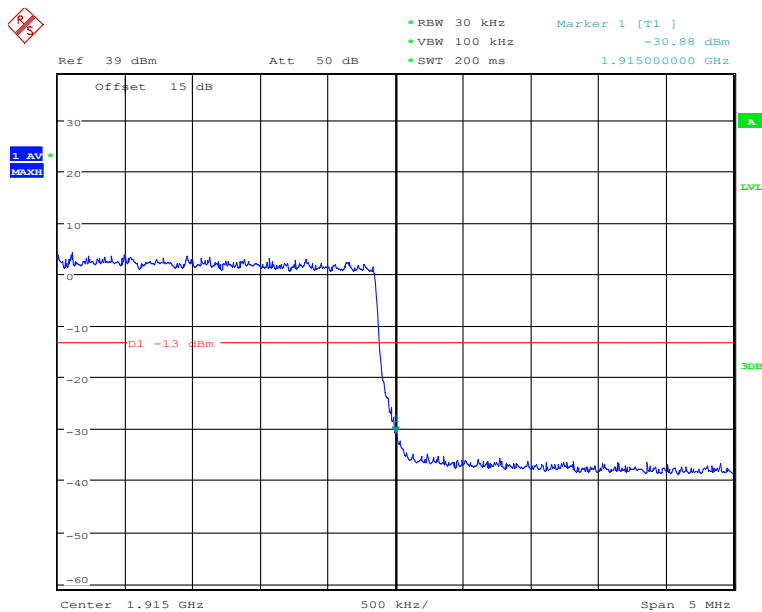
LTE Band25, 3MHz bandwidth, QPSK,(15,0) Mode , Below 1850MHz

Report No.:B19W50598-WWAN_Rev1



Date: 21.FEB.2020 09:18:13

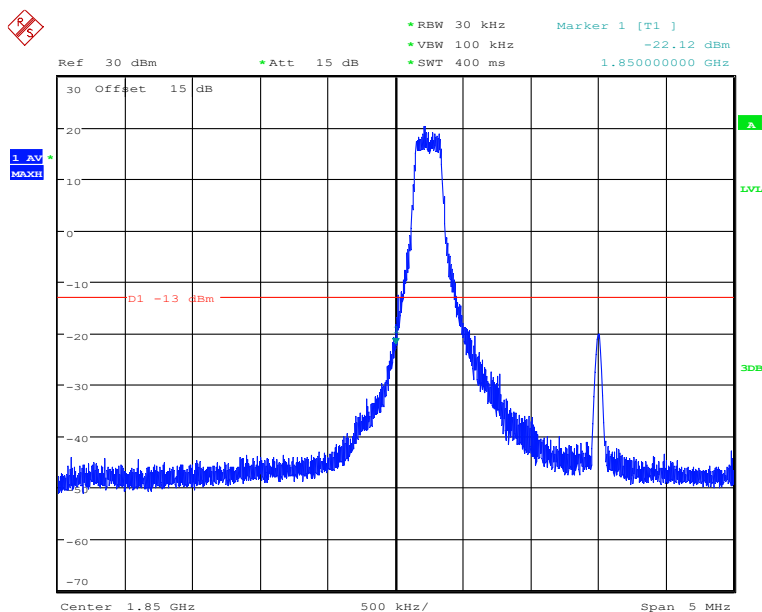
LTE Band25, 3MHz bandwidth, QPSK,(1,15) Mode, Above 1915MHz



Date: 21.FEB.2020 09:18:28

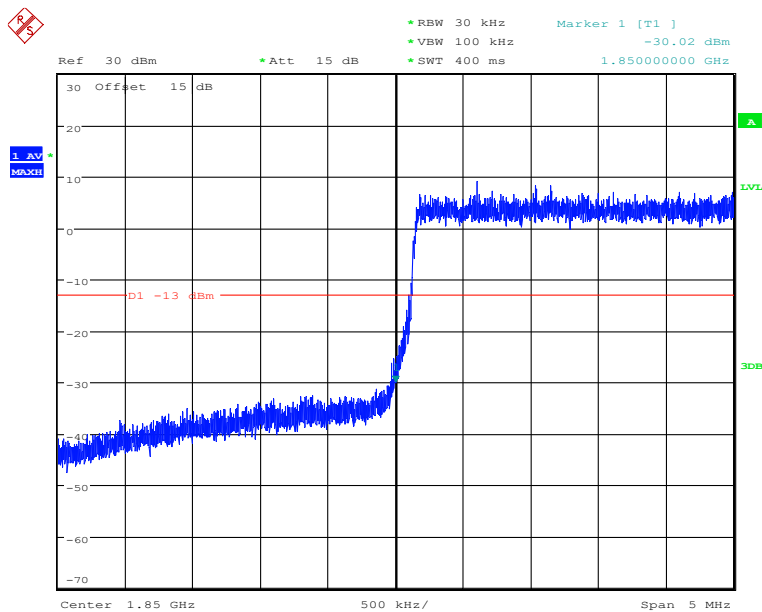
LTE Band25, 3MHz bandwidth, QPSK,(15,0) Mode, Above 1915MHz

Report No.:B19W50598-WWAN_Rev1



Date: 23.FEB.2020 06:22:20

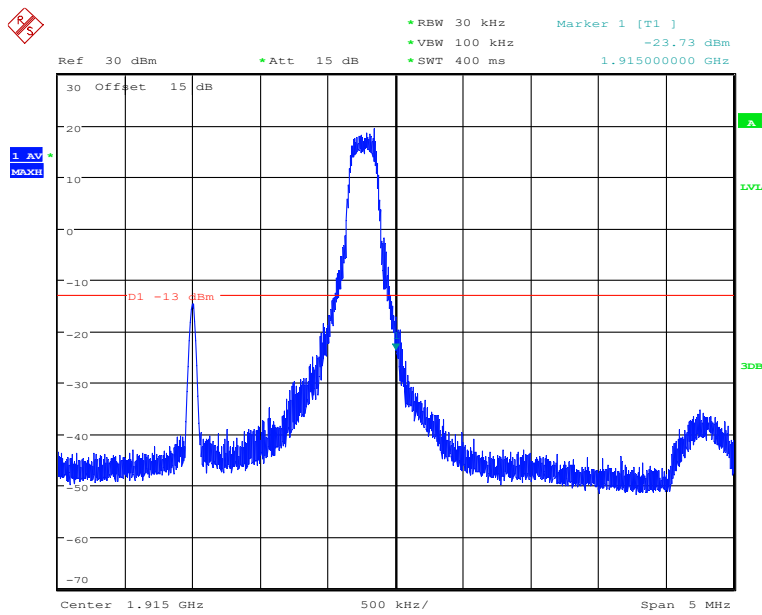
LTE Band25, 3MHz bandwidth, 16QAM,(1,0) Mode , Below 1850MHz



Date: 23.FEB.2020 06:22:32

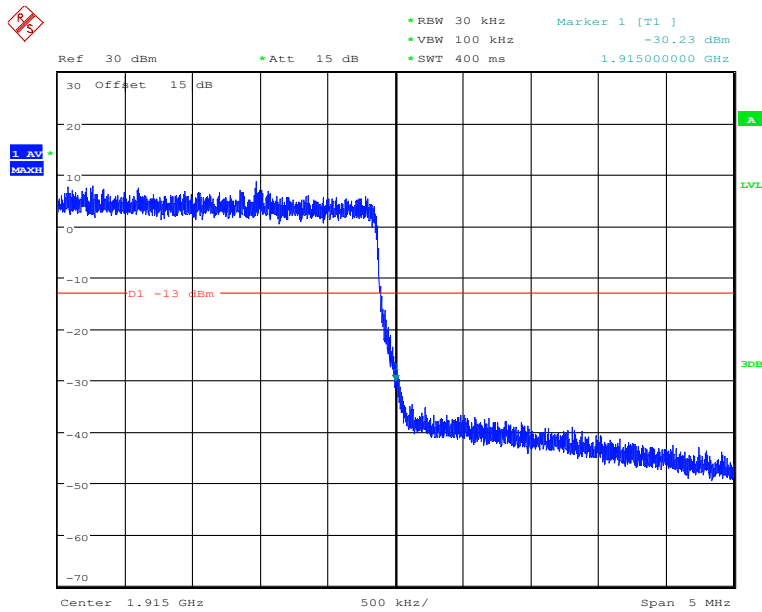
LTE Band25, 3MHz bandwidth, 16QAM,(15,0) Mode , Below 1850MHz

Report No.:B19W50598-WWAN_Rev1



Date: 23.FEB.2020 06:23:26

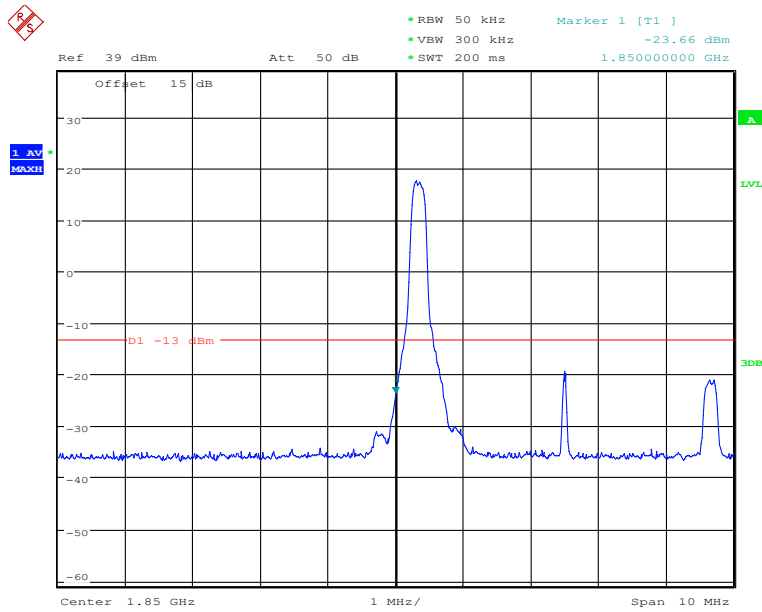
LTE Band25, 3MHz bandwidth, 16QAM,(1,15) Mode, Above 1915MHz



Date: 23.FEB.2020 06:23:08

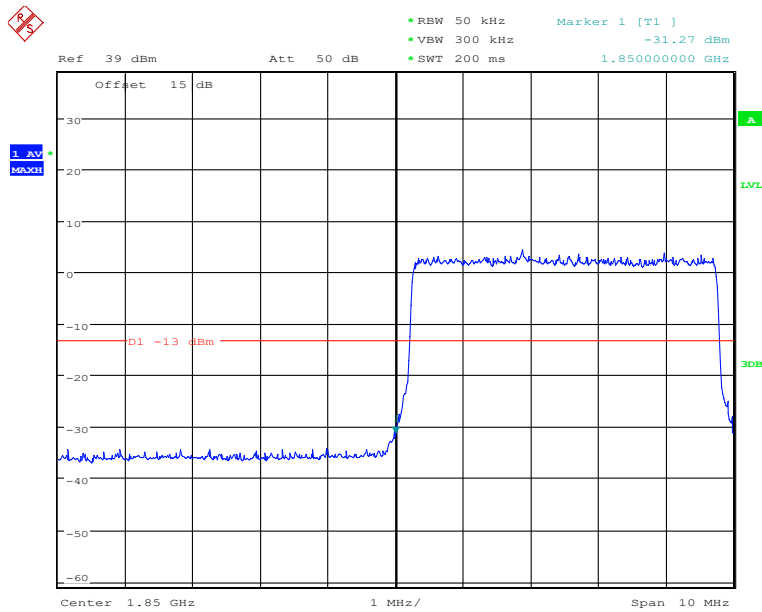
LTE Band25, 3MHz bandwidth, 16QAM,(15,0) Mode, Above 1915MHz

Report No.:B19W50598-WWAN_Rev1



Date: 21.FEB.2020 09:21:43

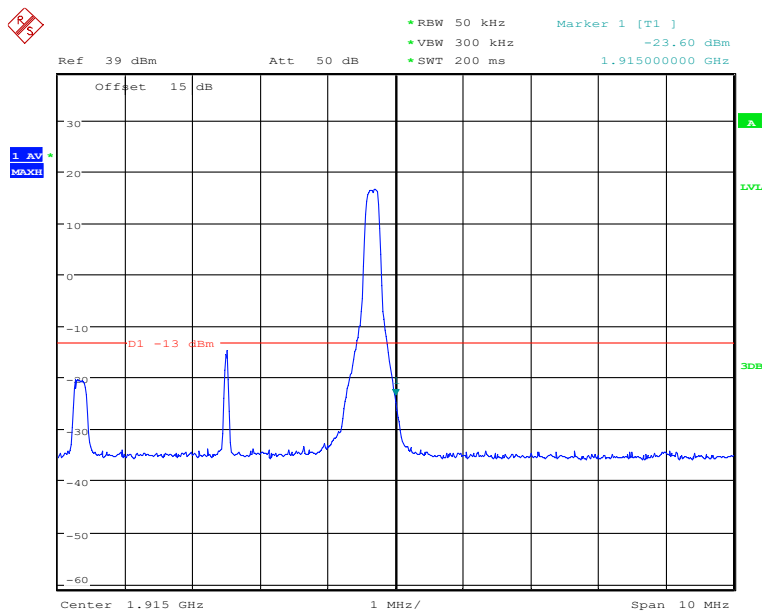
LTE Band25, 5MHz bandwidth, QPSK,(1,0) Mode , Below 1850MHz



Date: 21.FEB.2020 09:22:00

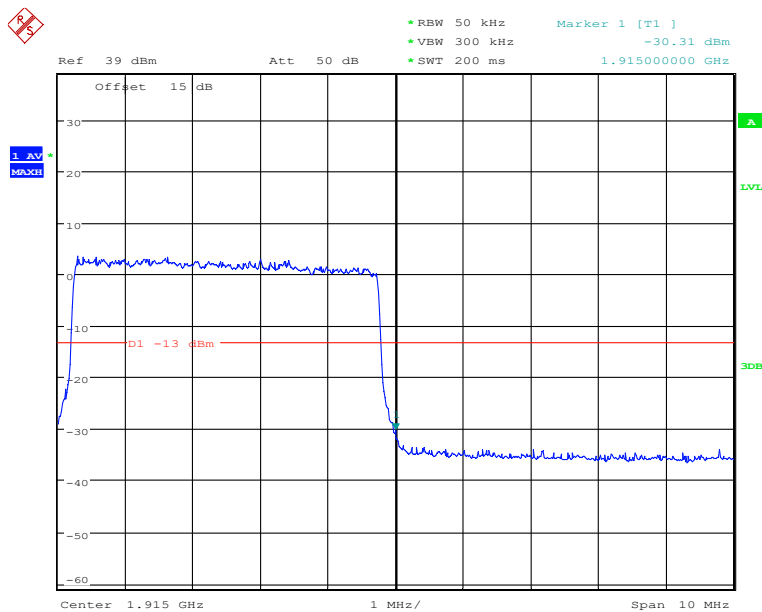
LTE Band25, 5MHz bandwidth, QPSK,(25,0) Mode , Below 1850MHz

Report No.:B19W50598-WWAN_Rev1



Date: 21.FEB.2020 09:23:20

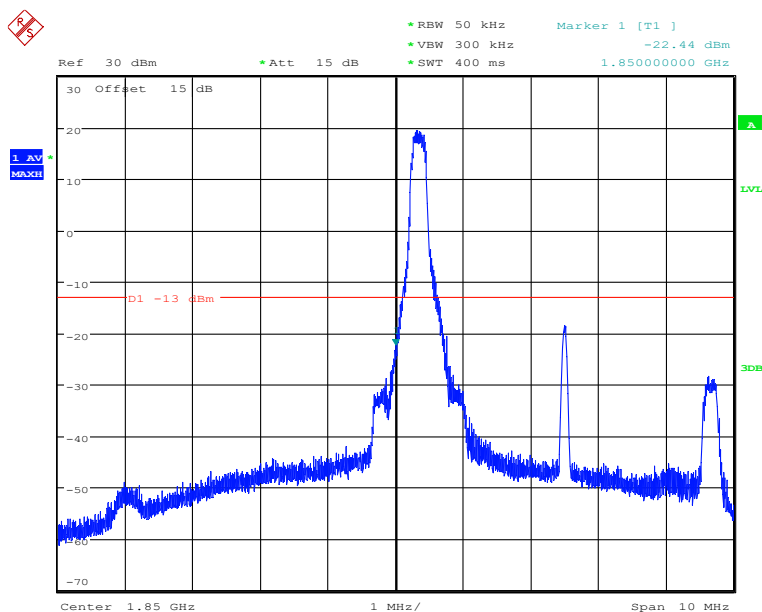
LTE Band25, 5MHz bandwidth, QPSK,(1,25) Mode, Above 1915MHz



Date: 21.FEB.2020 09:23:40

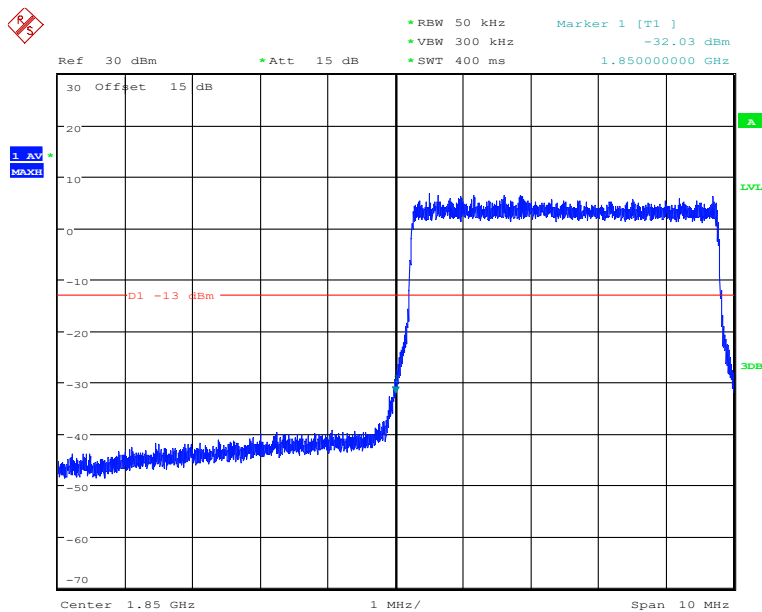
LTE Band25, 5MHz bandwidth, QPSK,(25,0) Mode, Above 1915MHz

Report No.:B19W50598-WWAN_Rev1



Date: 23.FEB.2020 06:27:06

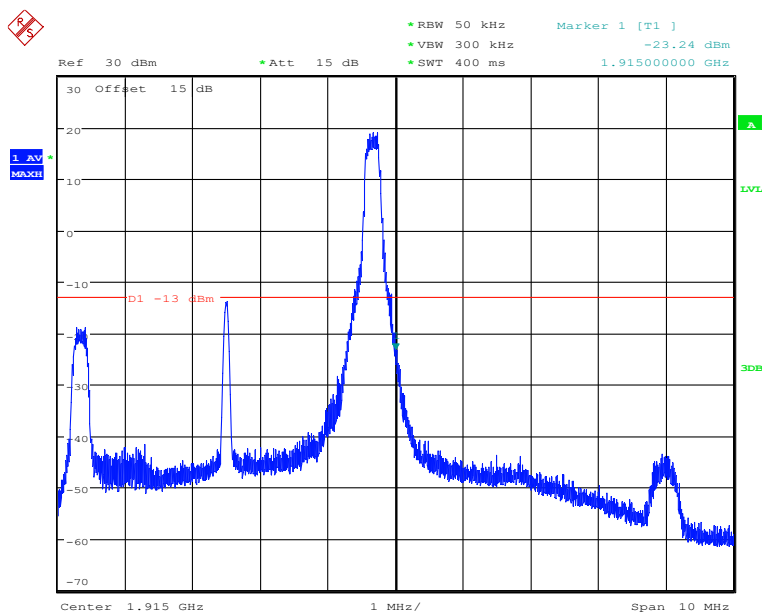
LTE Band25, 5MHz bandwidth, 16QAM,(1,0) Mode , Below 1850MHz



Date: 23.FEB.2020 06:26:52

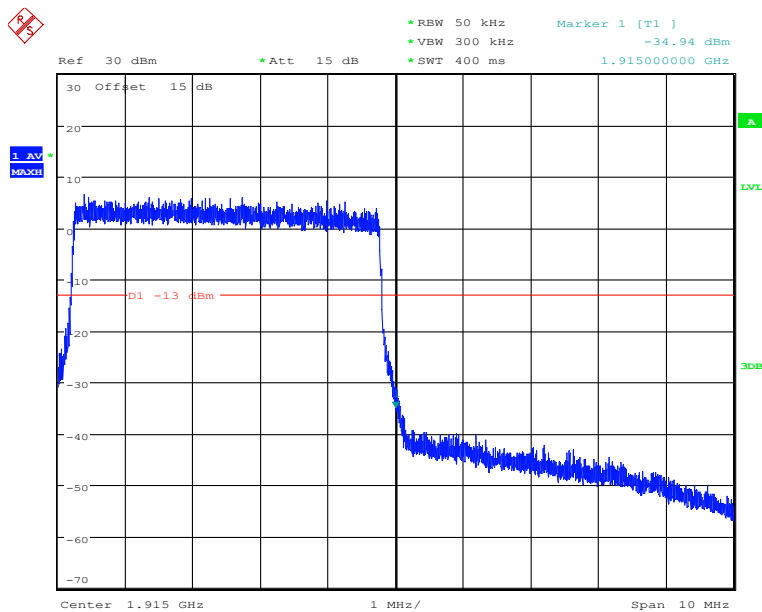
LTE Band25, 5MHz bandwidth, 16QAM,(25,0) Mode , Below 1850MHz

Report No.:B19W50598-WWAN_Rev1



Date: 23.FEB.2020 06:25:48

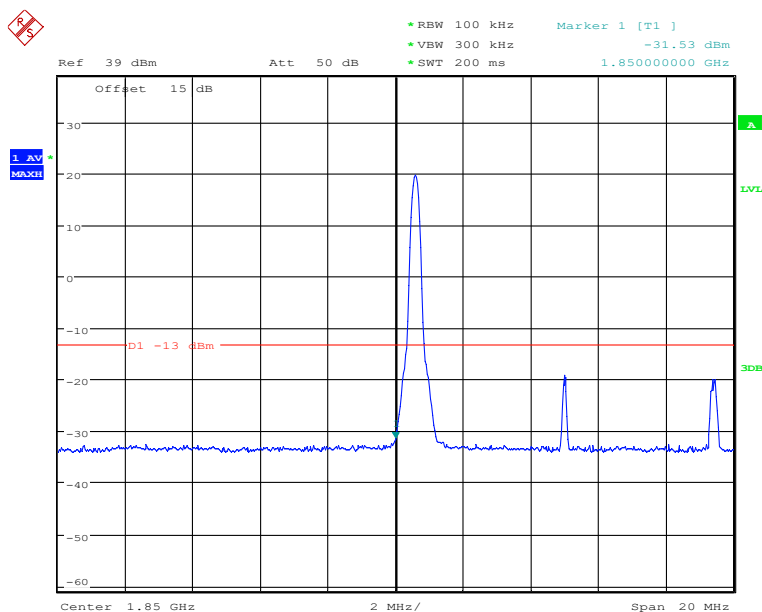
LTE Band25, 5MHz bandwidth, 16QAM,(1,25) Mode, Above 1915MHz



Date: 23.FEB.2020 06:26:04

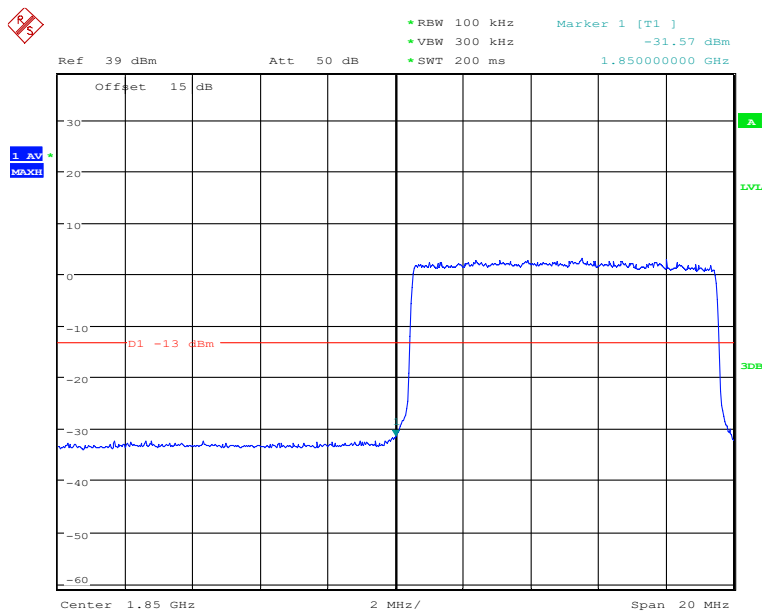
LTE Band25, 5MHz bandwidth, 16QAM,(25,0) Mode, Above 1915MHz

Report No.:B19W50598-WWAN_Rev1



Date: 21.FEB.2020 09:33:41

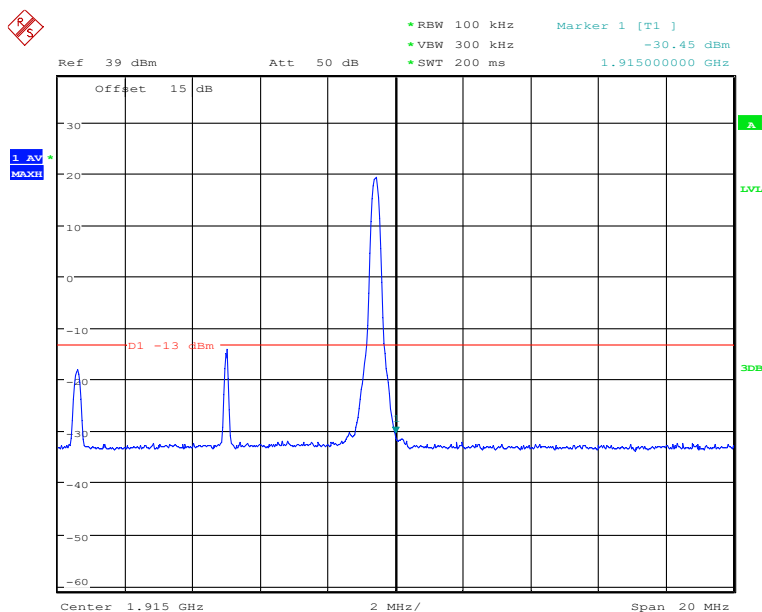
LTE Band25, 10MHz bandwidth, QPSK,(1,0) Mode , Below 1850MHz



Date: 21.FEB.2020 09:34:00

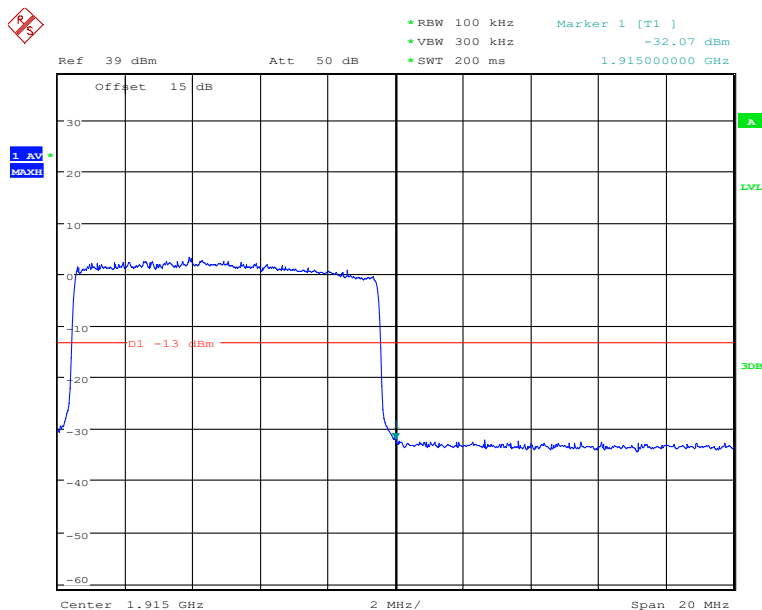
LTE Band25, 10MHz bandwidth, QPSK,(50,0) Mode , Below 1850MHz

Report No.:B19W50598-WWAN_Rev1



Date: 21.FEB.2020 09:35:01

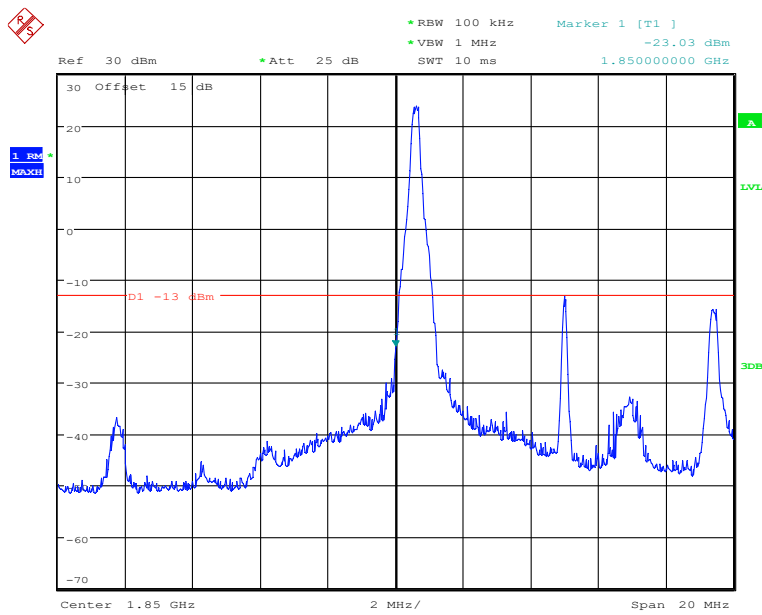
LTE Band25, 10MHz bandwidth, QPSK,(1,50) Mode, Above 1915MHz



Date: 21.FEB.2020 09:35:15

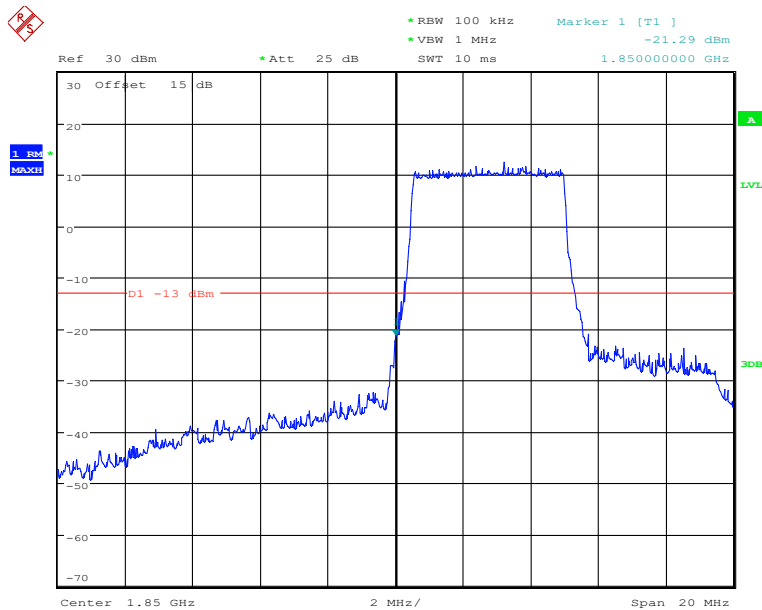
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Report No.:B19W50598-WWAN_Rev1



Date: 25.FEB.2020 02:34:09

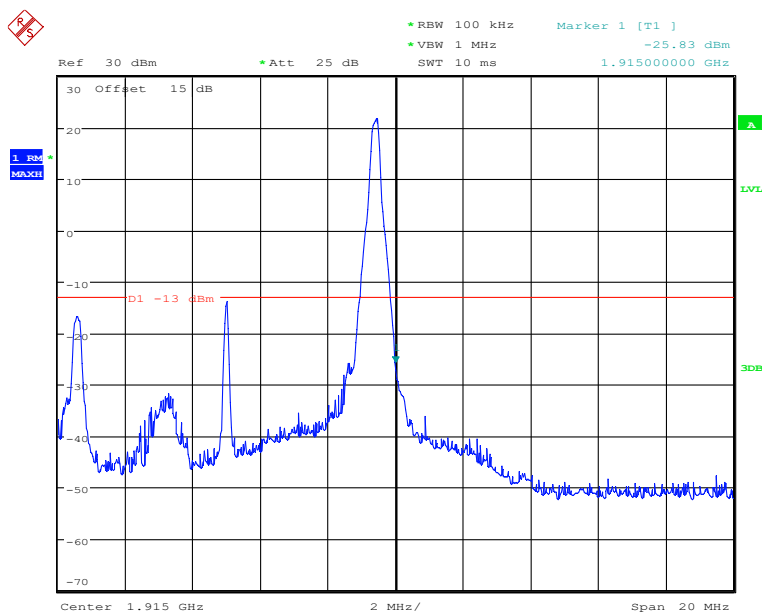
LTE Band25, 10MHz bandwidth, 16QAM,(1,0) Mode , Below 1850MHz



Date: 25.FEB.2020 02:34:33

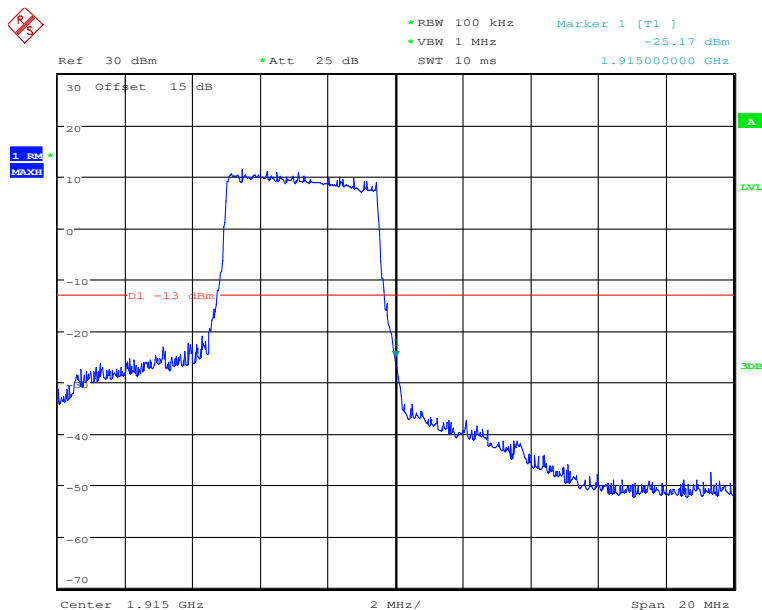
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Report No.:B19W50598-WWAN_Rev1



Date: 25.FEB.2020 02:35:40

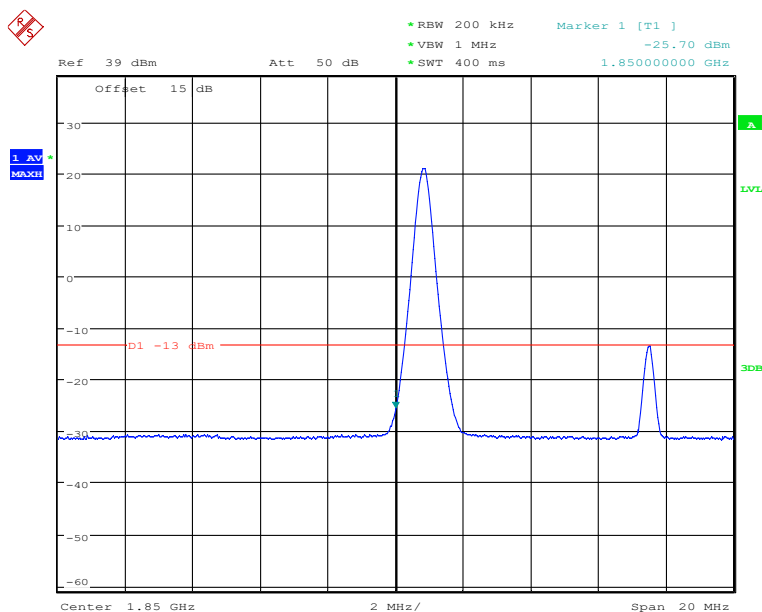
LTE Band25, 10MHz bandwidth, 16QAM,(1,50) Mode, Above 1915MHz



Date: 25.FEB.2020 02:35:20

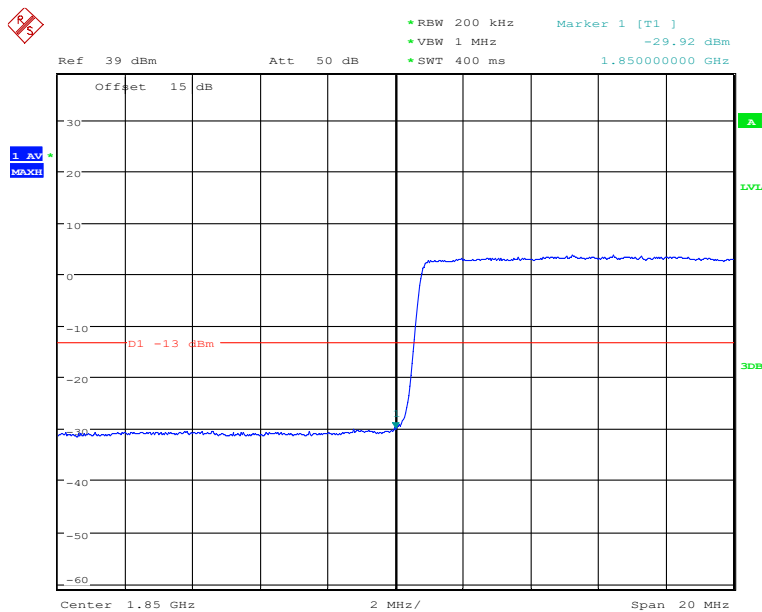
LTE Band25, 10MHz bandwidth, 16QAM,(50,0) Mode, Above 1915MHz

Report No.:B19W50598-WWAN_Rev1



Date: 21.FEB.2020 09:40:15

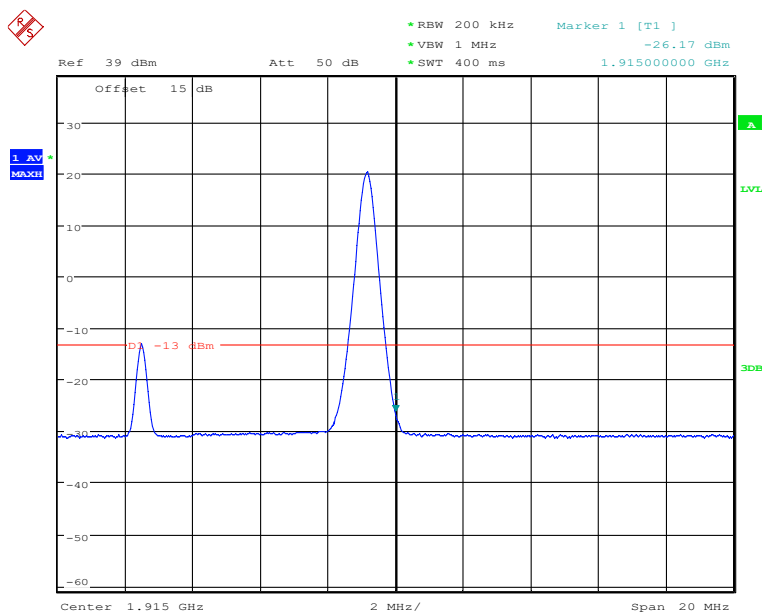
LTE Band25, 15MHz bandwidth, QPSK,(1,0) Mode , Below 1850MHz



Date: 21.FEB.2020 09:40:31

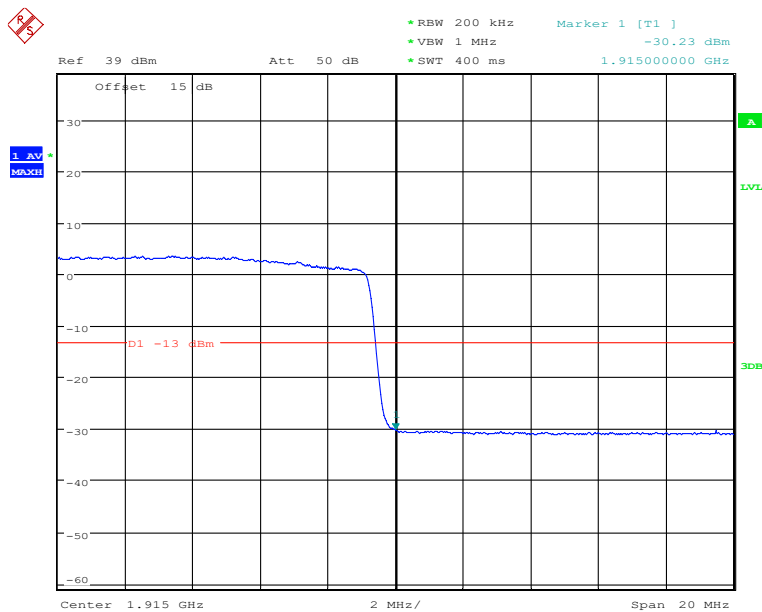
LTE Band25, 15MHz bandwidth, QPSK,(75,0) Mode , Below 1850MHz

Report No.:B19W50598-WWAN_Rev1



Date: 21.FEB.2020 09:38:46

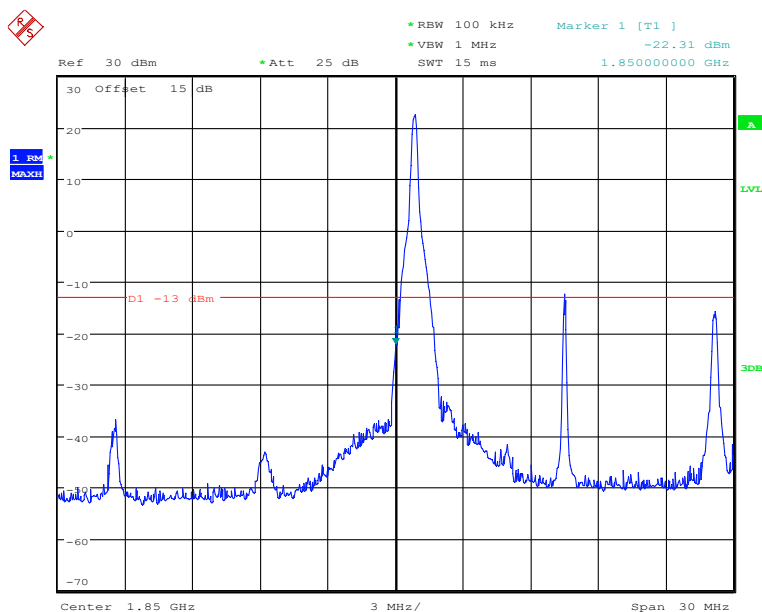
LTE Band25, 15MHz bandwidth, QPSK,(1,75) Mode, Above 1915MHz



Date: 21.FEB.2020 09:39:11

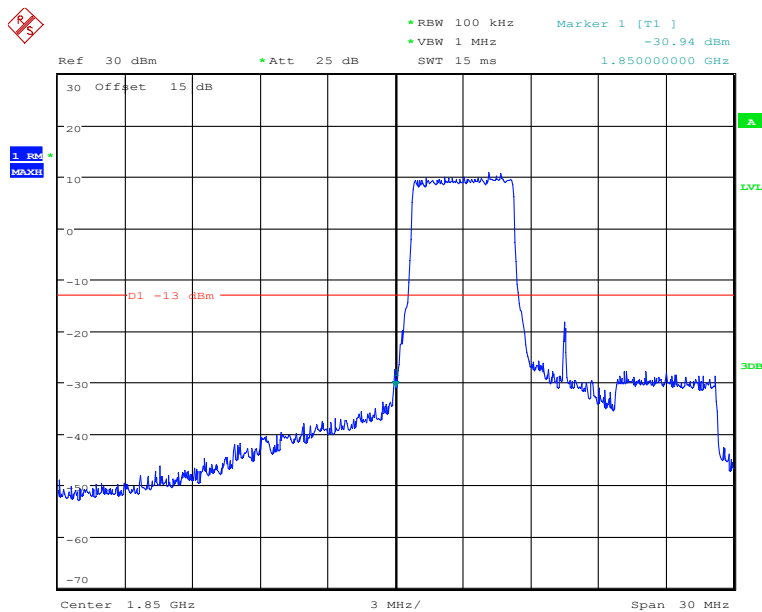
LTE Band25, 15MHz bandwidth, QPSK,(75,0) Mode, Above 1915MHz

Report No.:B19W50598-WWAN_Rev1



Date: 25.FEB.2020 02:38:45

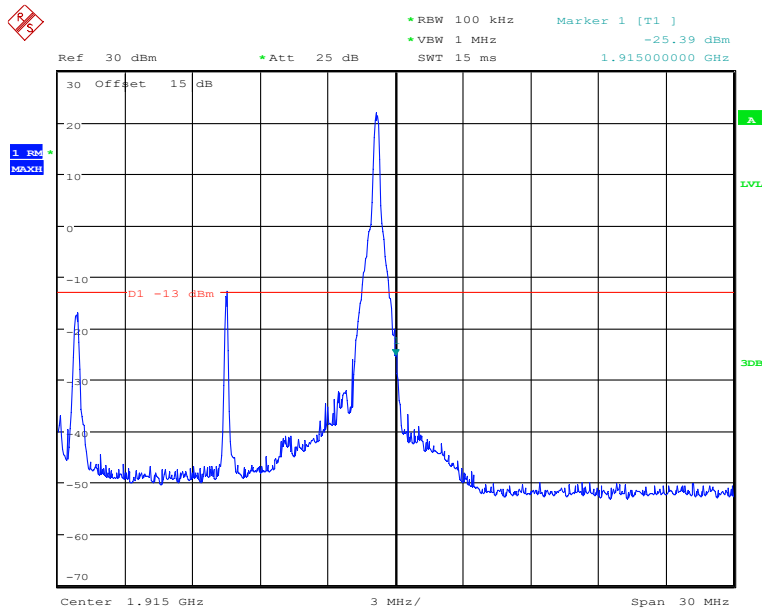
LTE Band25, 15MHz bandwidth, 16QAM,(1,0) Mode , Below 1850MHz



Date: 25.FEB.2020 02:38:21

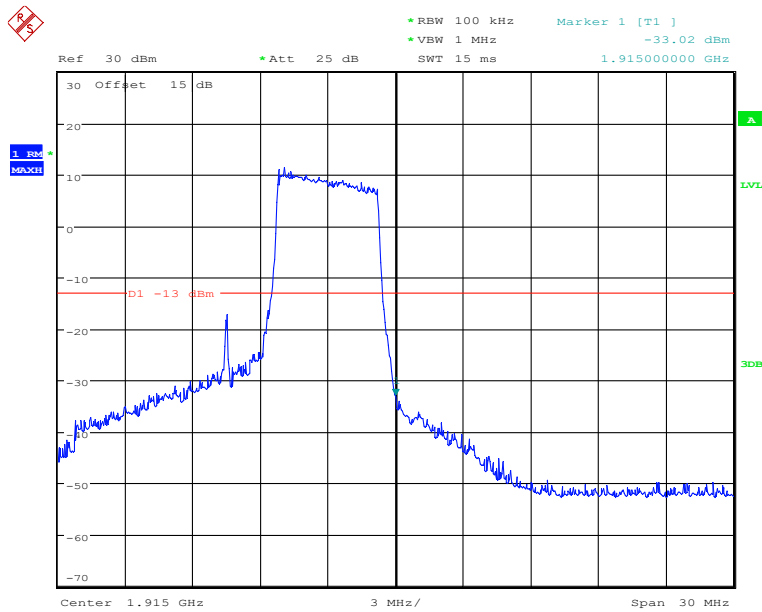
LTE Band25, 15MHz bandwidth, 16QAM,(75,0) Mode , Below 1850MHz

Report No.:B19W50598-WWAN_Rev1



Date: 25.FEB.2020 02:37:22

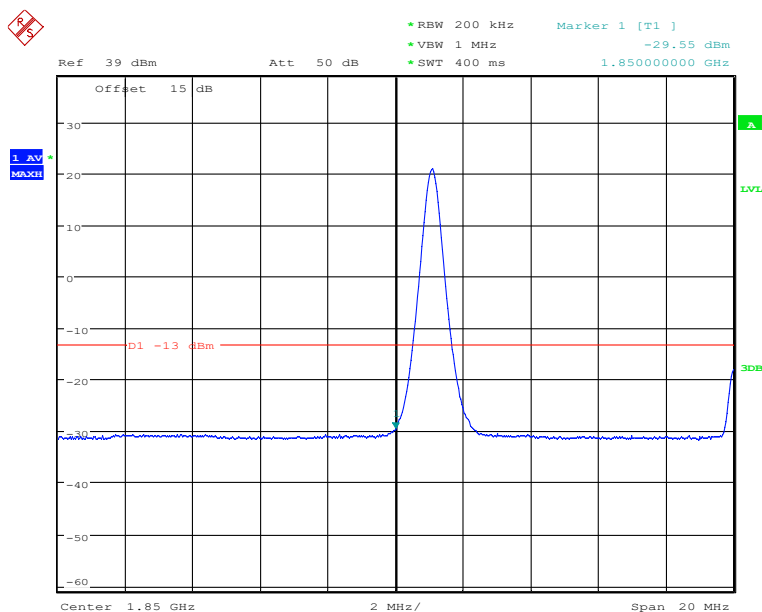
LTE Band25, 15MHz bandwidth, 16QAM,(1,75) Mode, Above 1915MHz



Date: 25.FEB.2020 02:37:42

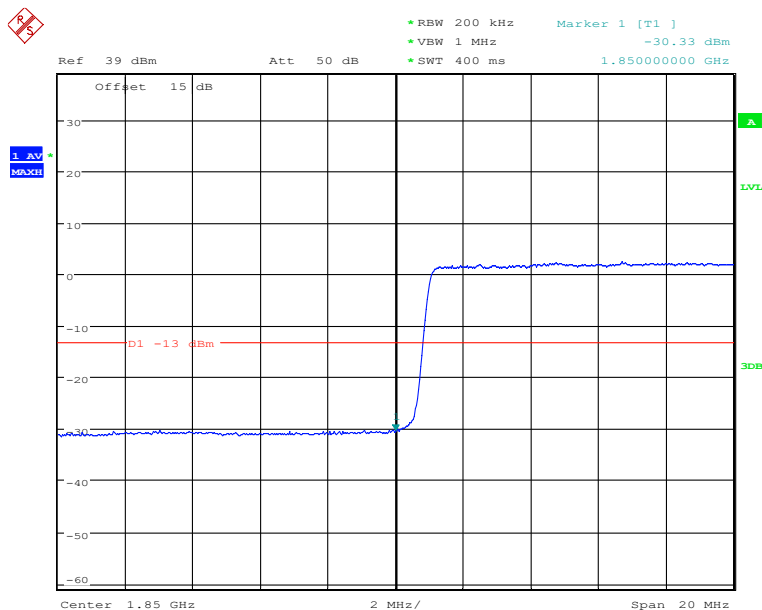
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Report No.:B19W50598-WWAN_Rev1



Date: 21.FEB.2020 09:43:03

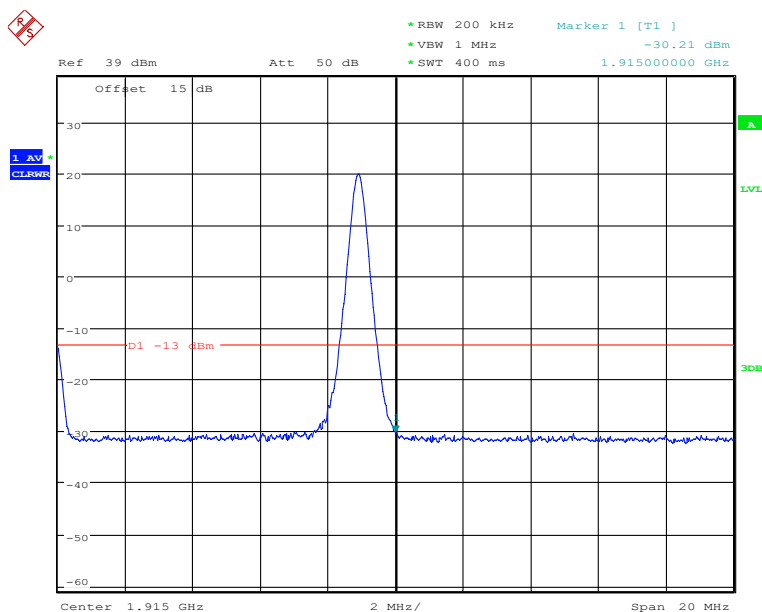
LTE Band25, 20MHz bandwidth, QPSK,(1,0) Mode , Below 1850MHz



Date: 21.FEB.2020 09:43:19

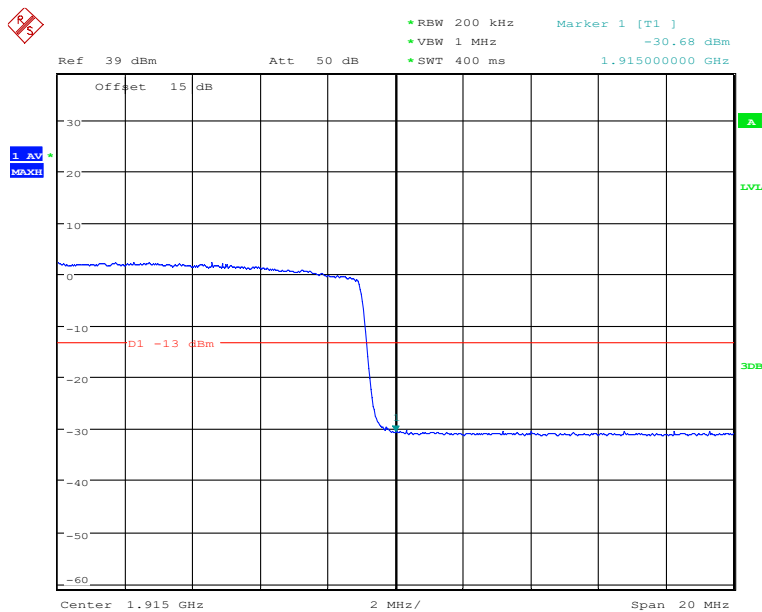
LTE Band25, 20MHz bandwidth, QPSK,(100,0) Mode , Below 1850MHz

Report No.:B19W50598-WWAN_Rev1



Date: 21.FEB.2020 09:44:01

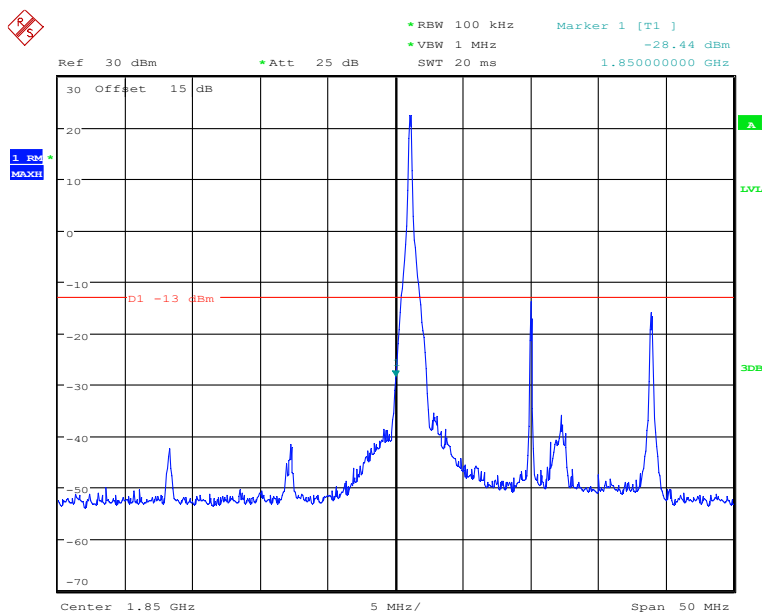
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Date: 21.FEB.2020 09:44:15

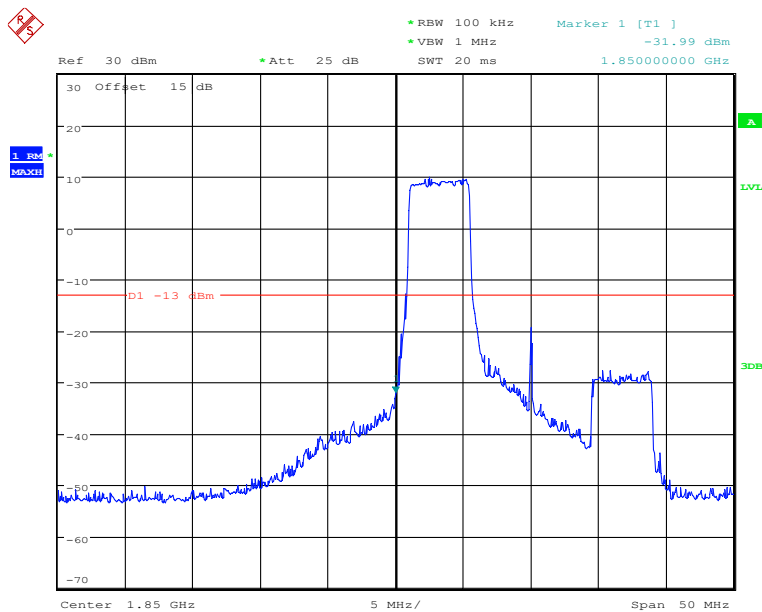
LTE Band25, 20MHz bandwidth, QPSK,(100,0) Mode, Above 1915MHz

Report No.:B19W50598-WWAN_Rev1



Date: 25.FEB.2020 02:39:31

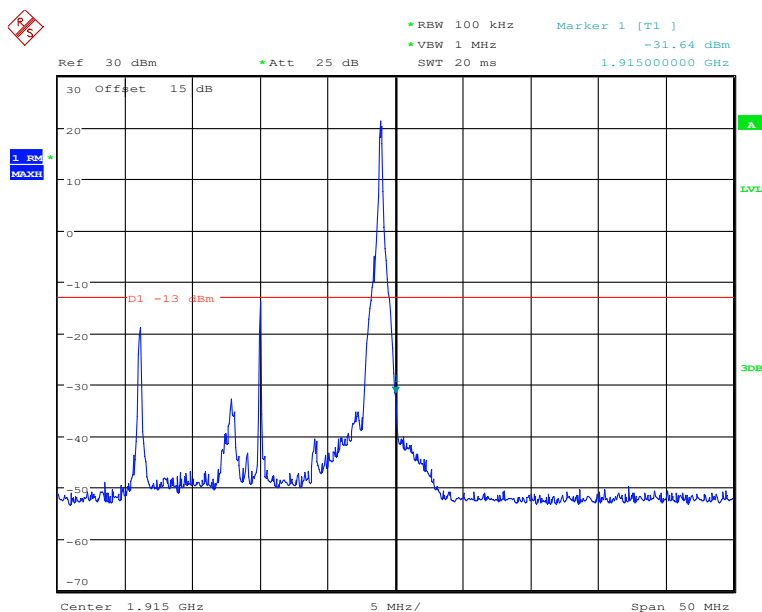
LTE Band25, 20MHz bandwidth, 16QAM,(1,0) Mode , Below 1850MHz



Date: 25.FEB.2020 02:39:51

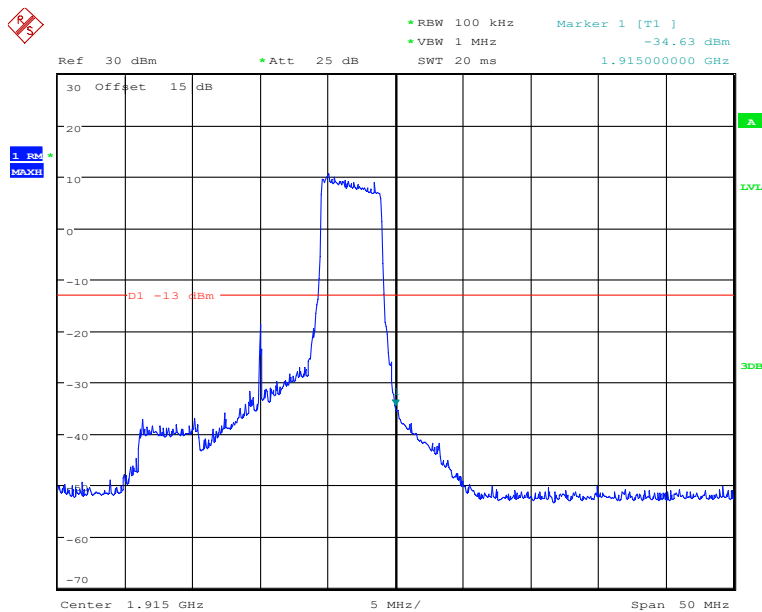
LTE Band25, 20MHz bandwidth, 16QAM,(100,0) Mode , Below 1850MHz

Report No.:B19W50598-WWAN_Rev1



Date: 25.FEB.2020 02:41:12

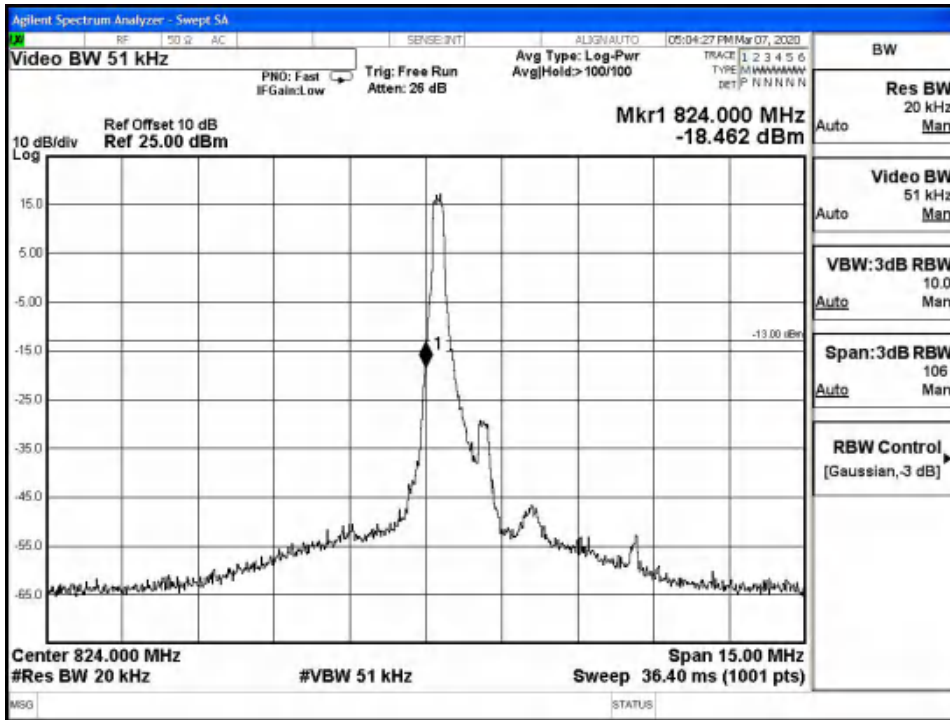
LTE Band25, 20MHz bandwidth, 16QAM,(1,100) Mode, Above 1915MHz



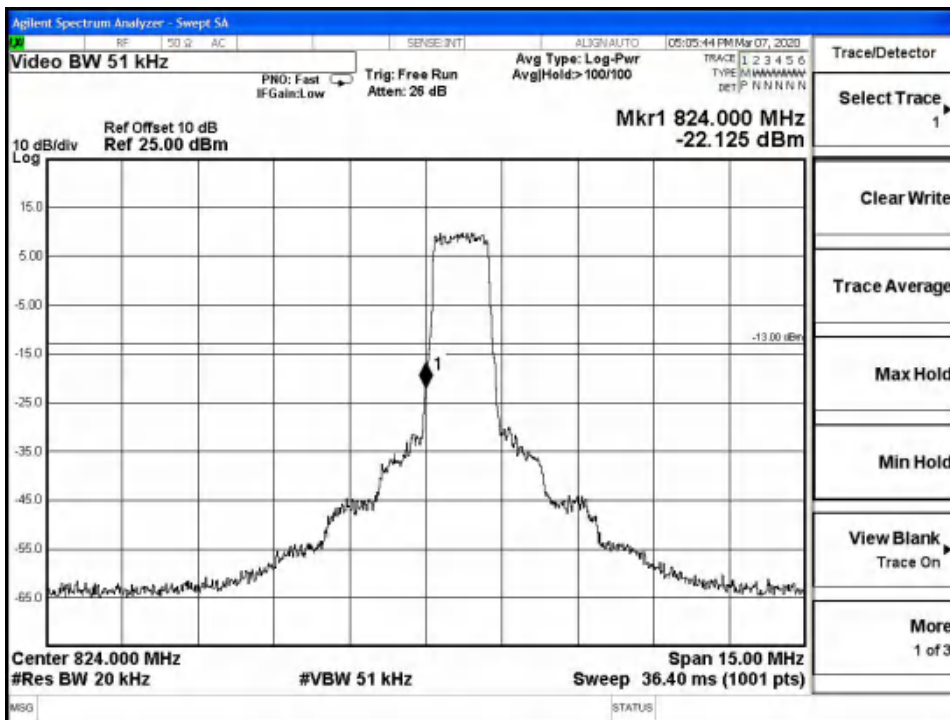
Date: 25.FEB.2020 02:40:43

LTE Band25, 20MHz bandwidth, 16QAM,(100,0) Mode, Above 1915MHz

5.5.10 LTE B26 Band Edge Results

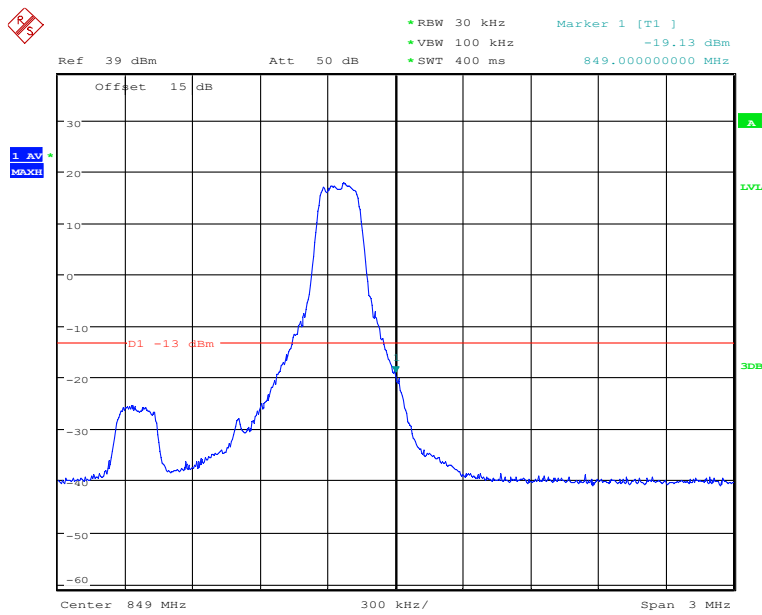


LTE Band26, 1.4MHz bandwidth, QPSK,(1,0) Mode , Below 824MHz



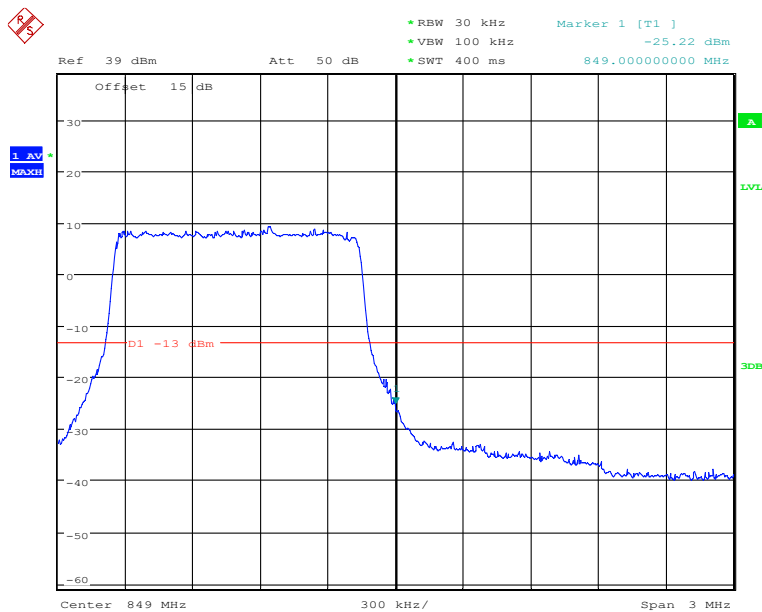
LTE Band26, 1.4MHz bandwidth, QPSK,(6,0) Mode , Below 824MHz

Report No.:B19W50598-WWAN_Rev1



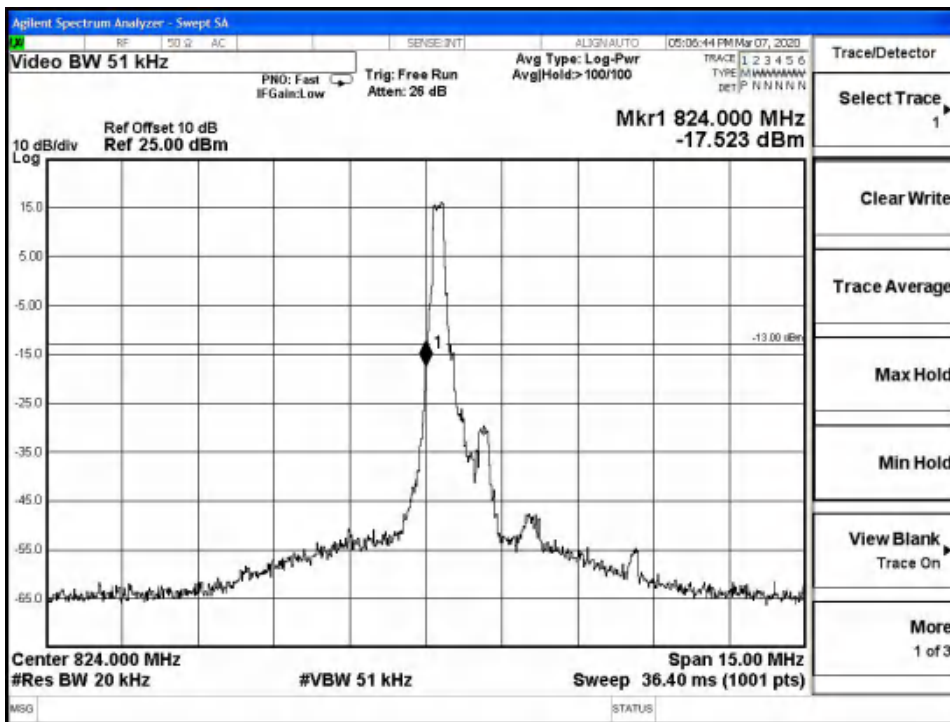
Date: 21.FEB.2020 09:47:51

LTE Band26, 1.4MHz bandwidth, QPSK,(1,6) Mode, Above 849MHz

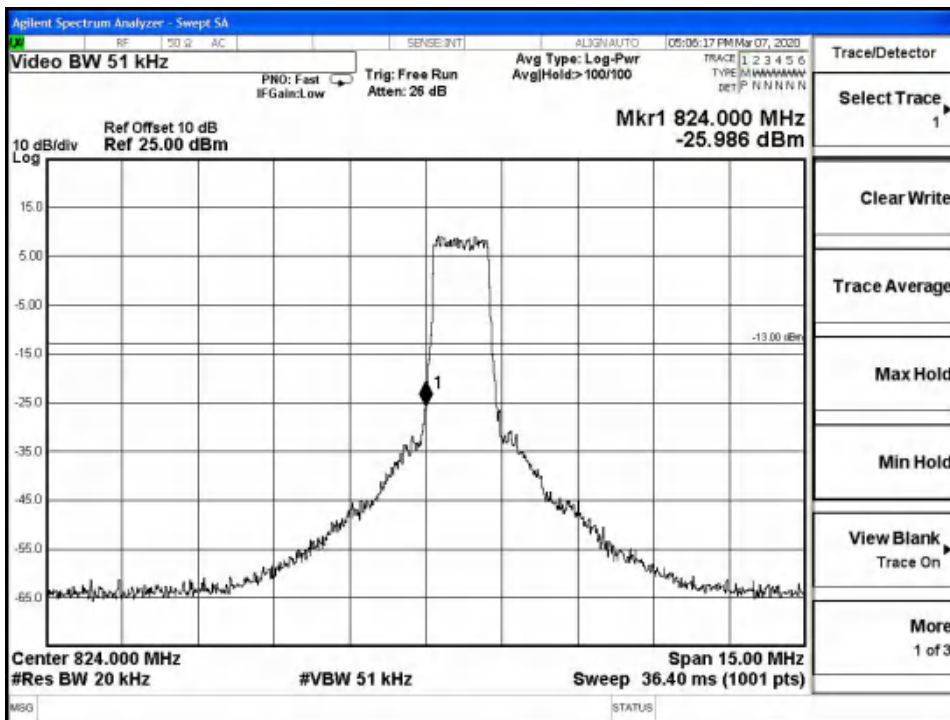


Date: 21.FEB.2020 09:48:04

LTE Band26, 1.4MHz bandwidth, QPSK,(6,0) Mode, Above 849MHz

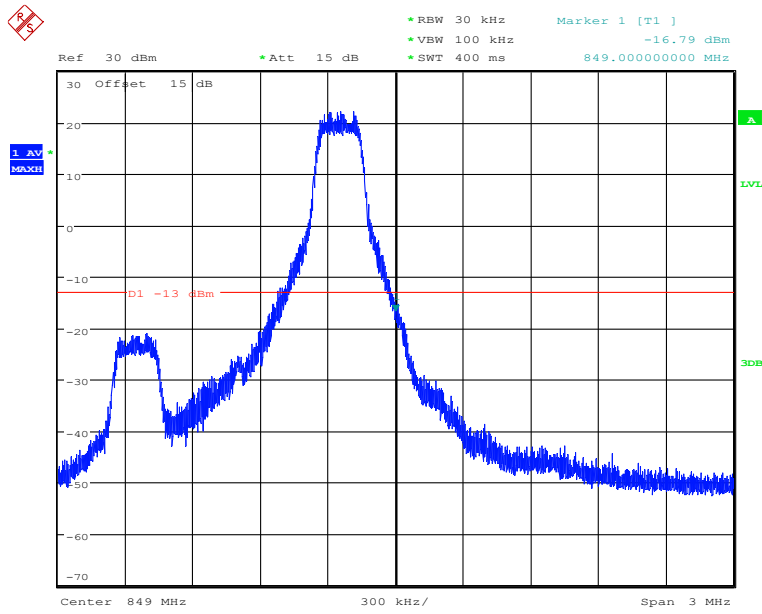


LTE Band26, 1.4MHz bandwidth, 16QAM,(1,0) Mode , Below 824MHz



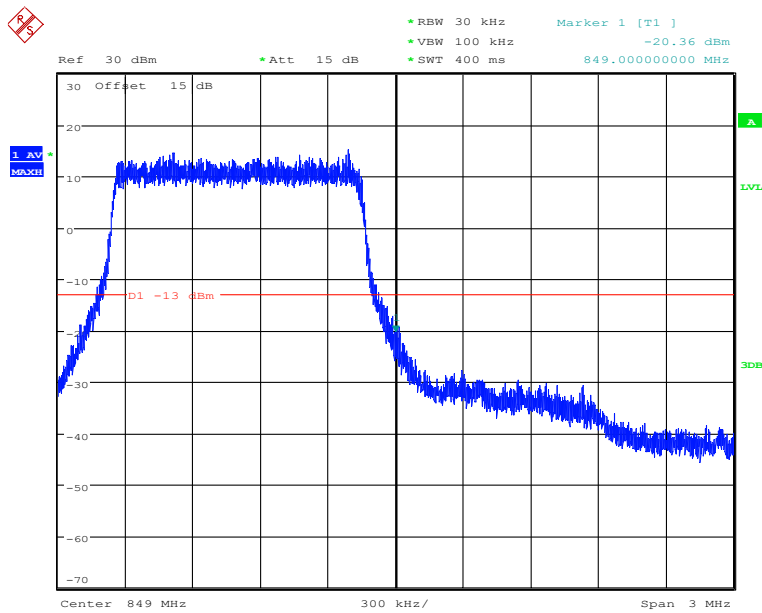
LTE Band26, 1.4MHz bandwidth, 16QAM,(6,0) Mode , Below 824MHz

Report No.:B19W50598-WWAN_Rev1



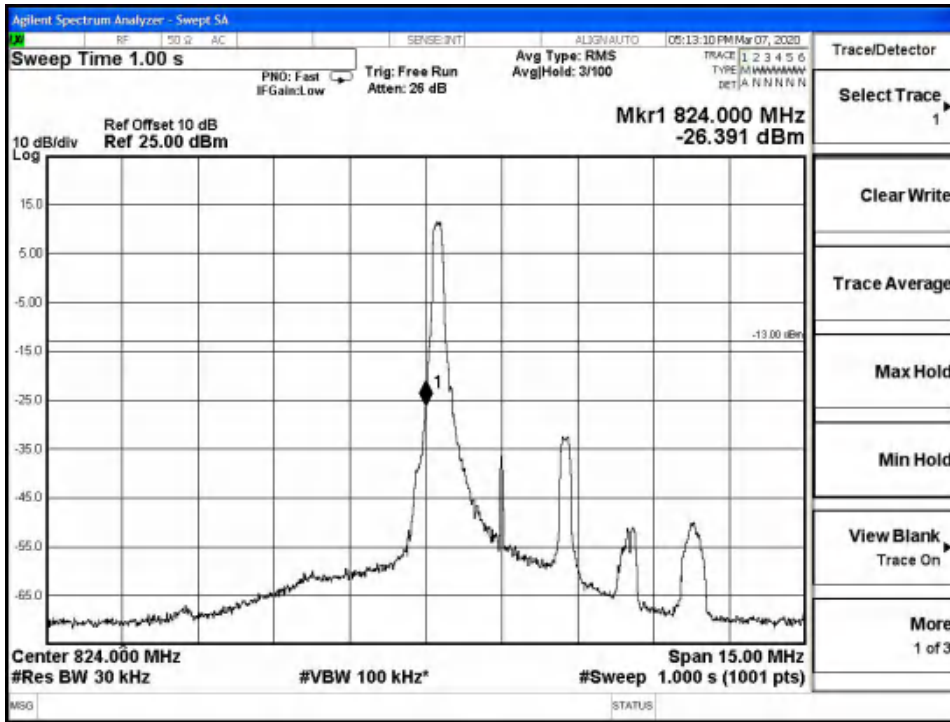
Date: 23.FEB.2020 06:34:35

LTE Band26, 1.4MHz bandwidth, 16QAM,(1,6) Mode, Above 849MHz

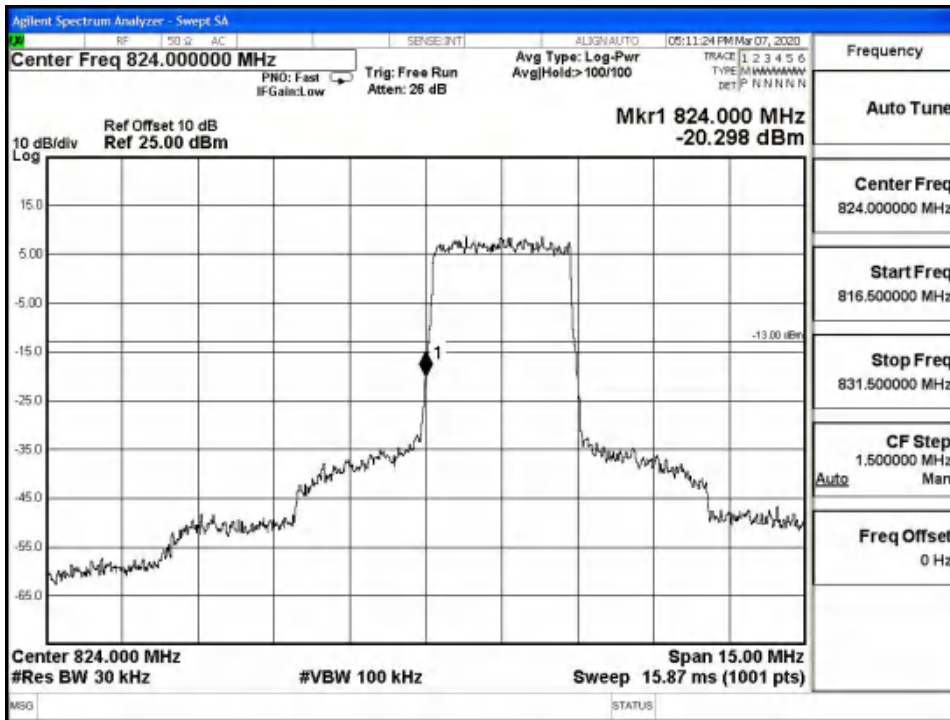


Date: 23.FEB.2020 06:34:14

LTE Band26, 1.4MHz bandwidth, 16QAM,(6,0) Mode, Above 849MHz

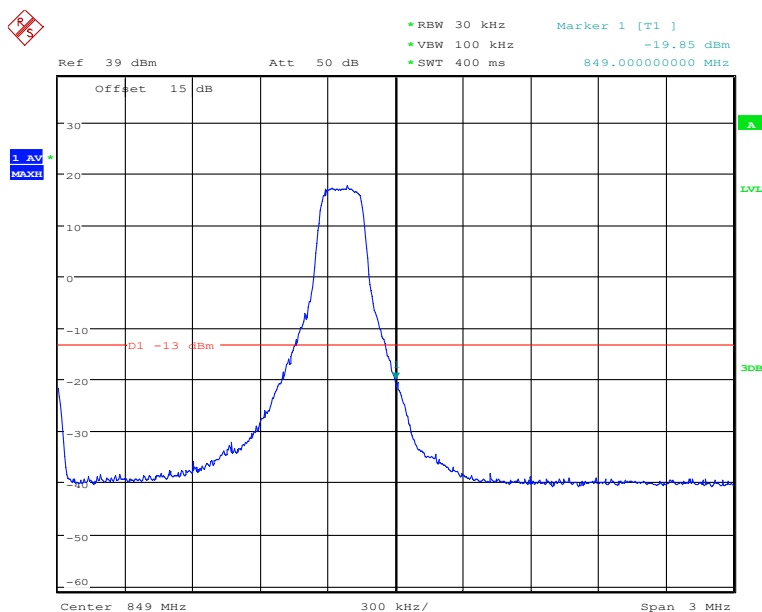


LTE Band26, 3MHz bandwidth, QPSK,(1,0) Mode , Below 824MHz



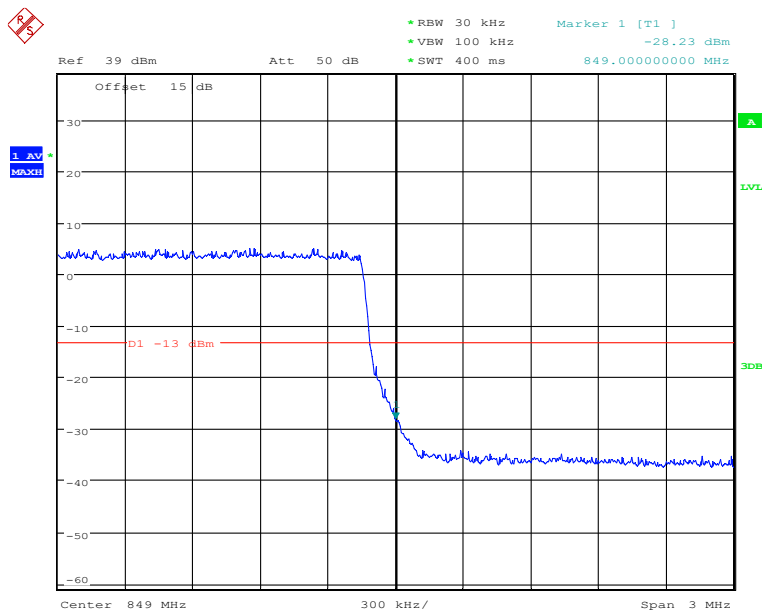
LTE Band26, 3MHz bandwidth, QPSK,(15,0) Mode , Below 824MHz

Report No.:B19W50598-WWAN_Rev1



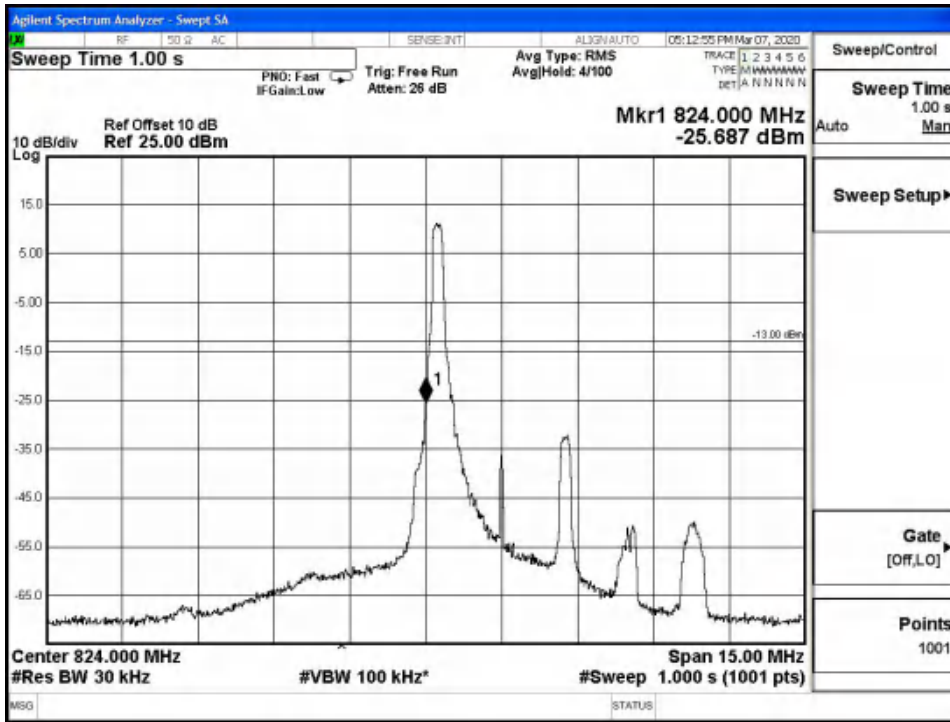
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LTE Band26, 3MHz bandwidth, QPSK,(1,15) Mode, Above 849MHz

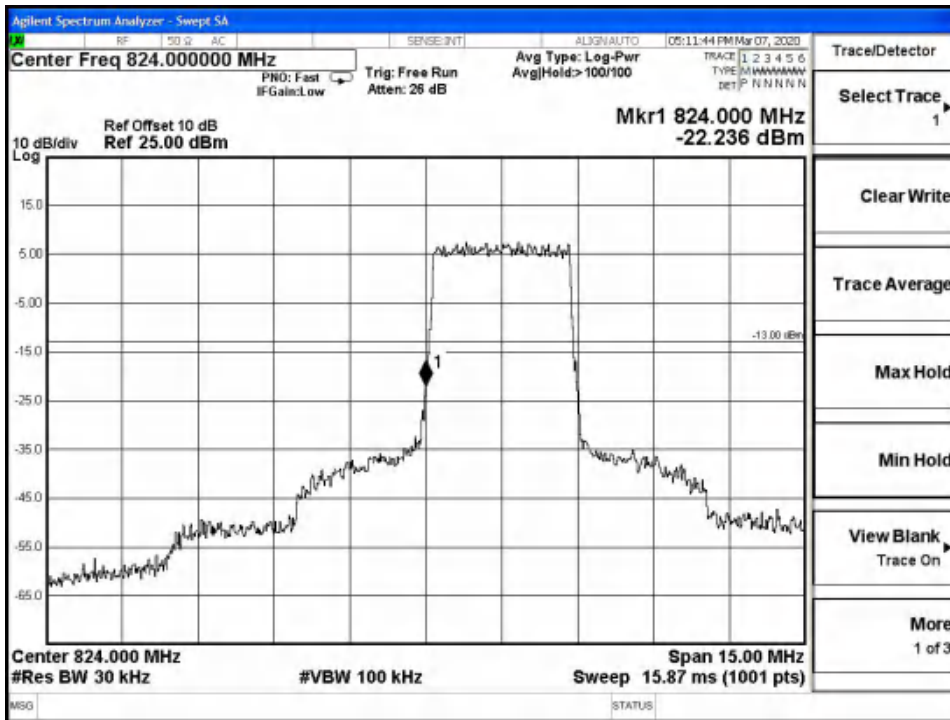


Date: 21.FEB.2020 09:50:43

LTE Band26, 3MHz bandwidth, QPSK,(15,0) Mode, Above 849MHz

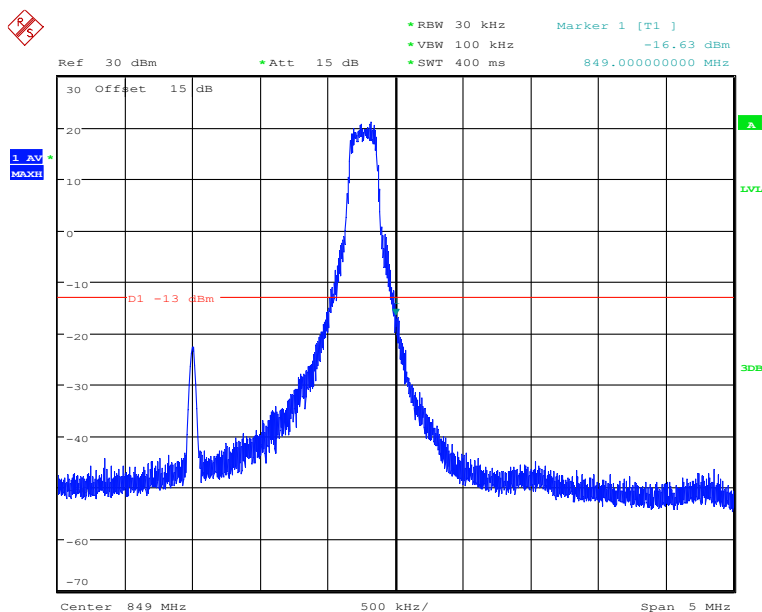


LTE Band26, 3MHz bandwidth, 16QAM,(1,0) Mode , Below 824MHz



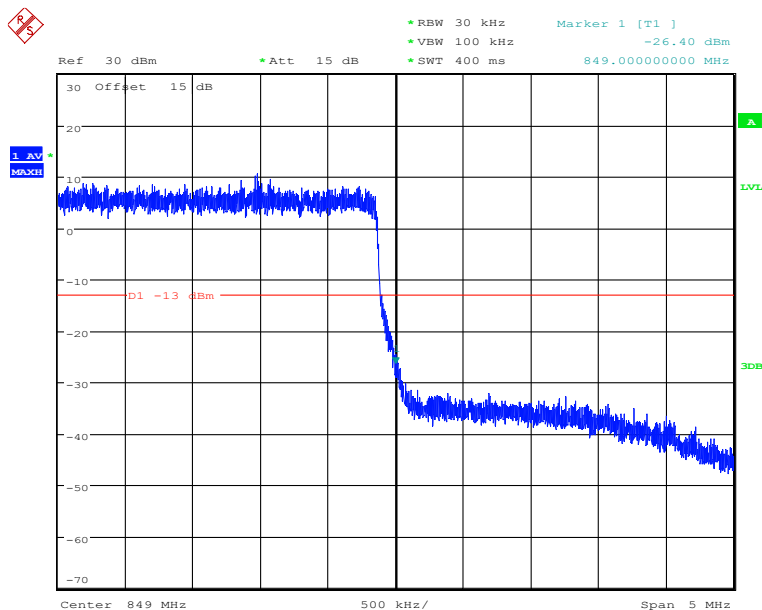
LTE Band26, 3MHz bandwidth, 16QAM,(15,0) Mode , Below 824MHz

Report No.:B19W50598-WWAN_Rev1



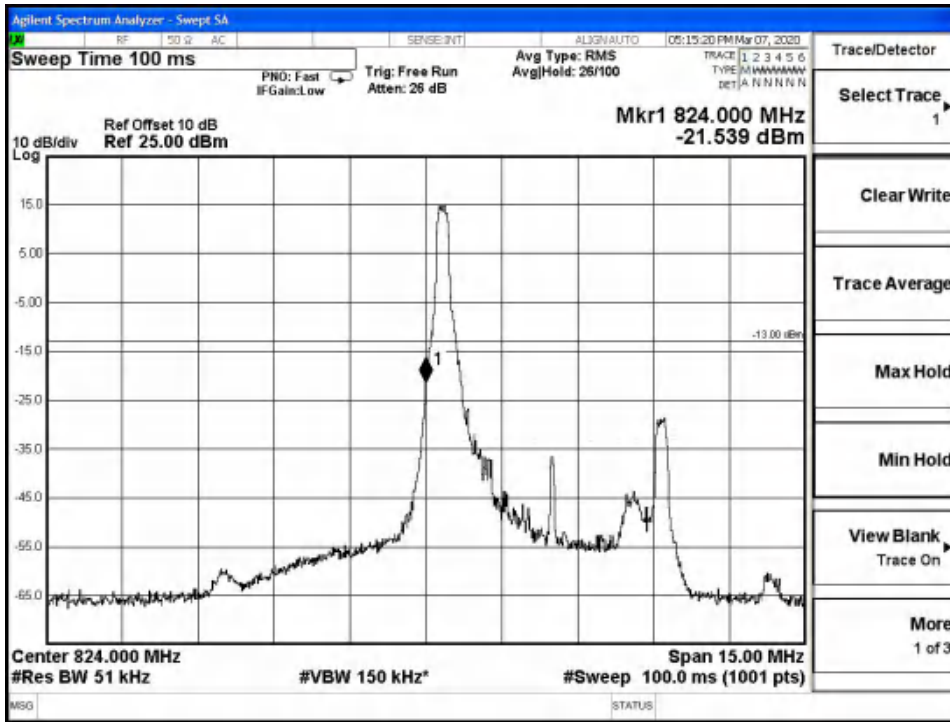
Date: 23.FEB.2020 06:31:42

LTE Band26, 3MHz bandwidth, 16QAM,(1,15) Mode, Above 849MHz

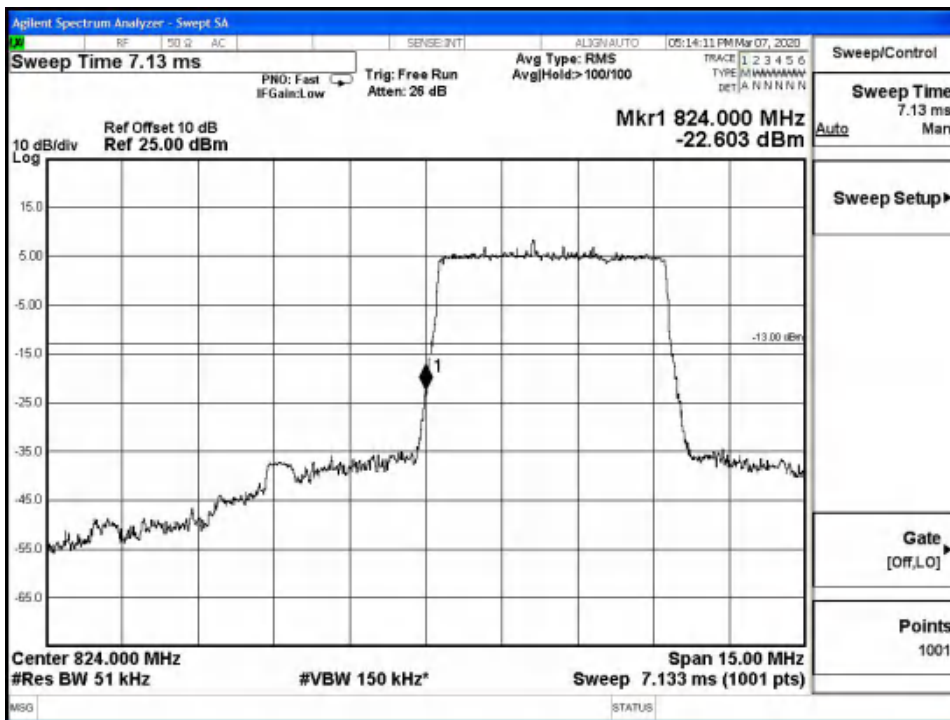


Date: 23.FEB.2020 06:31:56

LTE Band26, 3MHz bandwidth, 16QAM,(15,0) Mode, Above 849MHz

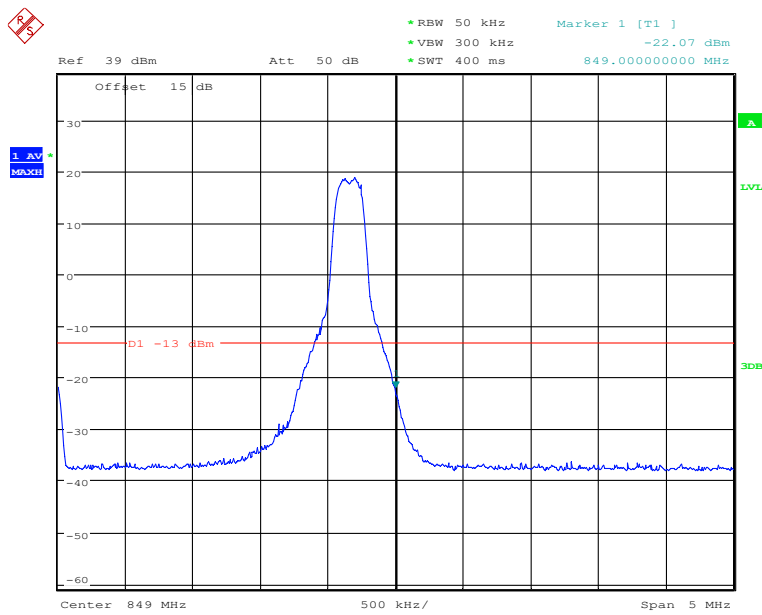


LTE Band26, 5MHz bandwidth, QPSK,(1,0) Mode , Below 824MHz



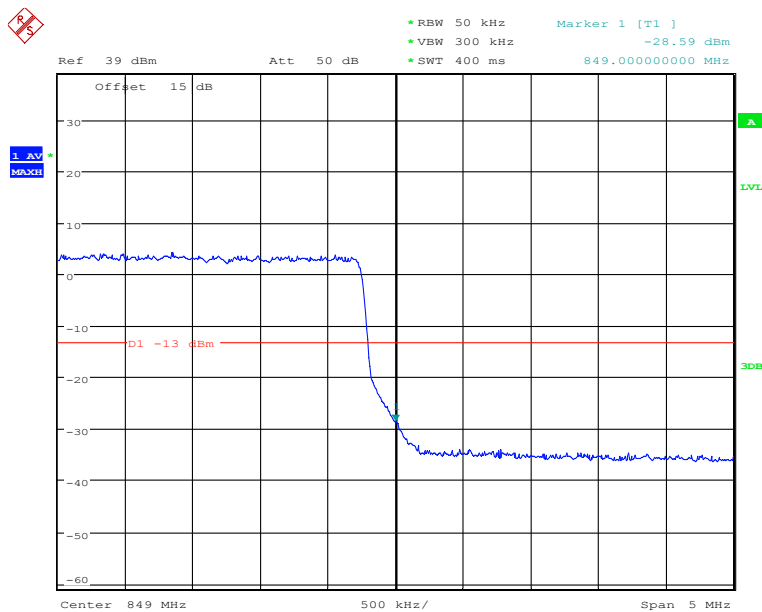
LTE Band26, 5MHz bandwidth, QPSK,(25,0) Mode , Below 824MHz

Report No.:B19W50598-WWAN_Rev1



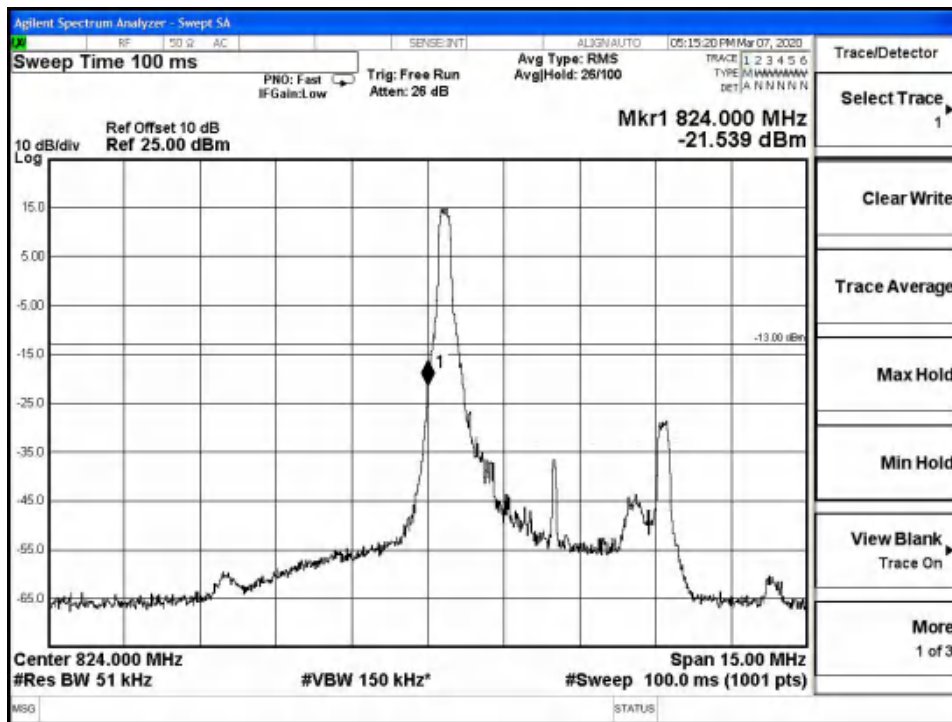
Date: 21.FEB.2020 09:55:07

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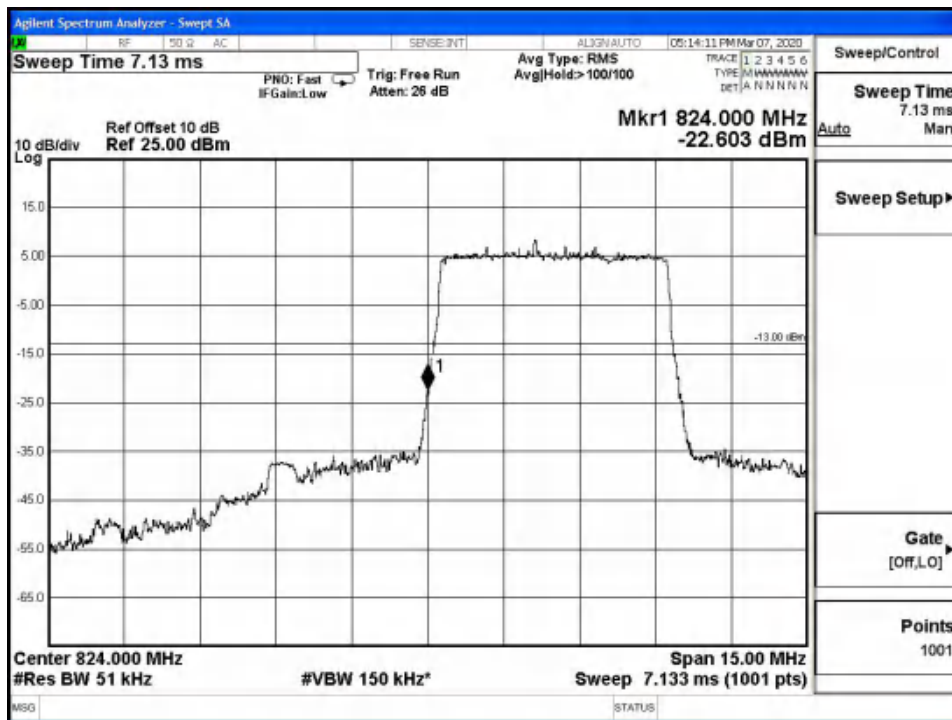


Date: 21.FEB.2020 09:55:20

LTE Band26, 5MHz bandwidth, QPSK,(25,0) Mode, Above 849MHz

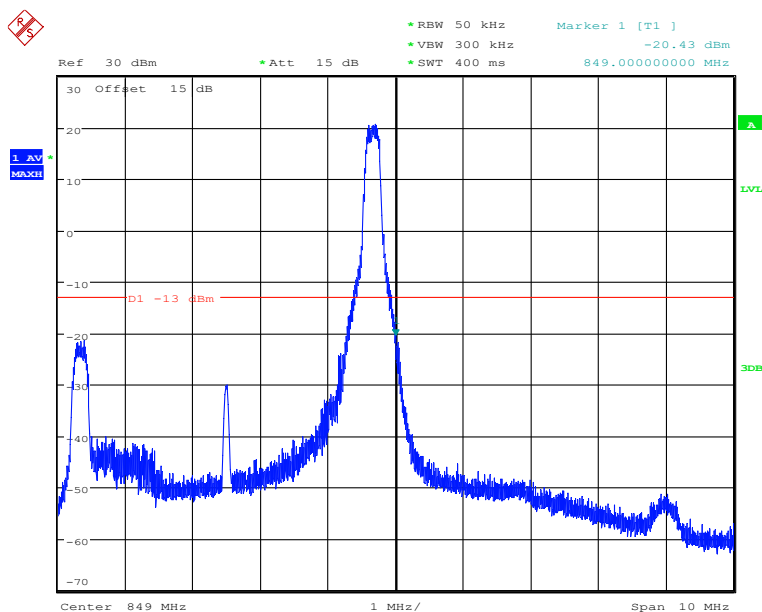


LTE Band26, 5MHz bandwidth, 16QAM,(1,0) Mode , Below 824MHz



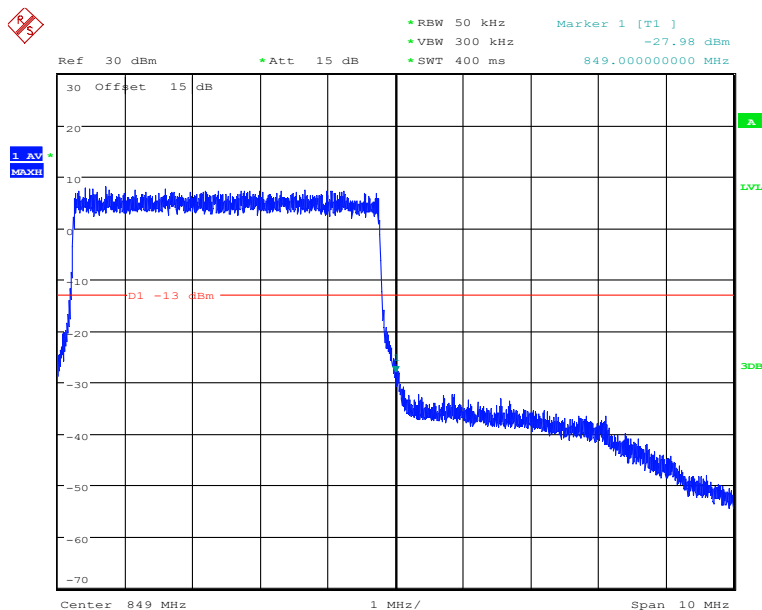
LTE Band26, 5MHz bandwidth, 16QAM,(25,0) Mode , Below 824MHz

Report No.:B19W50598-WWAN_Rev1



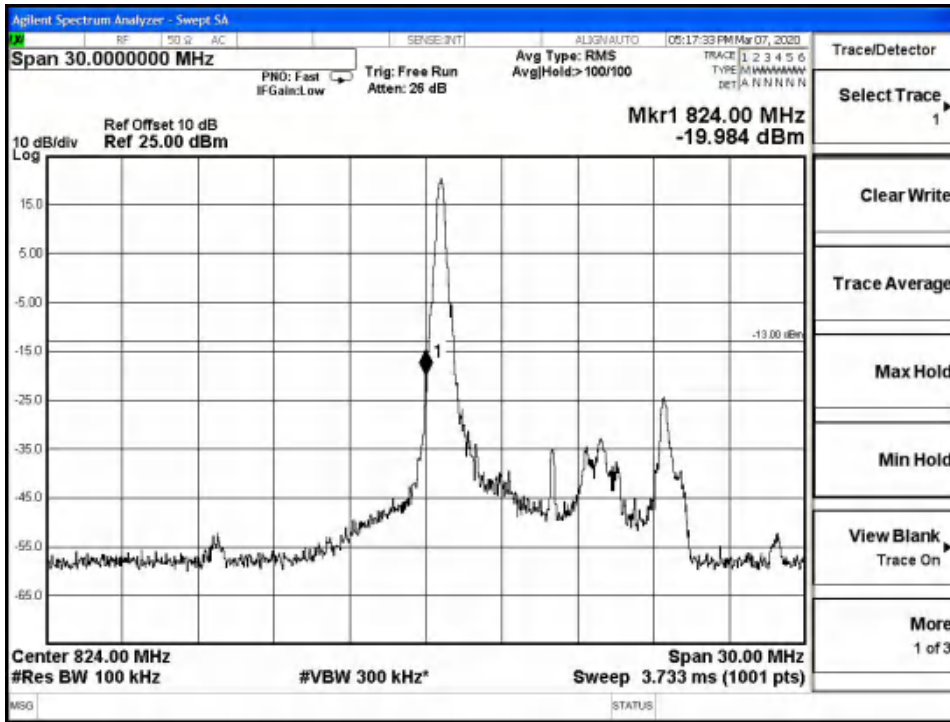
Date: 23.FEB.2020 06:30:32

LTE Band26, 5MHz bandwidth, 16QAM,(1,25) Mode, Above 849MHz

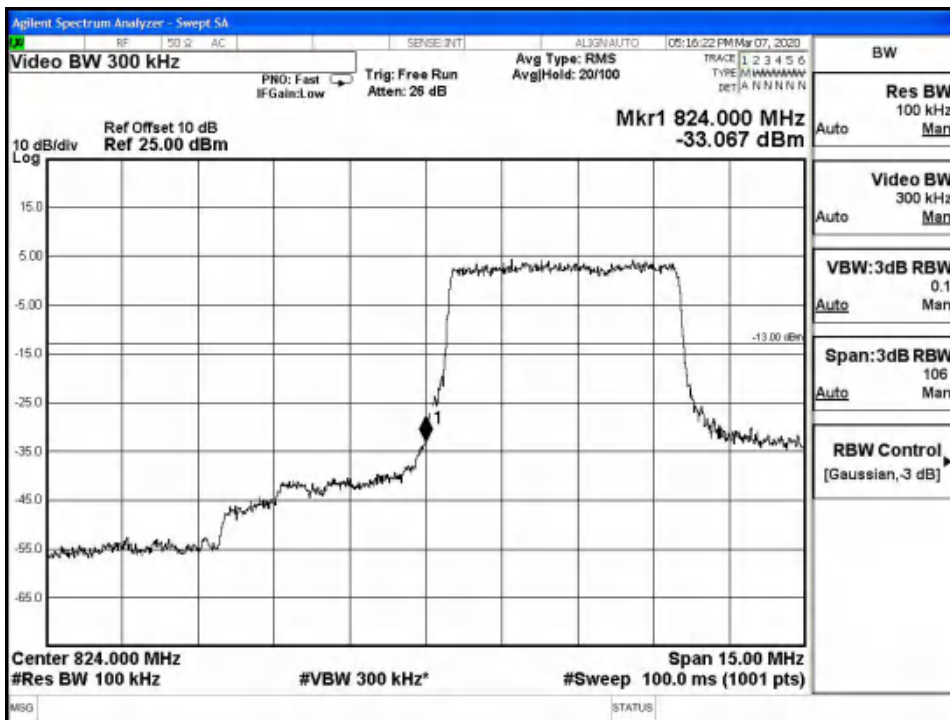


Date: 23.FEB.2020 06:30:13

LTE Band26, 5MHz bandwidth, 16QAM,(25,0) Mode, Above 849MHz

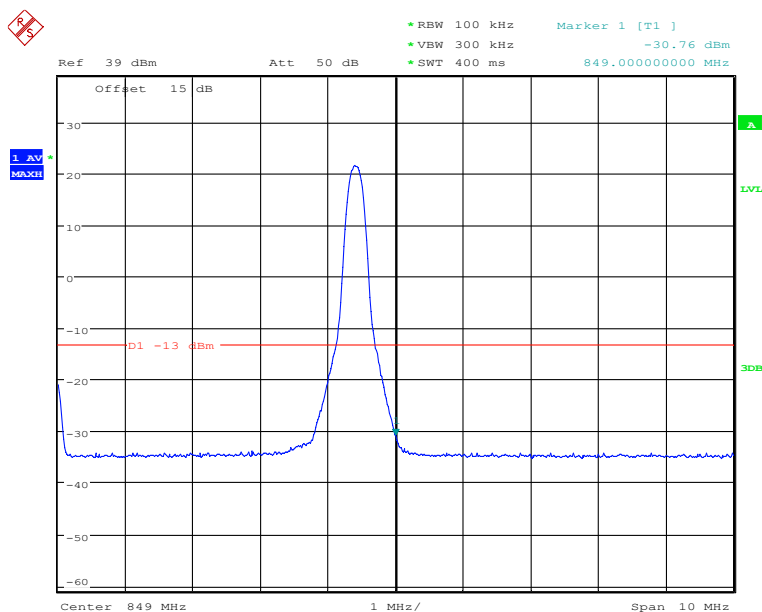


LTE Band26, 10MHz bandwidth, QPSK,(1,0) Mode , Below 824MHz



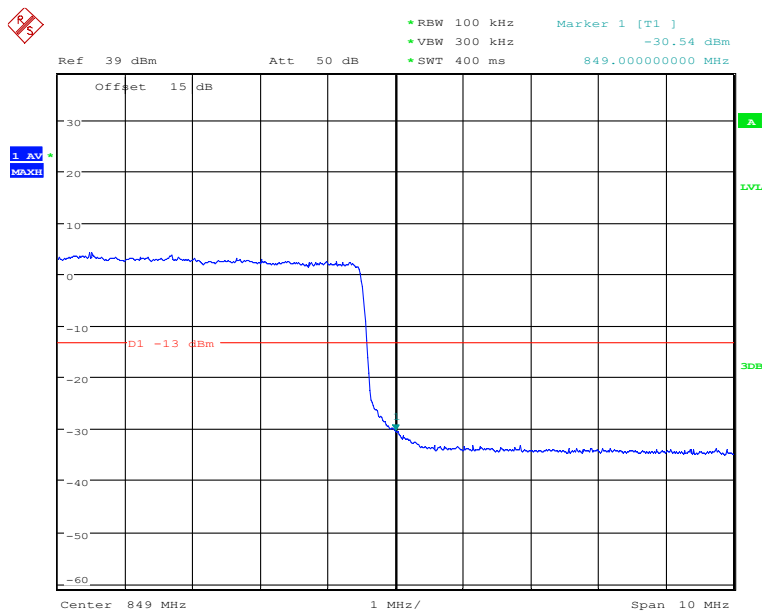
LTE Band26, 10MHz bandwidth, QPSK,(50,0) Mode , Below 824MHz

Report No.:B19W50598-WWAN_Rev1



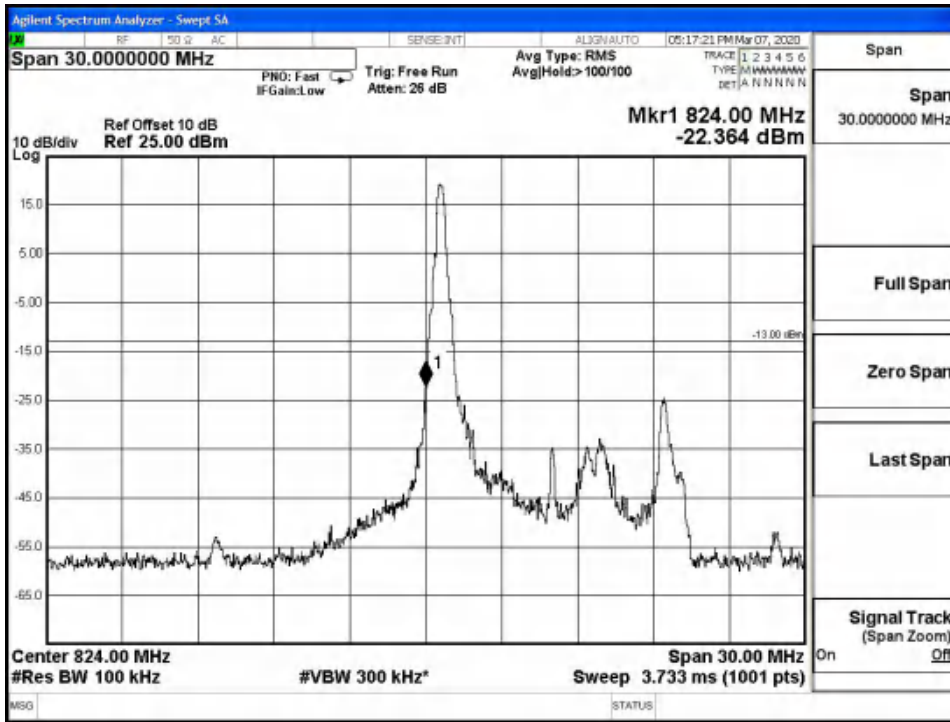
Date: 21.FEB.2020 09:57:49

LTE Band26, 10MHz bandwidth, QPSK,(1,50) Mode, Above 849MHz

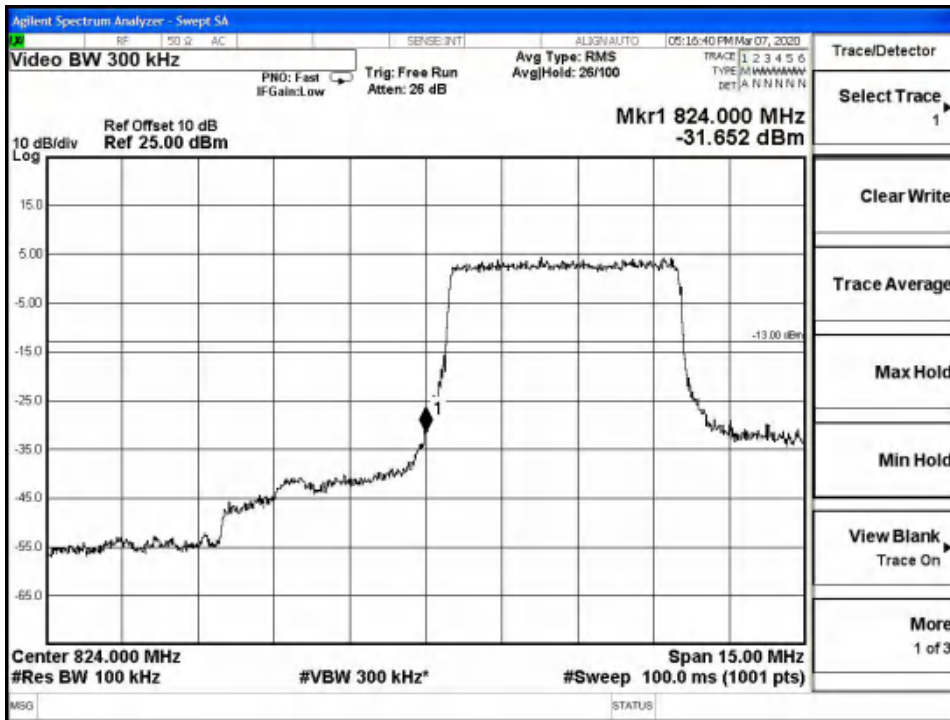


Date: 21.FEB.2020 09:58:05

LTE Band26, 10MHz bandwidth, QPSK,(50,0) Mode, Above 849MHz

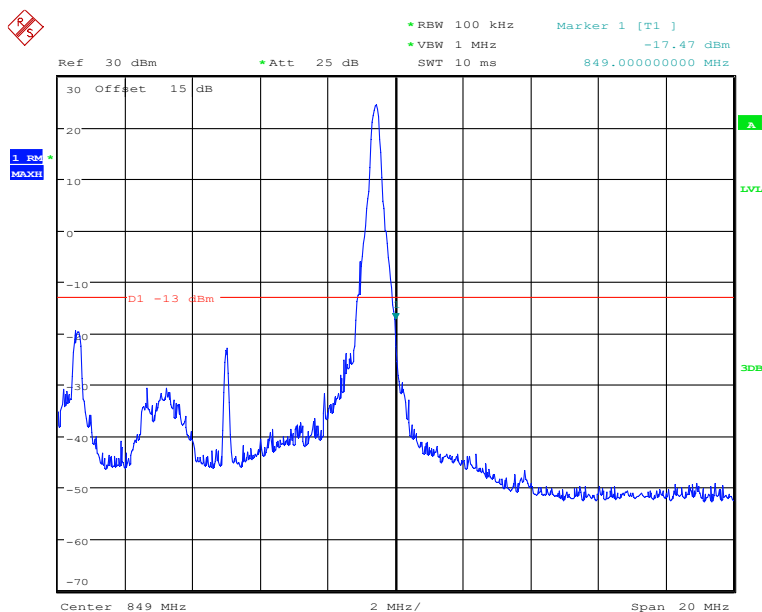


LTE Band26, 10MHz bandwidth, 16QAM,(1,0) Mode , Below 824MHz



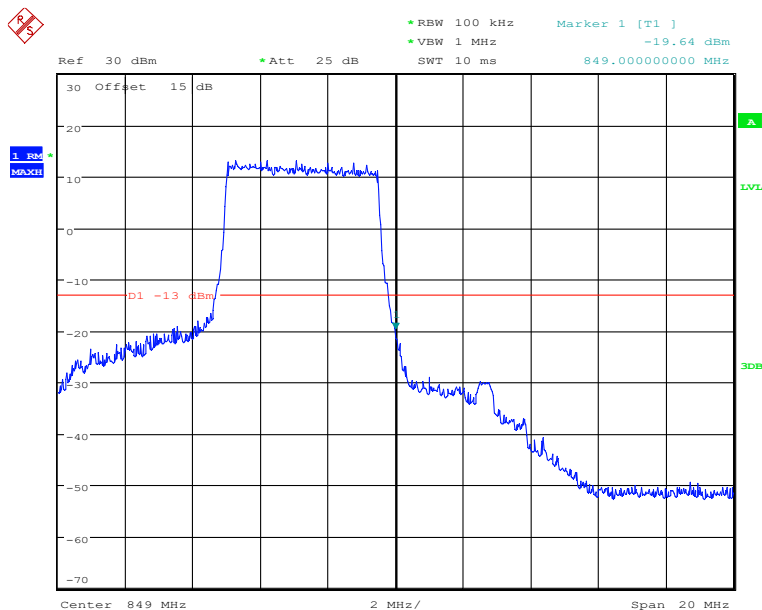
LTE Band26, 10MHz bandwidth, 16QAM,(25,0) Mode , Below 824MHz

Report No.:B19W50598-WWAN_Rev1



Date: 25.FEB.2020 02:58:00

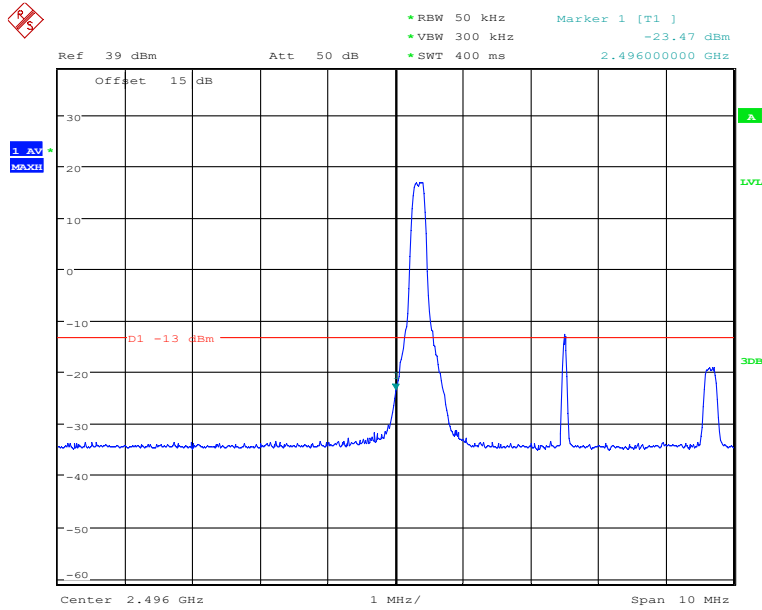
LTE Band26, 10MHz bandwidth, 16QAM,(1,50) Mode, Above 849MHz



Date: 25.FEB.2020 02:57:33

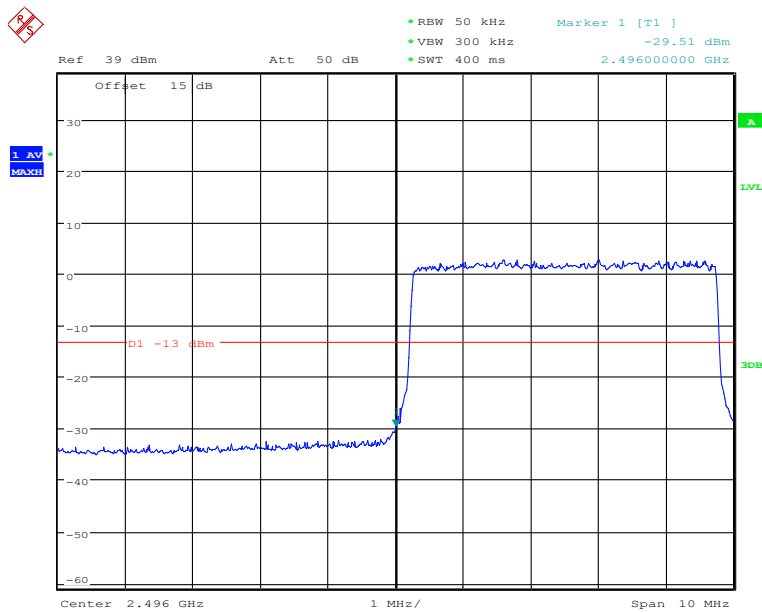
LTE Band26, 10MHz bandwidth, 16QAM,(25,0) Mode, Above 849MHz

5.5.11 LTE B41 Band Edge Results



Date: 21.FEB.2020 10:10:50

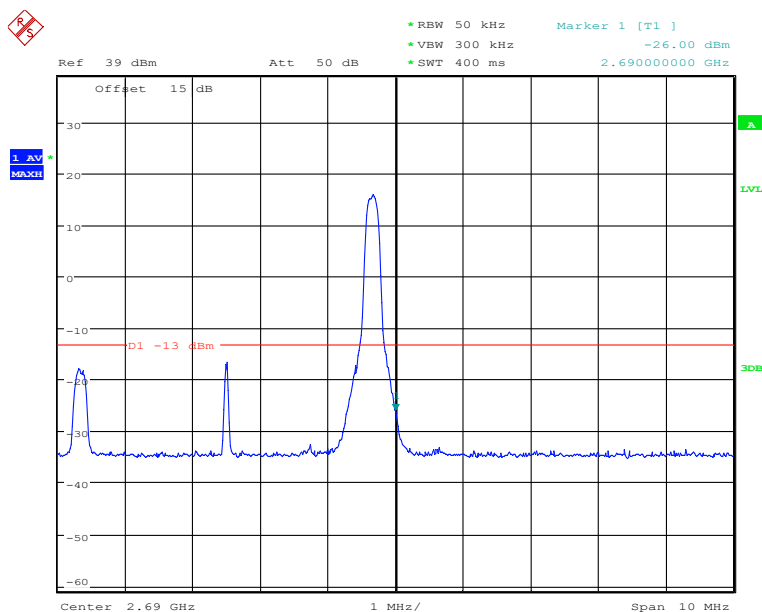
LTE Band41, 5MHz bandwidth, QPSK,(1,0) Mode , Below 2496MHz



Date: 21.FEB.2020 10:11:12

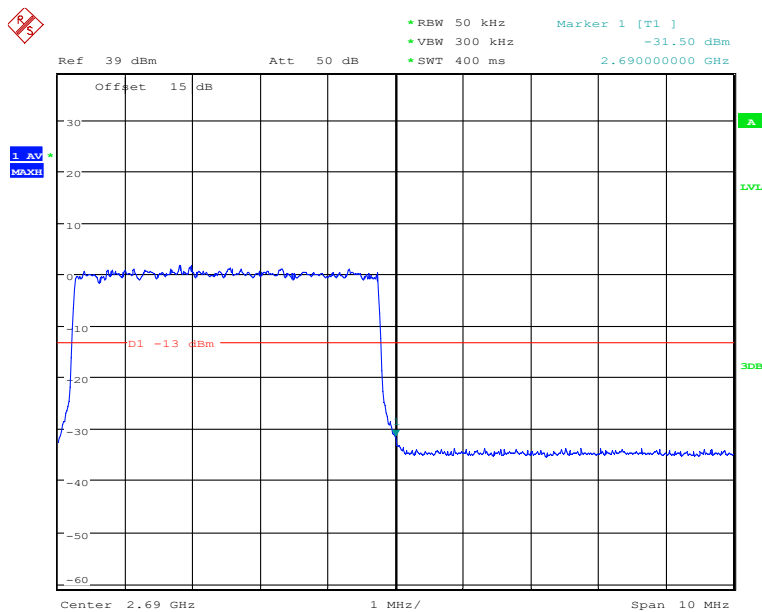
LTE Band41, 5MHz bandwidth, QPSK,(25,0) Mode , Below 2496MHz

Report No.:B19W50598-WWAN_Rev1



Date: 21.FEB.2020 10:12:16

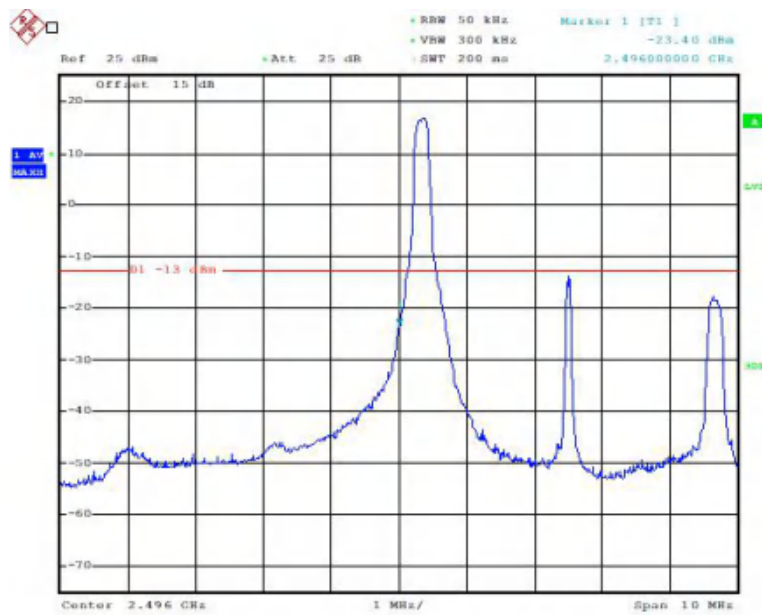
LTE Band41, 5MHz bandwidth, QPSK,(1,25) Mode, Above 2690MHz



Date: 21.FEB.2020 10:12:34

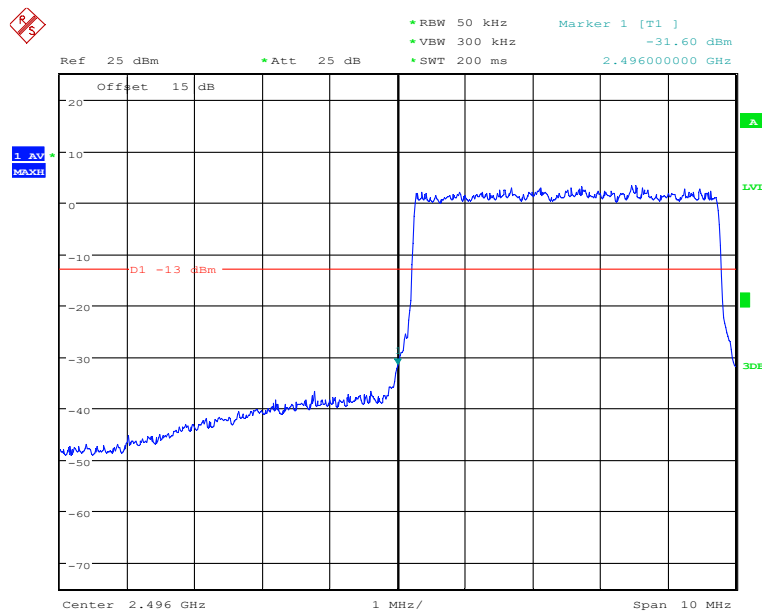
LTE Band41, 5MHz bandwidth, QPSK,(25,0) Mode, Above 2690MHz

Report No.:B19W50598-WWAN_Rev1



Date: 23.FEB.2020 07:03:04

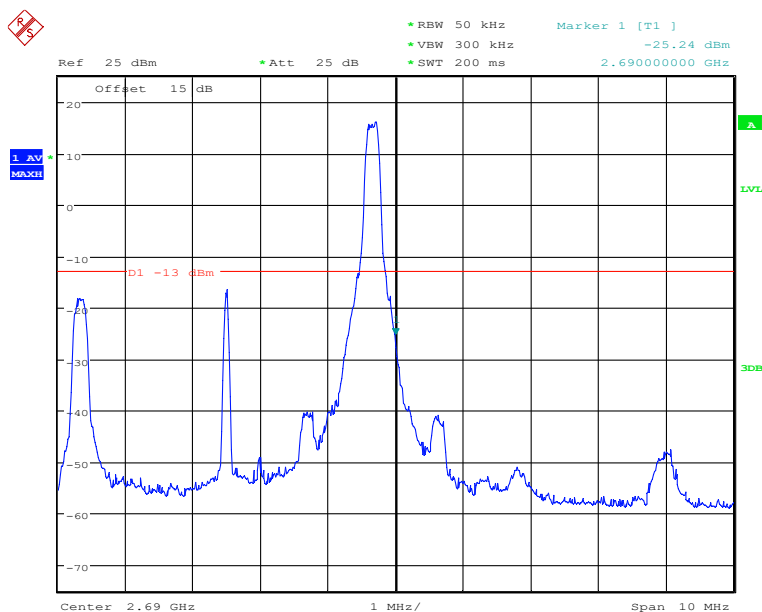
LTE Band41, 5MHz bandwidth, 16QAM,(1,0) Mode , Below 2496MHz



Date: 23.FEB.2020 07:03:18

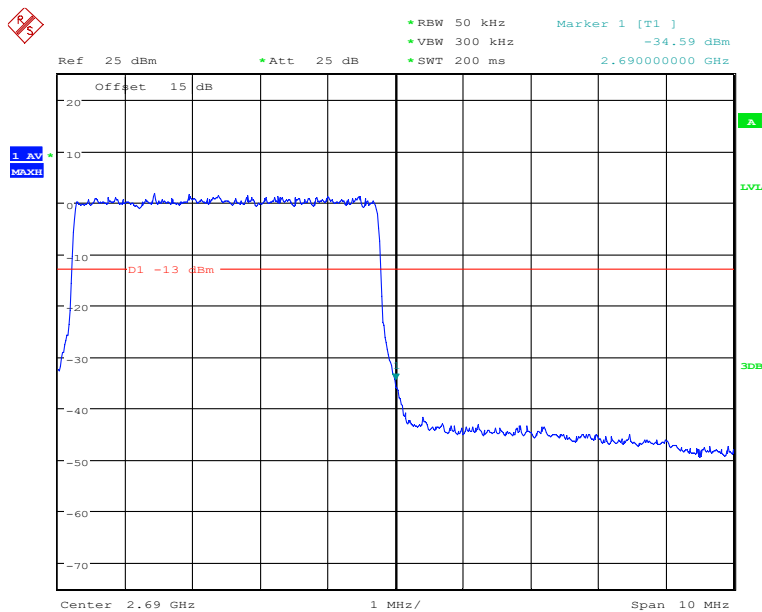
LTE Band41, 5MHz bandwidth, 16QAM,(25,0) Mode , Below 2496MHz

Report No.:B19W50598-WWAN_Rev1



Date: 23.FEB.2020 07:04:44

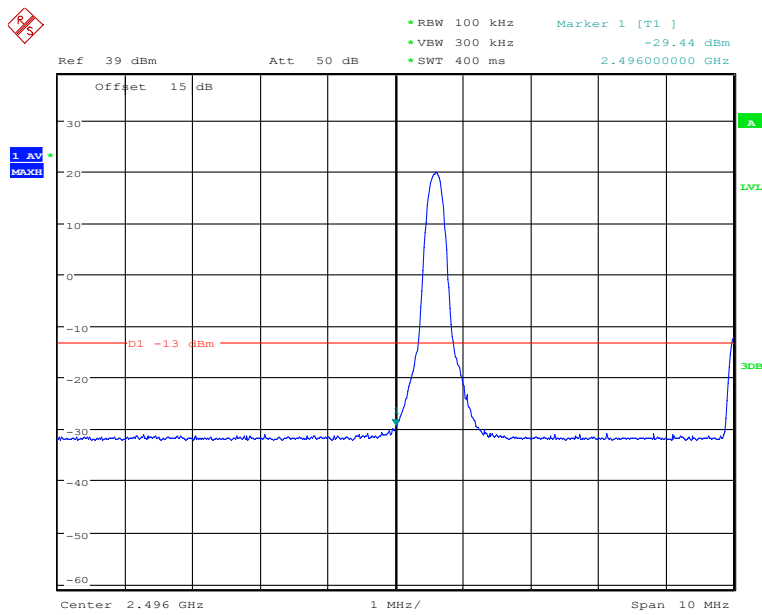
LTE Band41, 5MHz bandwidth, 16QAM,(1,25) Mode, Above 2690MHz



Date: 23.FEB.2020 07:04:26

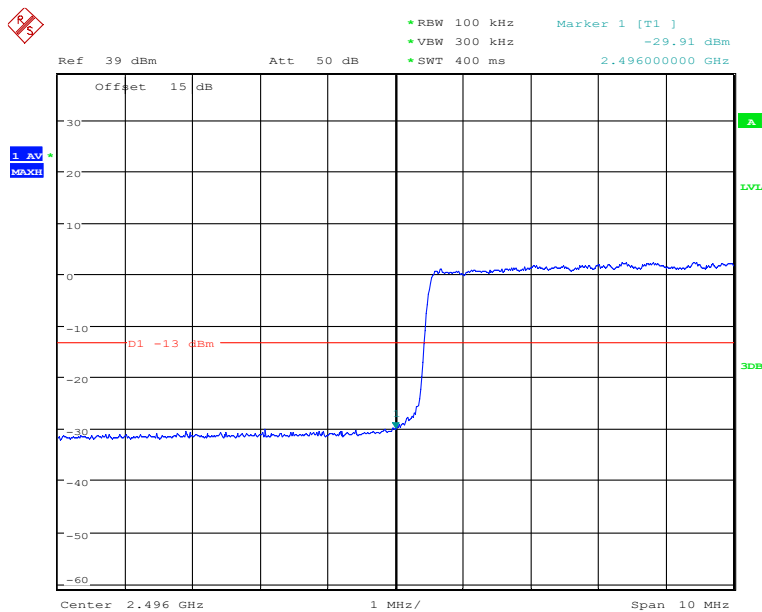
LTE Band41, 5MHz bandwidth, 16QAM,(25,0) Mode, Above 2690MHz

Report No.:B19W50598-WWAN_Rev1



Date: 21.FEB.2020 10:33:58

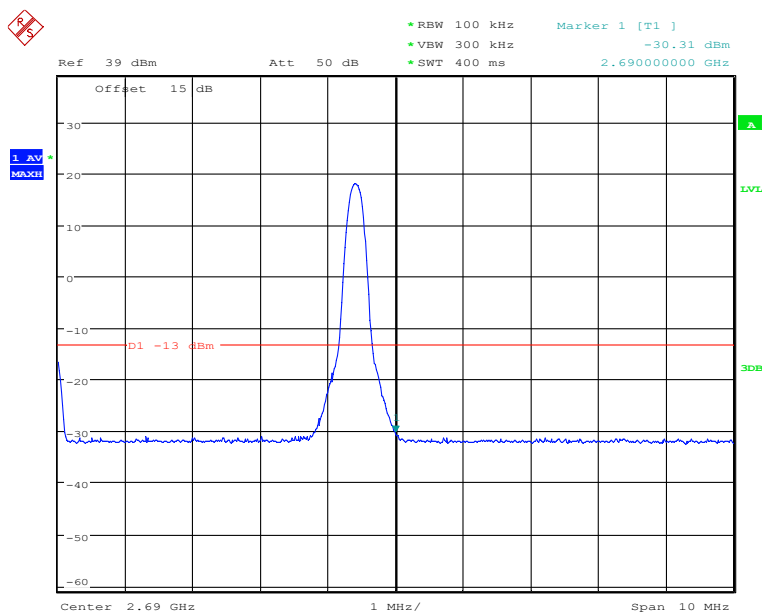
LTE Band41, 10MHz bandwidth, QPSK,(1,0) Mode , Below 2496MHz



Date: 21.FEB.2020 10:34:17

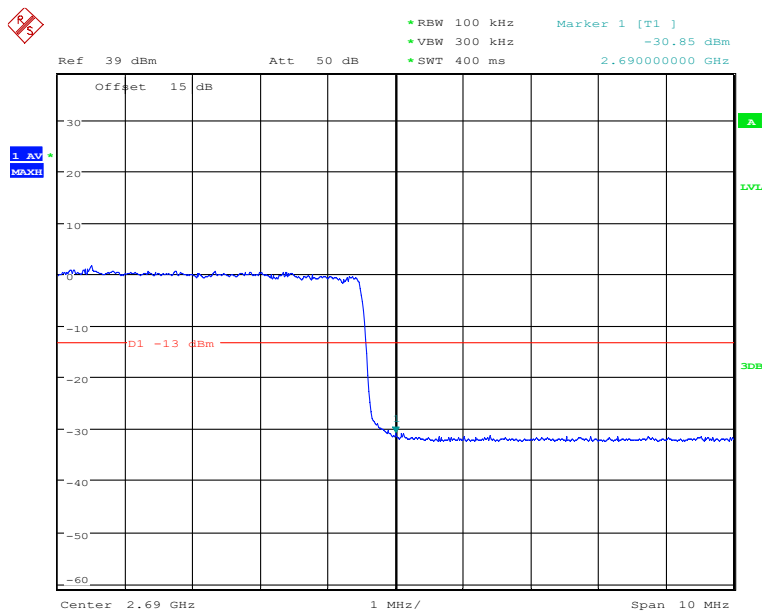
LTE Band41, 10MHz bandwidth, QPSK,(50,0) Mode , Below 2496MHz

Report No.:B19W50598-WWAN_Rev1



Date: 21.FEB.2020 10:35:20

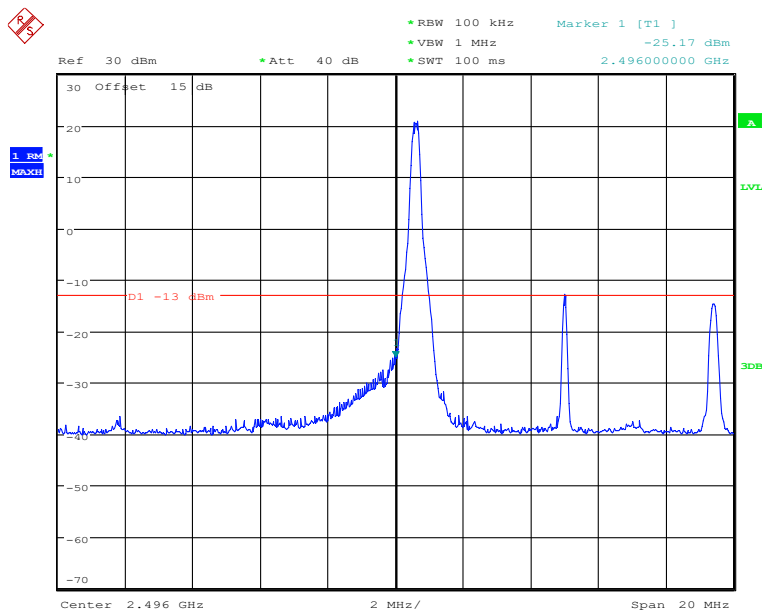
LTE Band41, 10MHz bandwidth, QPSK,(1,50) Mode, Above 2690MHz



Date: 21.FEB.2020 10:35:37

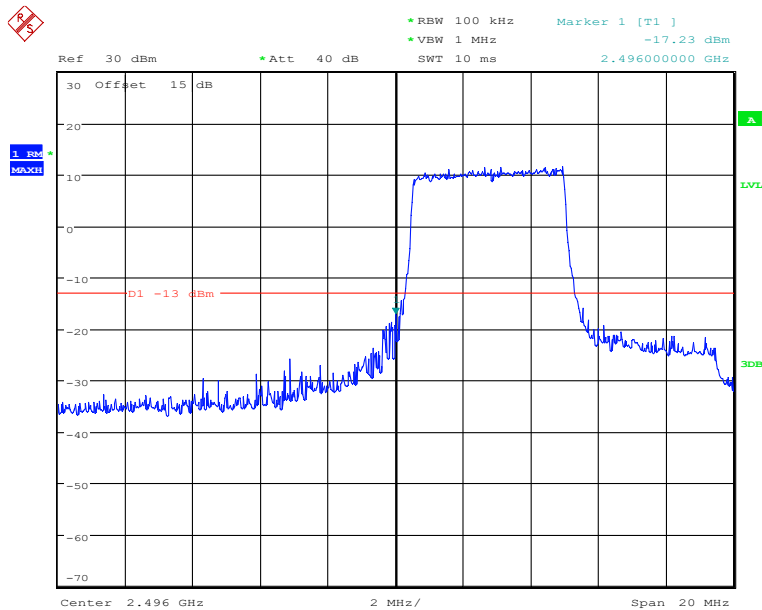
LTE Band41, 10MHz bandwidth, QPSK,(50,0) Mode, Above 2690MHz

Report No.:B19W50598-WWAN_Rev1



Date: 25.FEB.2020 03:59:05

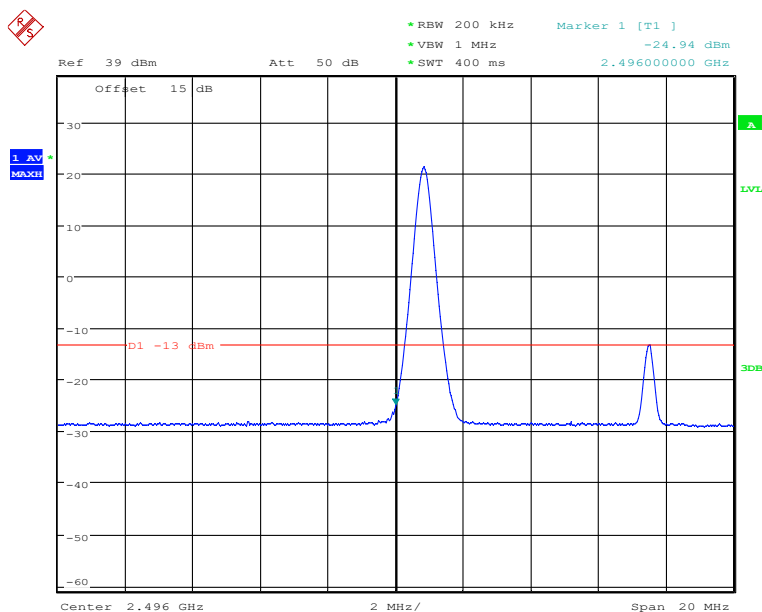
LTE Band41, 10MHz bandwidth, 16QAM,(1,0) Mode , Below 2496MHz



Date: 25.FEB.2020 03:59:40

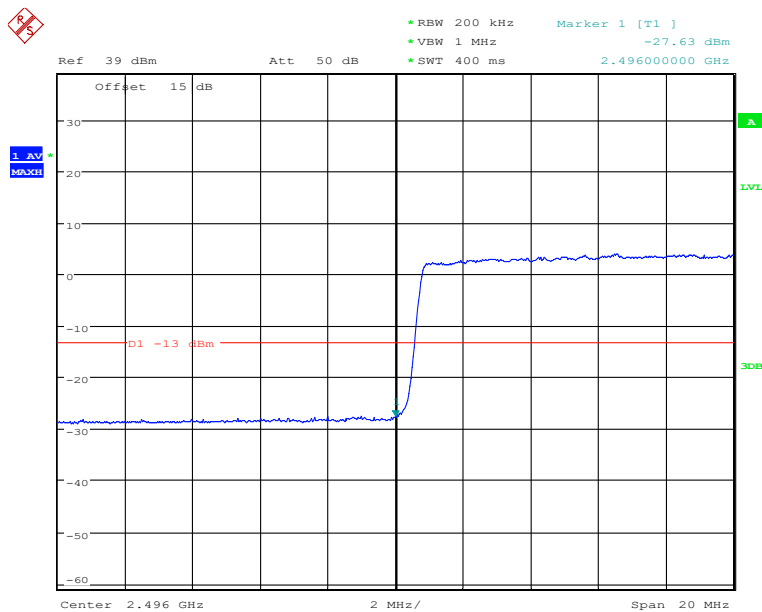
LTE Band41, 10MHz bandwidth, 16QAM,(50,0) Mode , Below 2496MHz

Report No.:B19W50598-WWAN_Rev1



Date: 21.FEB.2020 10:39:02

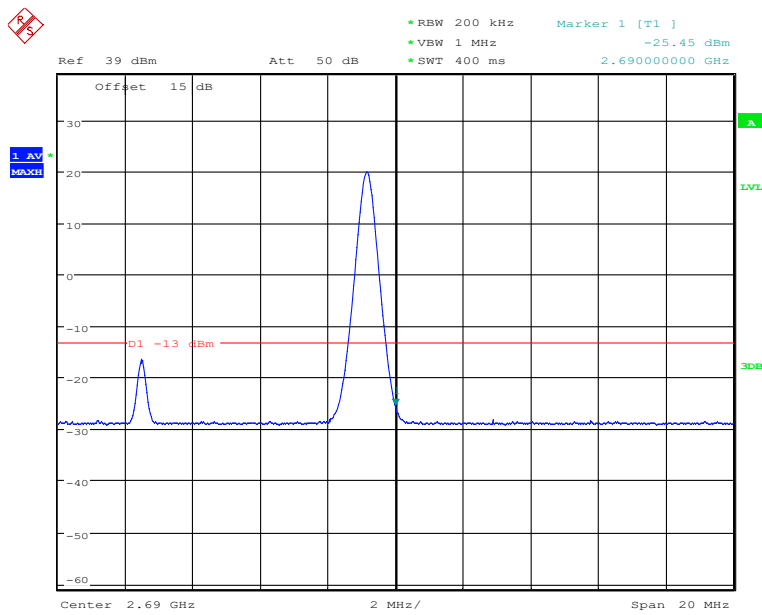
LTE Band41, 15MHz bandwidth, QPSK,(1,0) Mode , Below 2496MHz



Date: 21.FEB.2020 10:39:19

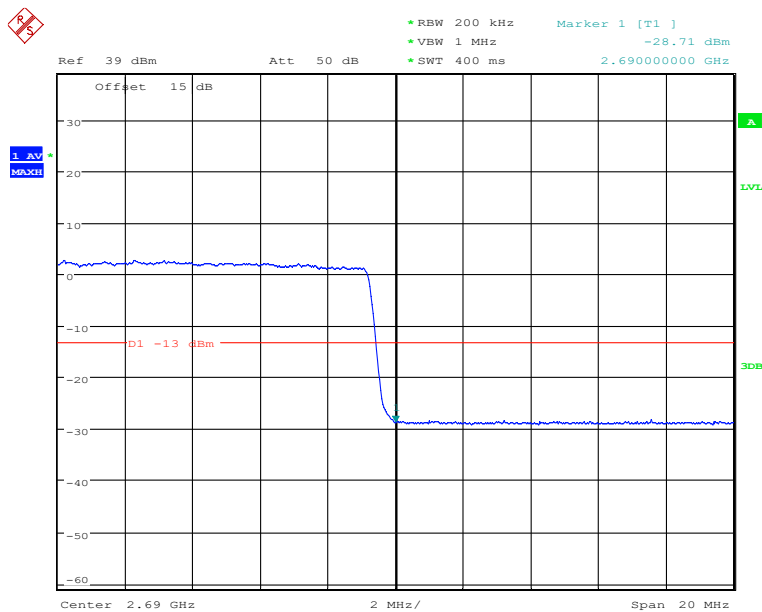
LTE Band41, 15MHz bandwidth, QPSK,(75,0) Mode , Below 2496MHz

Report No.:B19W50598-WWAN_Rev1



Date: 21.FEB.2020 10:40:40

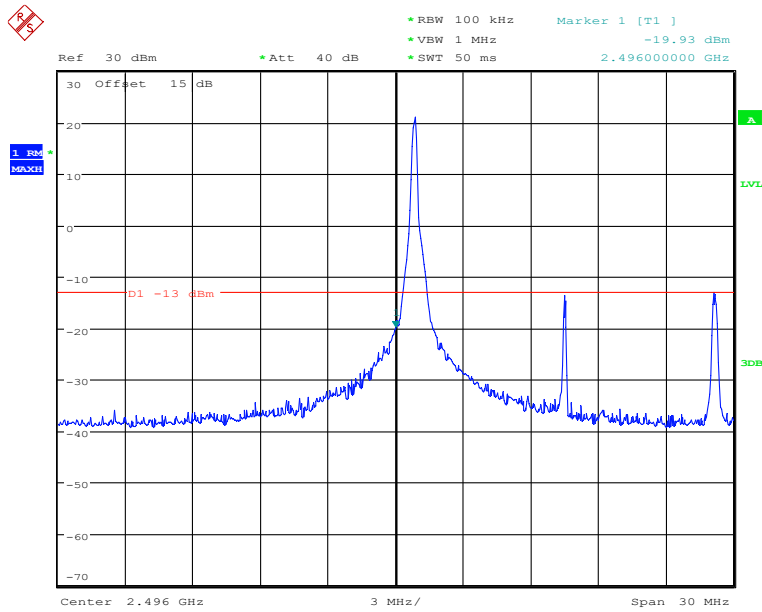
LTE Band41, 15MHz bandwidth, QPSK,(1,75) Mode, Above 2690MHz



Date: 21.FEB.2020 10:40:12

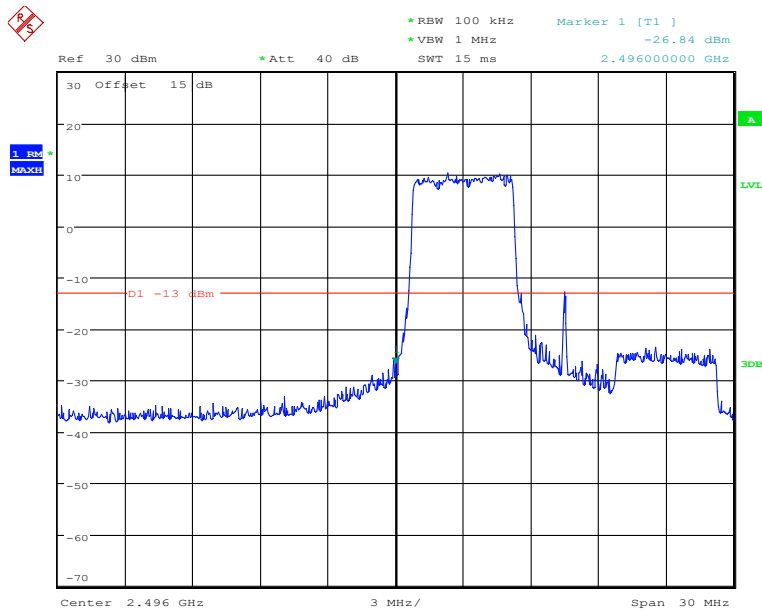
LTE Band41, 15MHz bandwidth, QPSK,(75,0) Mode, Above 2690MHz

Report No.:B19W50598-WWAN_Rev1



Date: 25.FEB.2020 04:40:22

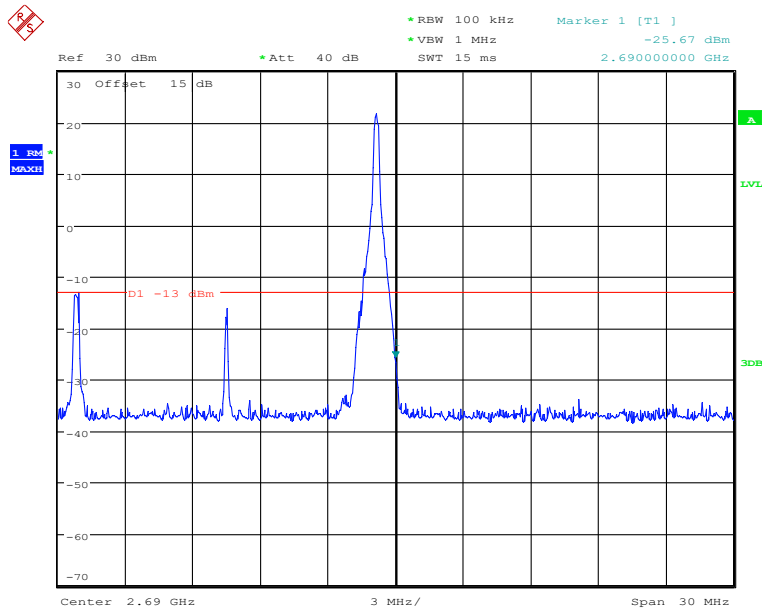
LTE Band41, 15MHz bandwidth, 16QAM,(1,0) Mode , Below 2496MHz



Date: 25.FEB.2020 04:38:07

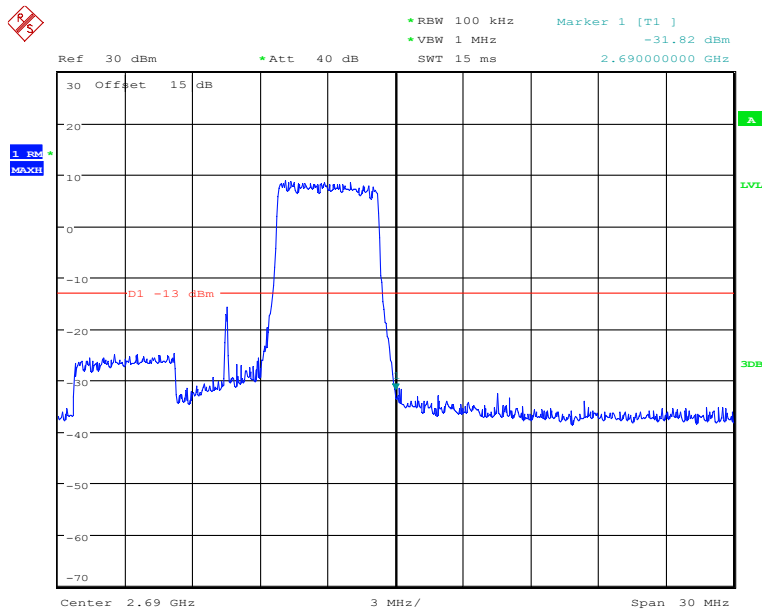
LTE Band41, 15MHz bandwidth, 16QAM,(75,0) Mode , Below 2496MHz

Report No.:B19W50598-WWAN_Rev1



Date: 25.FEB.2020 04:36:45

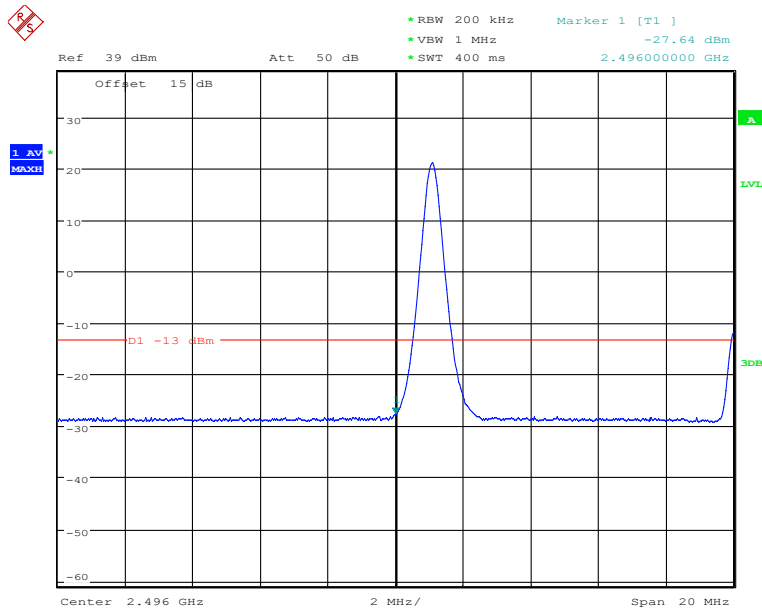
LTE Band41, 15MHz bandwidth, 16QAM,(1,75) Mode, Above 2690MHz



Date: 25.FEB.2020 04:37:05

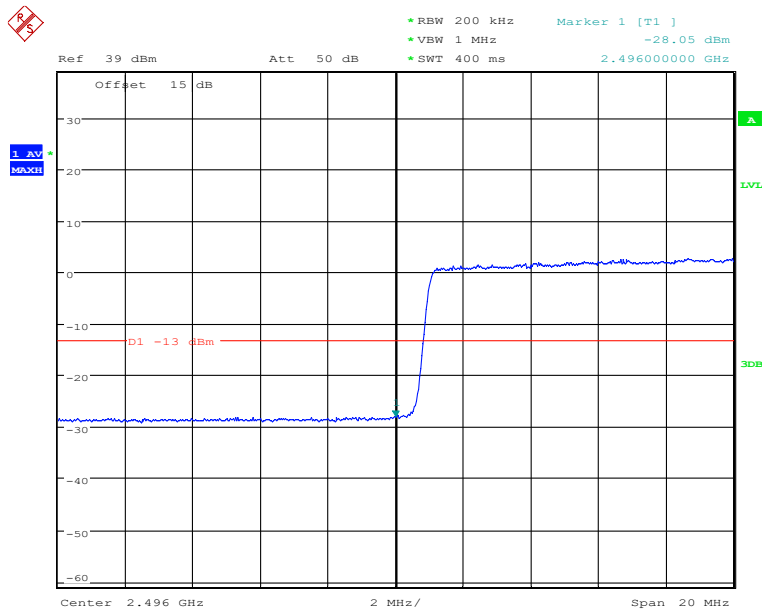
LTE Band41, 15MHz bandwidth, 16QAM,(75,0) Mode, Above 2690MHz

Report No.:B19W50598-WWAN_Rev1



Date: 21.FEB.2020 10:43:13

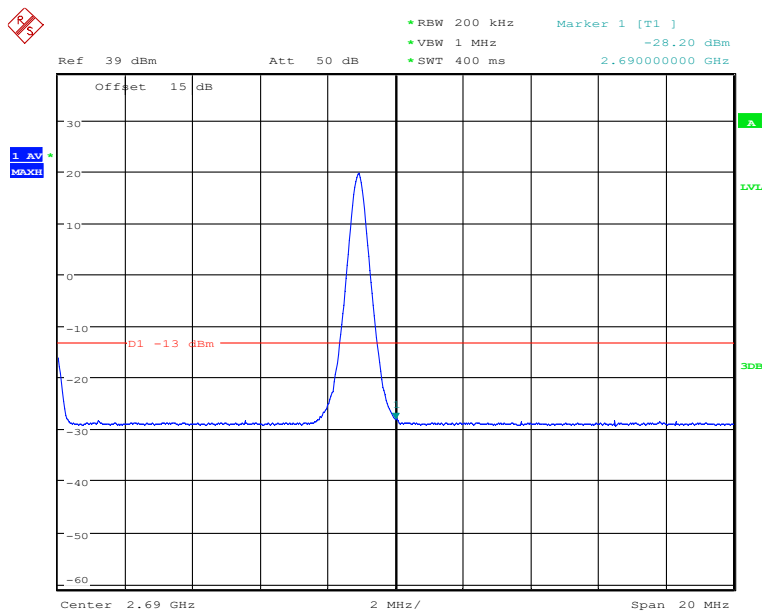
LTE Band41, 20MHz bandwidth, QPSK,(1,0) Mode , Below 2496MHz



Date: 21.FEB.2020 10:43:28

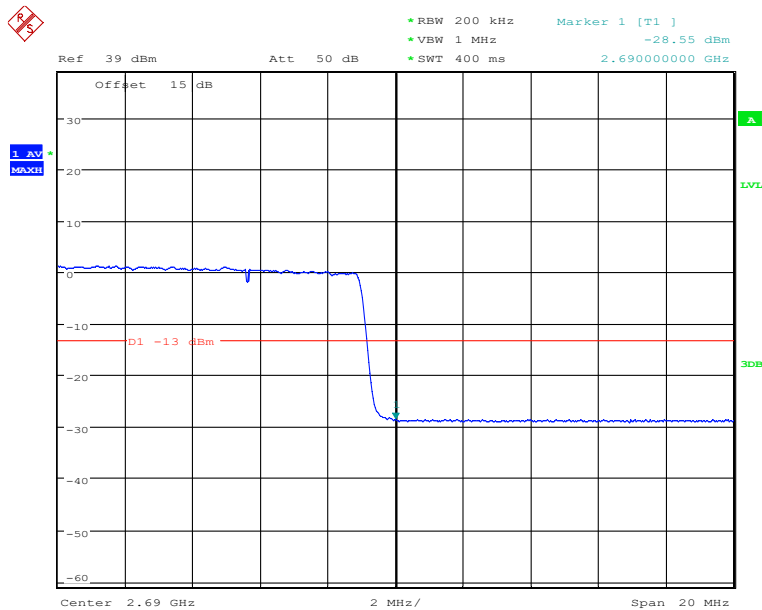
LTE Band41, 20MHz bandwidth, QPSK,(100,0) Mode , Below 2496MHz

Report No.:B19W50598-WWAN_Rev1



Date: 21.FEB.2020 10:44:34

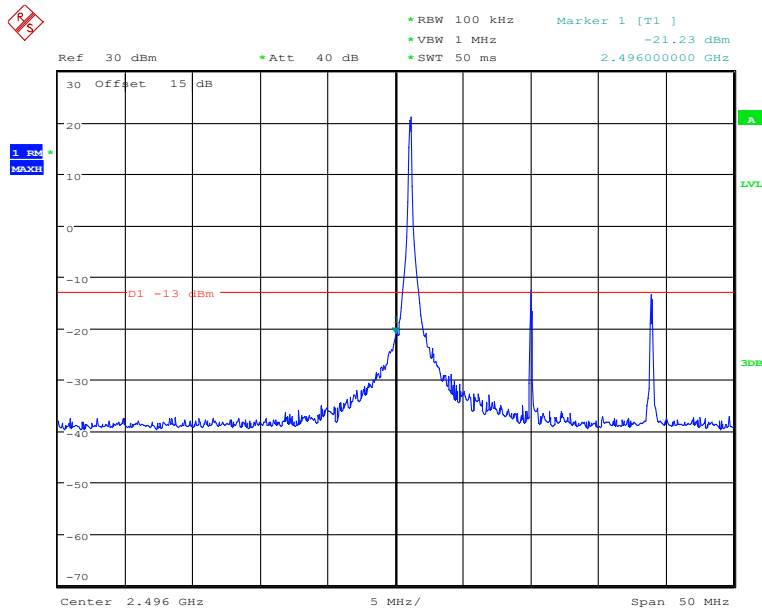
LTE Band41, 20MHz bandwidth, QPSK,(1,100) Mode, Above 2690MHz



Date: 21.FEB.2020 10:44:15

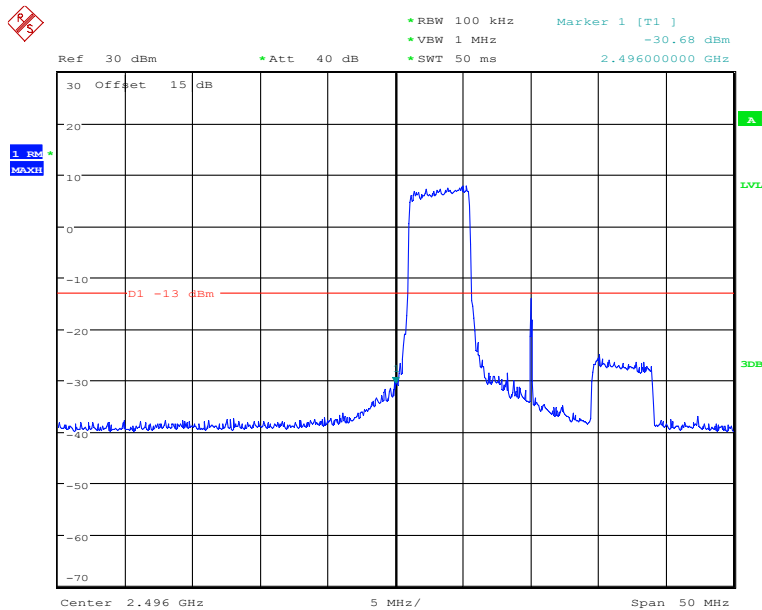
LTE Band41, 20MHz bandwidth, QPSK,(100,0) Mode, Above 2690MHz

Report No.:B19W50598-WWAN_Rev1



Date: 25.FEB.2020 04:41:39

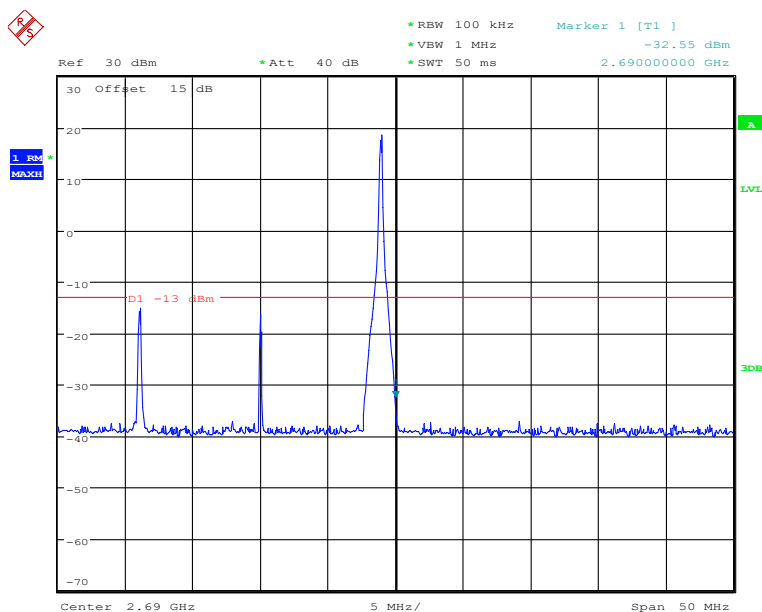
LTE Band41, 20MHz bandwidth, 16QAM,(1,0) Mode , Below 2496MHz



Date: 25.FEB.2020 04:42:05

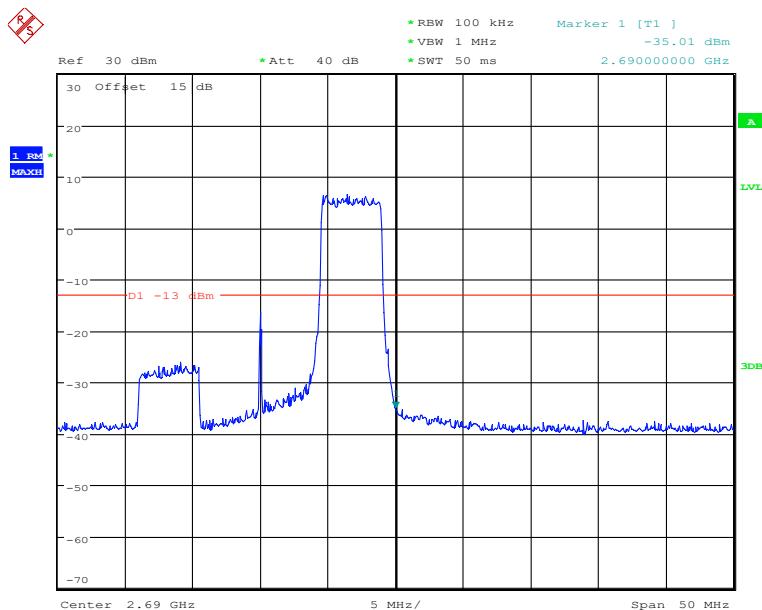
LTE Band41, 20MHz bandwidth, 16QAM,(100,0) Mode , Below 2496MHz

Report No.:B19W50598-WWAN_Rev1



Date: 25.FEB.2020 04:43:13

LTE Band41, 20MHz bandwidth, 16QAM,(1,100) Mode, Above 2690MHz

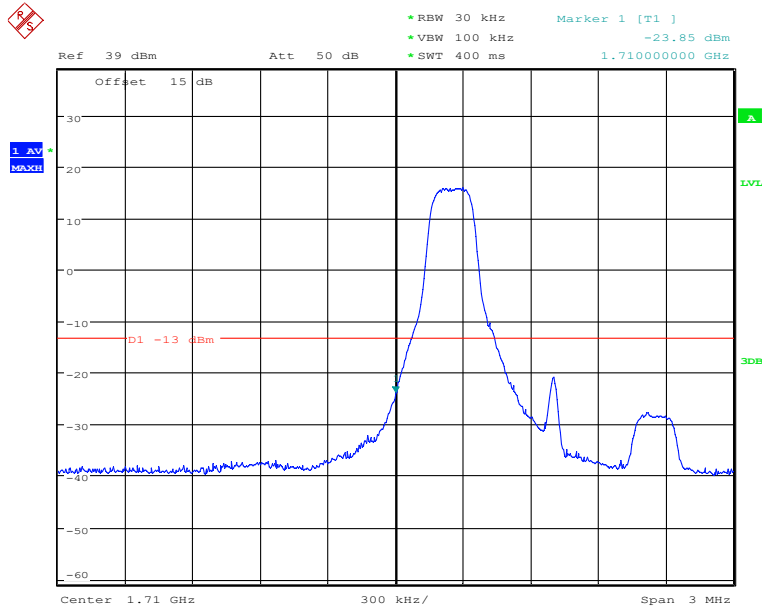


Date: 25.FEB.2020 04:42:50

LTE Band41, 20MHz bandwidth, 16QAM,(100,0) Mode, Above 2690MHz

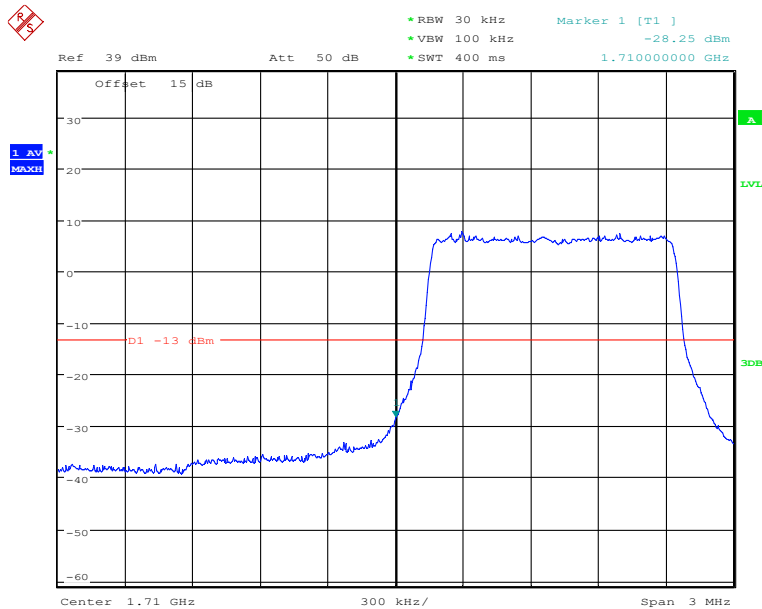
5.5.12 LTE B66 Band Edge Results

NOTE:Only the worst case



Date: 21.FEB.2020 10:46:15

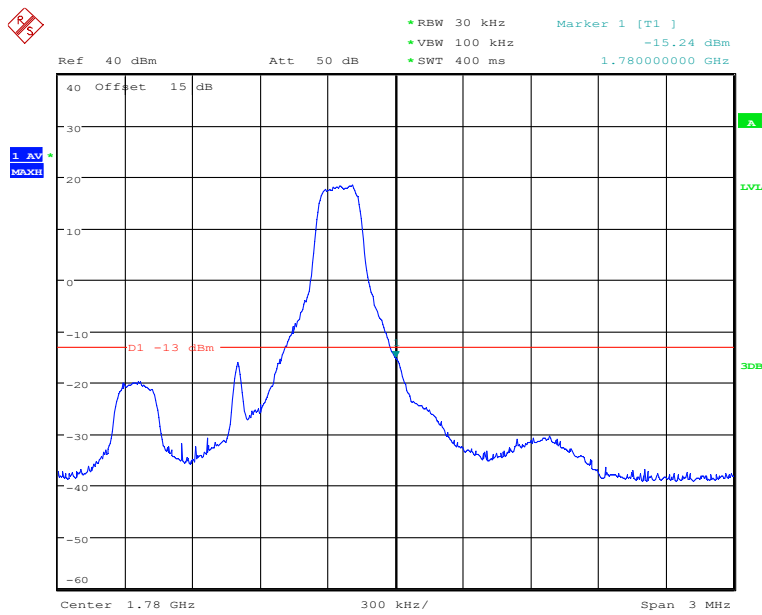
LTE Band66, 1.4MHz bandwidth, QPSK,(1,0) Mode , Below 1710MHz



Date: 21.FEB.2020 10:46:29

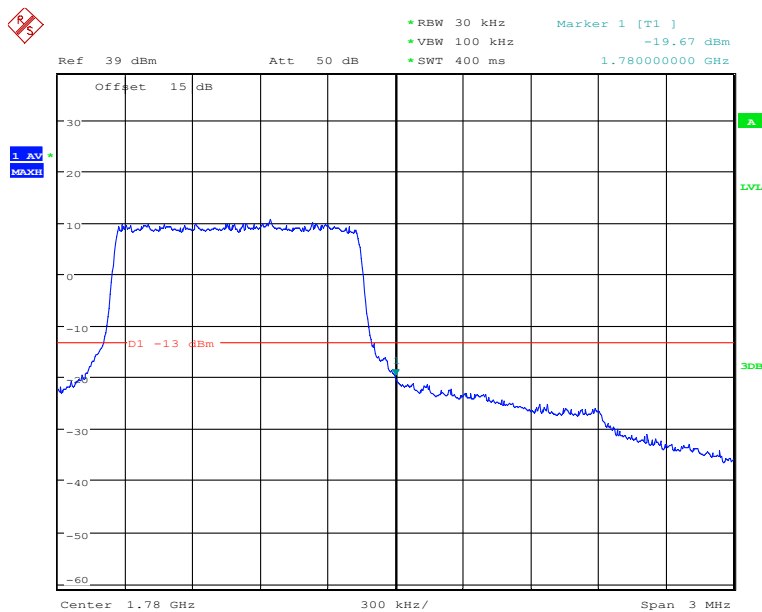
LTE Band66, 1.4MHz bandwidth, QPSK,(6,0) Mode , Below 1710MHz

Report No.:B19W50598-WWAN_Rev1



Date: 22.FEB.2020 03:59:35

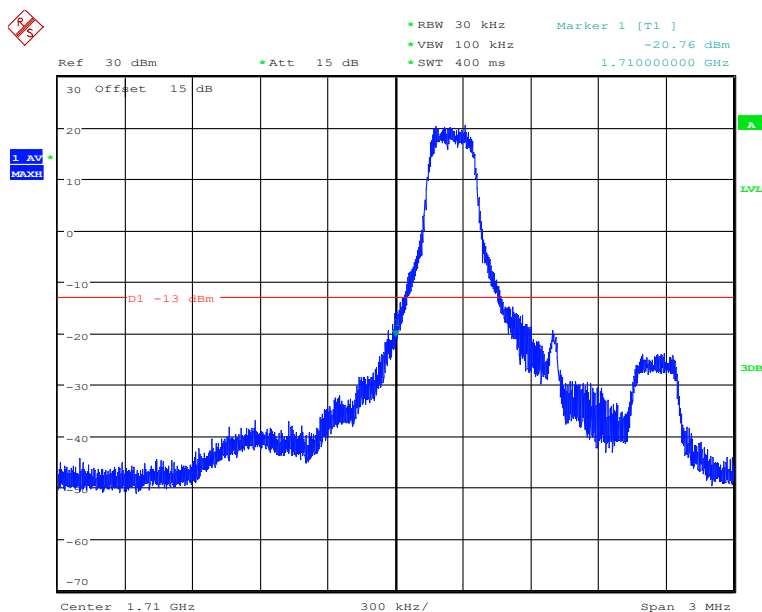
LTE Band66, 1.4MHz bandwidth, QPSK,(1,6) Mode, Above 1780MHz



Date: 21.FEB.2020 10:47:04

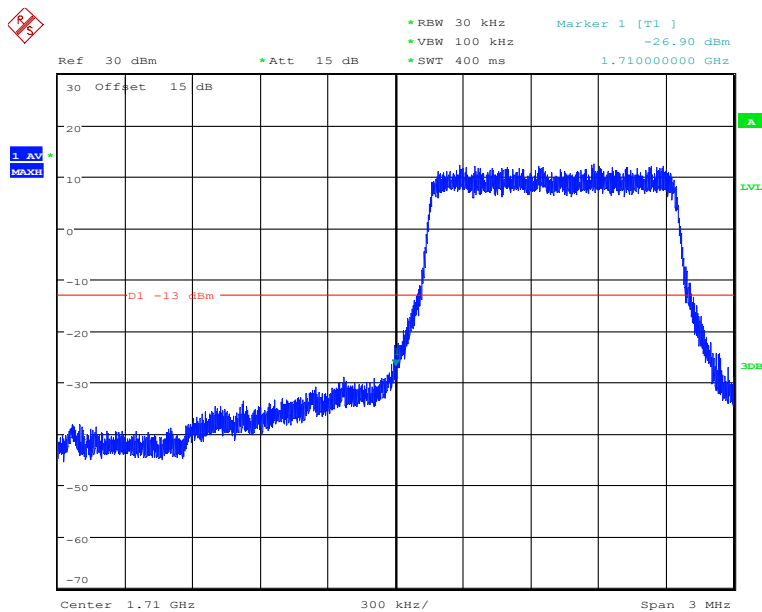
LTE Band66, 1.4MHz bandwidth, QPSK,(6,0) Mode, Above 1780MHz

Report No.:B19W50598-WWAN_Rev1



Date: 23.FEB.2020 06:35:52

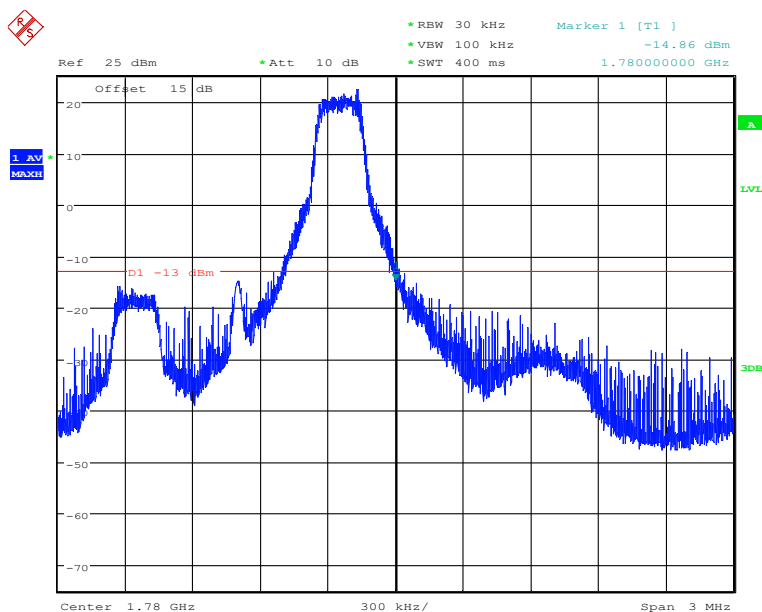
LTE Band66, 1.4MHz bandwidth, 16QAM,(1,0) Mode , Below 1710MHz



Date: 23.FEB.2020 06:36:05

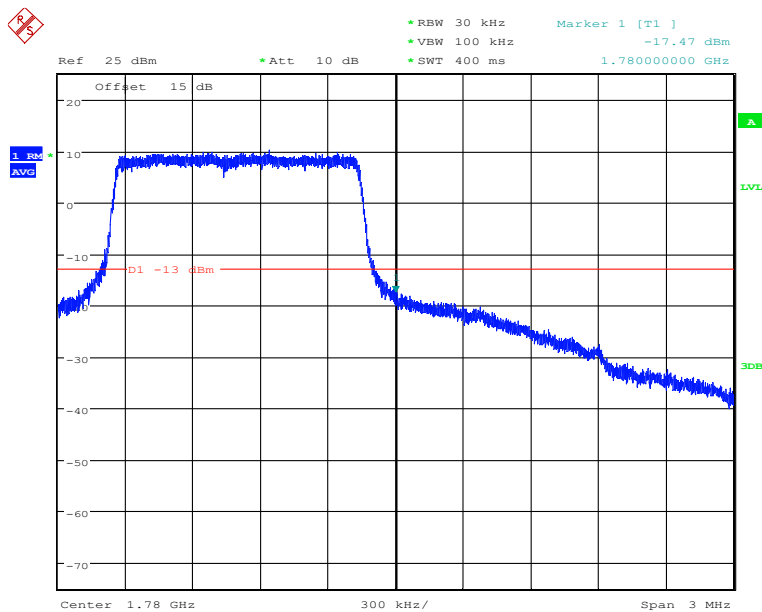
LTE Band66, 1.4MHz bandwidth, 16QAM,(6,0) Mode , Below 1710MHz

Report No.:B19W50598-WWAN_Rev1



Date: 23.FEB.2020 06:40:23

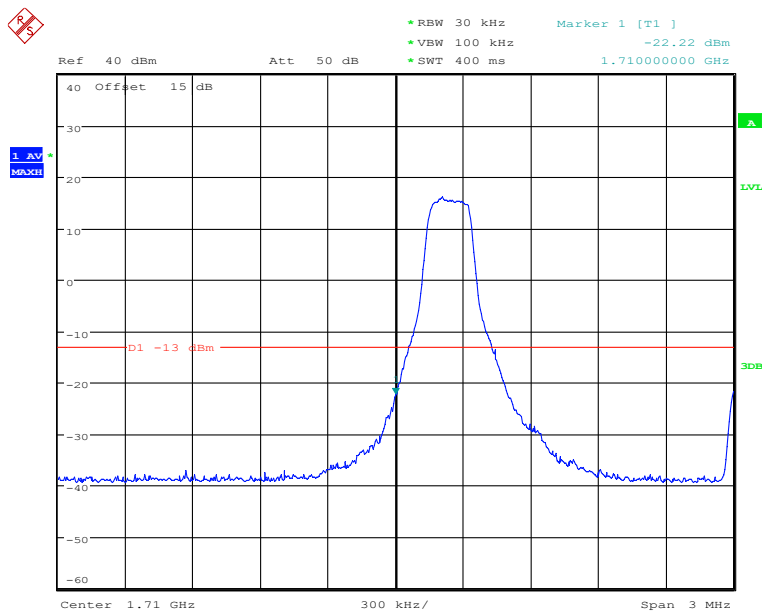
LTE Band66, 1.4MHz bandwidth, 16QAM,(1,6) Mode, Above 1780MHz



Date: 23.FEB.2020 06:41:29

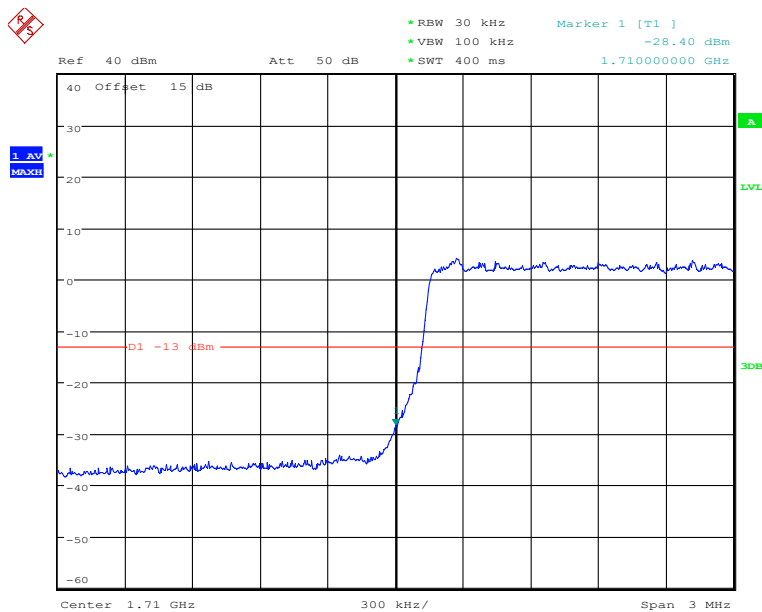
LTE Band66, 1.4MHz bandwidth, 16QAM,(6,0) Mode, Above 1780MHz

Report No.:B19W50598-WWAN_Rev1



Date: 22.FEB.2020 04:03:04

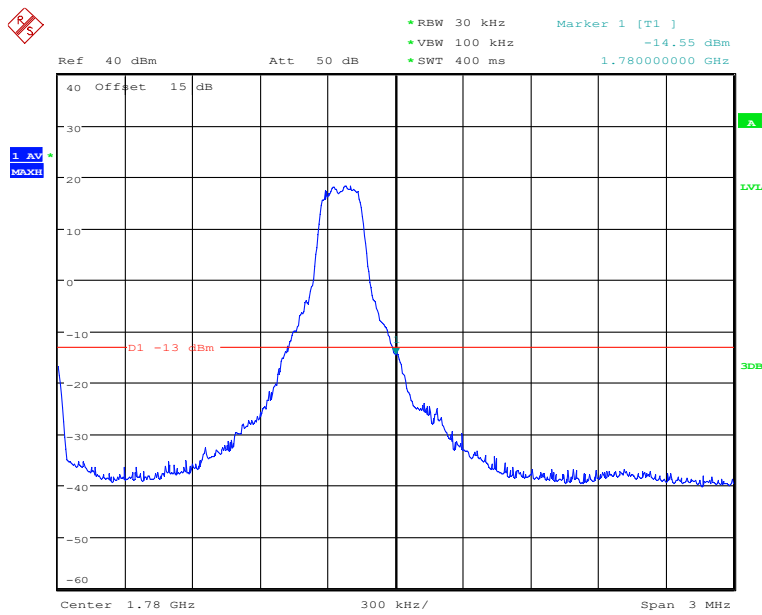
LTE Band66, 3MHz bandwidth, QPSK,(1,0) Mode , Below 1710MHz



Date: 22.FEB.2020 04:03:27

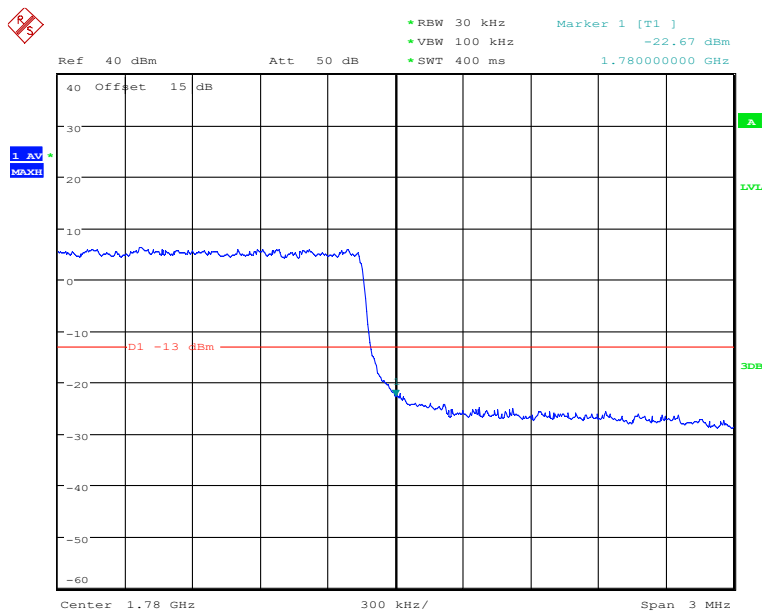
LTE Band66, 3MHz bandwidth, QPSK,(15,0) Mode , Below 1710MHz

Report No.:B19W50598-WWAN_Rev1



Date: 22.FEB.2020 04:06:41

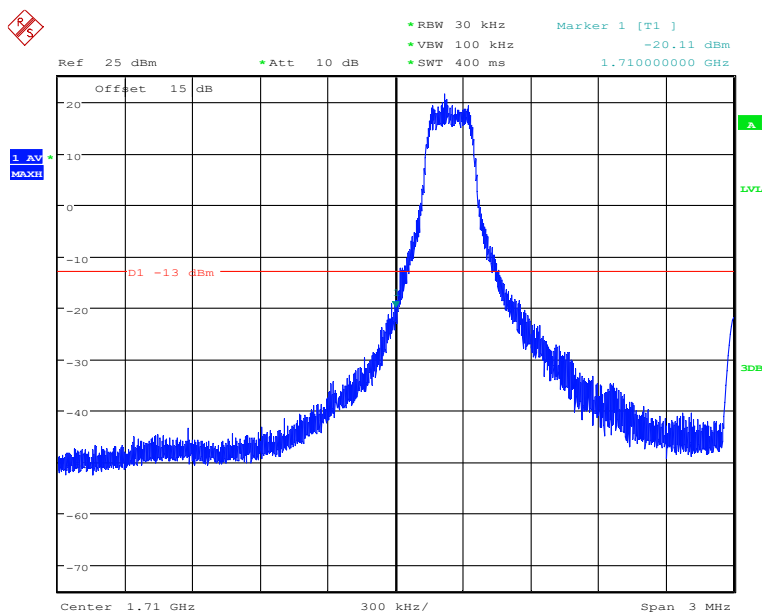
LTE Band66, 3MHz bandwidth, QPSK,(1,15) Mode, Above 1780MHz



Date: 22.FEB.2020 04:04:21

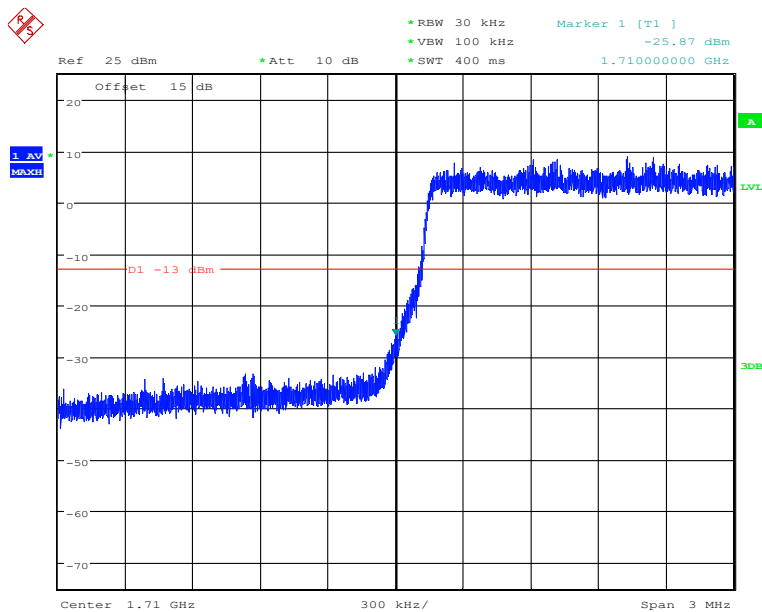
LTE Band66, 3MHz bandwidth, QPSK,(15,0) Mode, Above 1780MHz

Report No.:B19W50598-WWAN_Rev1



Date: 23.FEB.2020 06:42:48

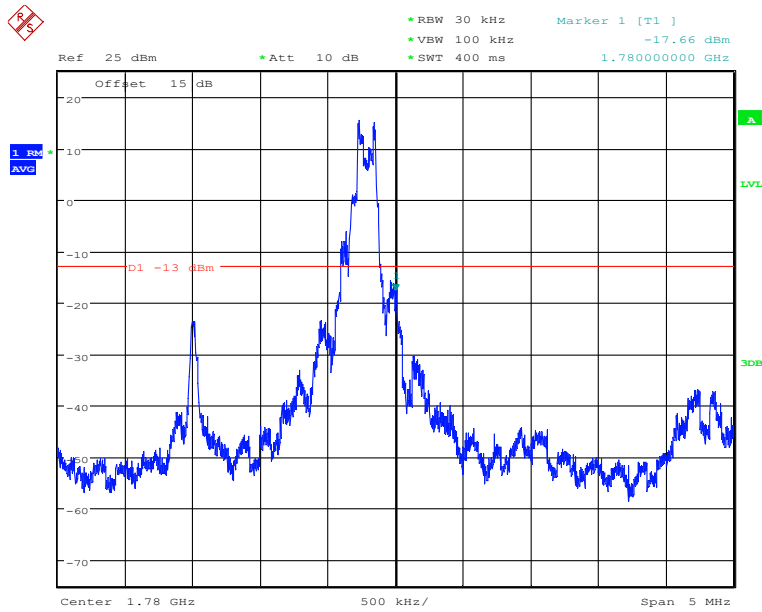
LTE Band66, 3MHz bandwidth, 16QAM,(1,0) Mode , Below 1710MHz



Date: 23.FEB.2020 06:43:03

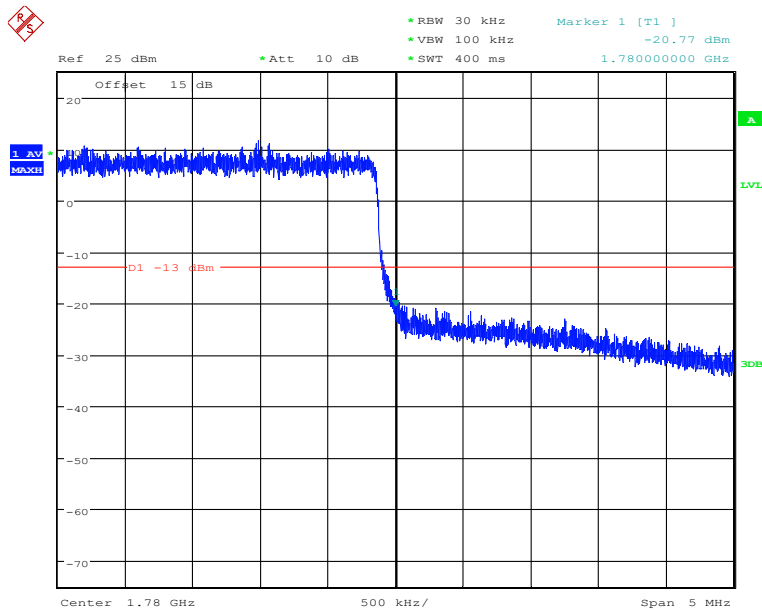
LTE Band66, 3MHz bandwidth, 16QAM,(15,0) Mode , Below 1710MHz

Report No.:B19W50598-WWAN_Rev1



Date: 23.FEB.2020 06:45:34

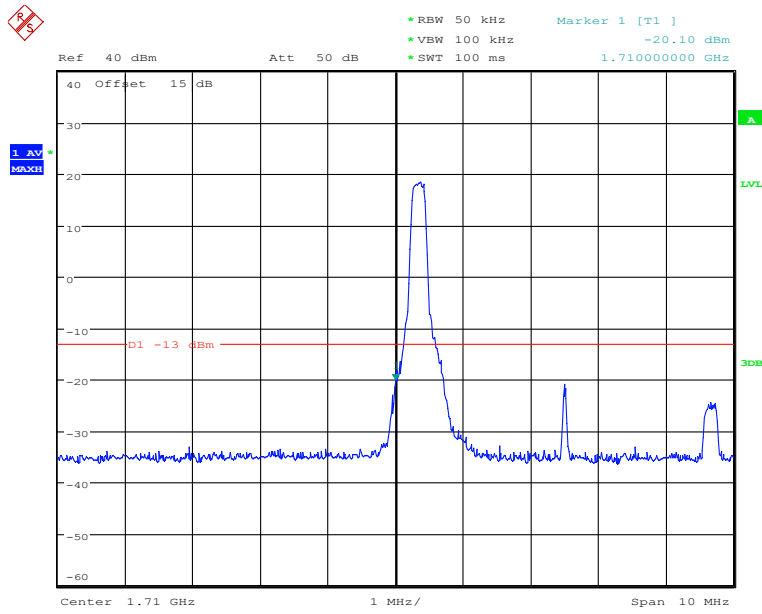
LTE Band66, 3MHz bandwidth, 16QAM,(1,15) Mode, Above 1780MHz



Date: 23.FEB.2020 06:43:53

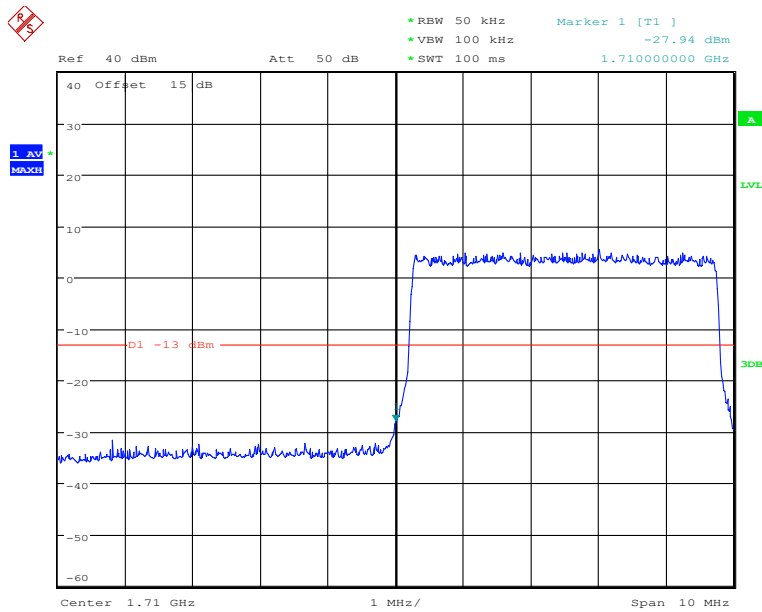
LTE Band66, 3MHz bandwidth, 16QAM,(15,0) Mode, Above 1780MHz

Report No.:B19W50598-WWAN_Rev1



Date: 22.FEB.2020 04:09:50

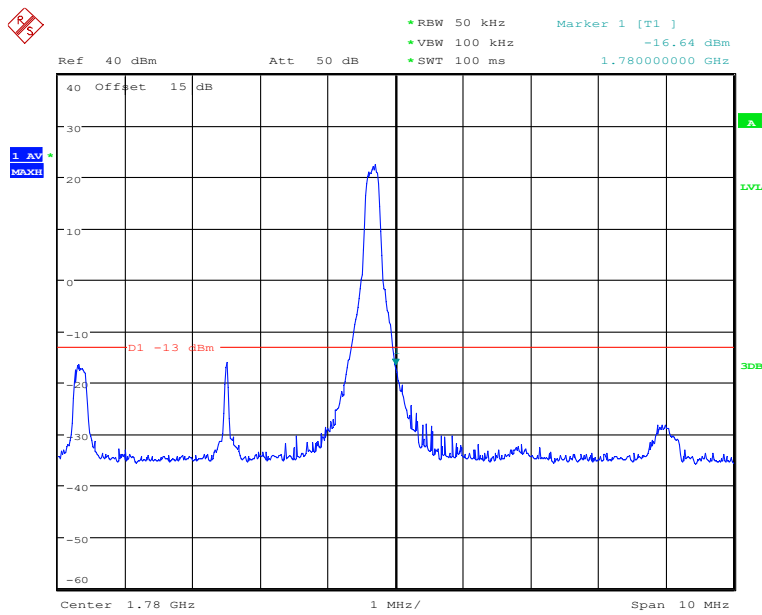
LTE Band66, 5MHz bandwidth, QPSK,(1,0) Mode , Below 1710MHz



Date: 22.FEB.2020 04:10:07

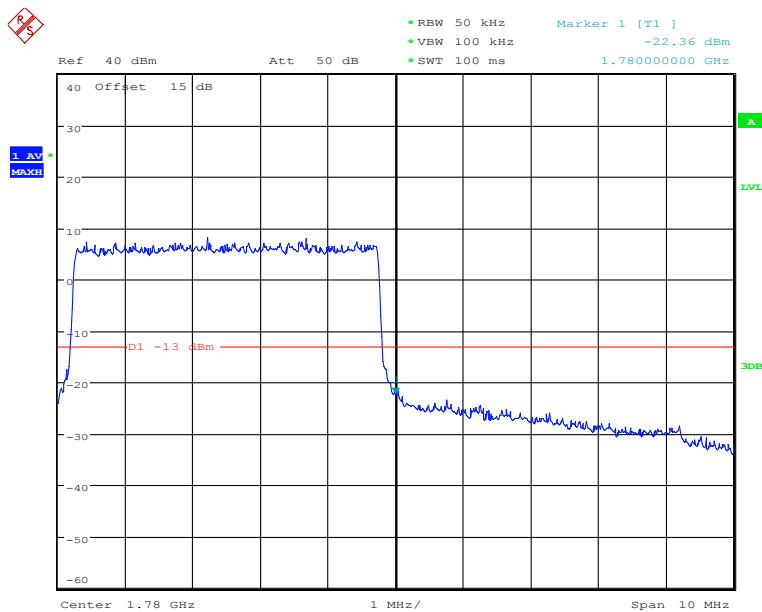
LTE Band66, 5MHz bandwidth, QPSK,(25,0) Mode , Below 1710MHz

Report No.:B19W50598-WWAN_Rev1



Date: 22.FEB.2020 04:11:07

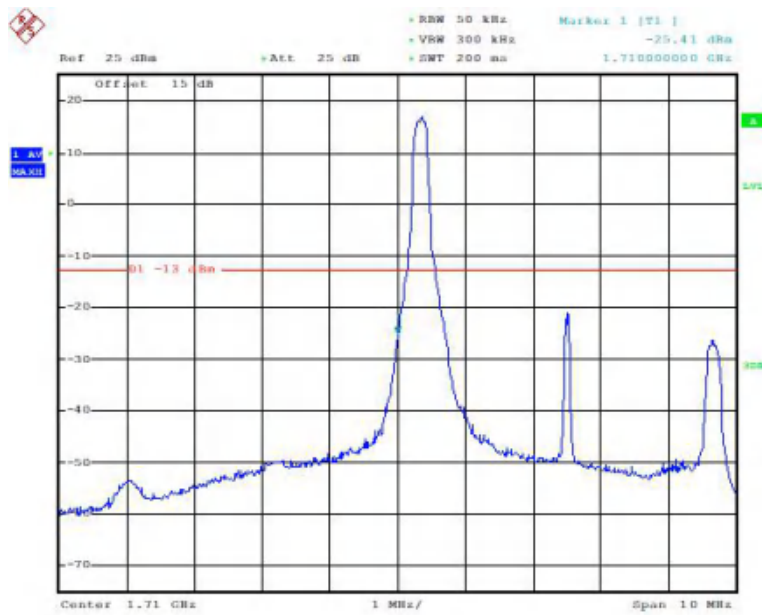
LTE Band66, 5MHz bandwidth, QPSK,(1,25) Mode, Above 1780MHz



Date: 22.FEB.2020 04:11:19

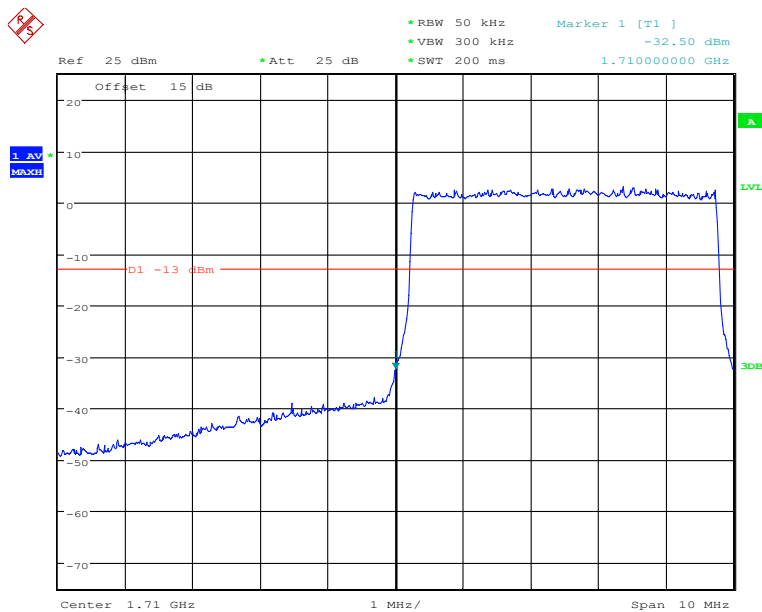
LTE Band66, 5MHz bandwidth, QPSK,(25,0) Mode, Above 1780MHz

Report No.:B19W50598-WWAN_Rev1



Date: 23.FEB.2020 07:06:51

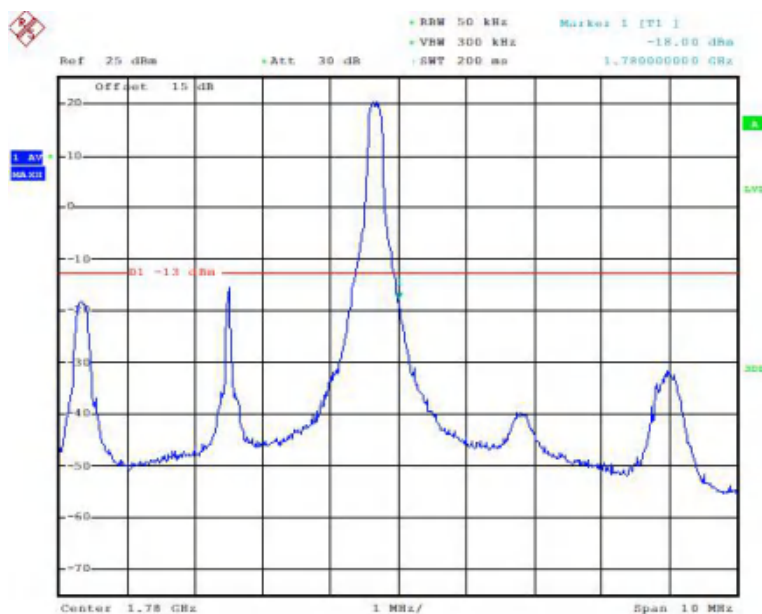
LTE Band66, 5MHz bandwidth, 16QAM,(1,0) Mode , Below 1710MHz



Date: 23.FEB.2020 07:07:21

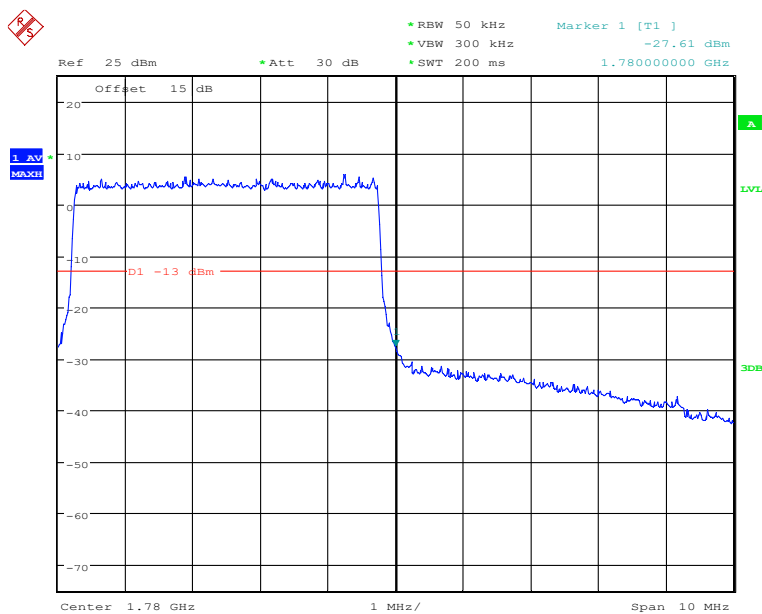
LTE Band66, 5MHz bandwidth, 16QAM,(25,0) Mode , Below 1710MHz

Report No.:B19W50598-WWAN_Rev1



Date: 23.FEB.2020 07:08:06

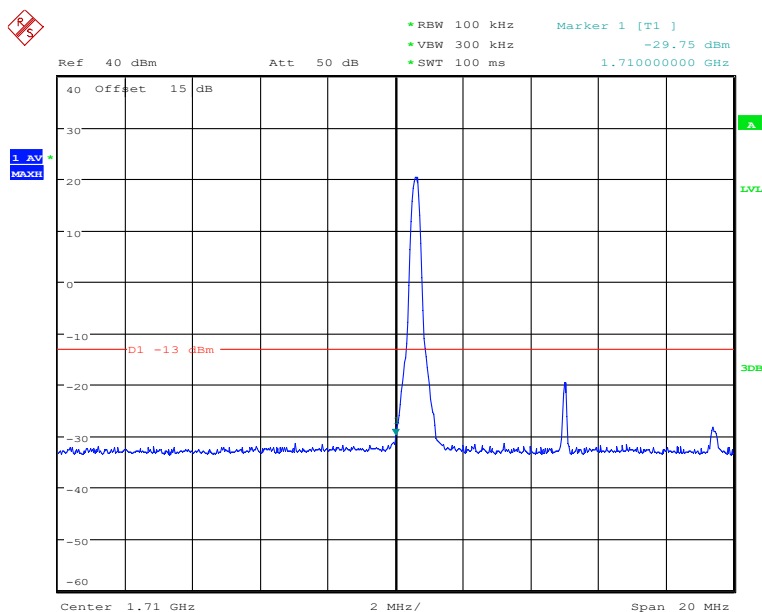
LTE Band66, 5MHz bandwidth, 16QAM,(1,25) Mode, Above 1780MHz



Date: 23.FEB.2020 07:07:46

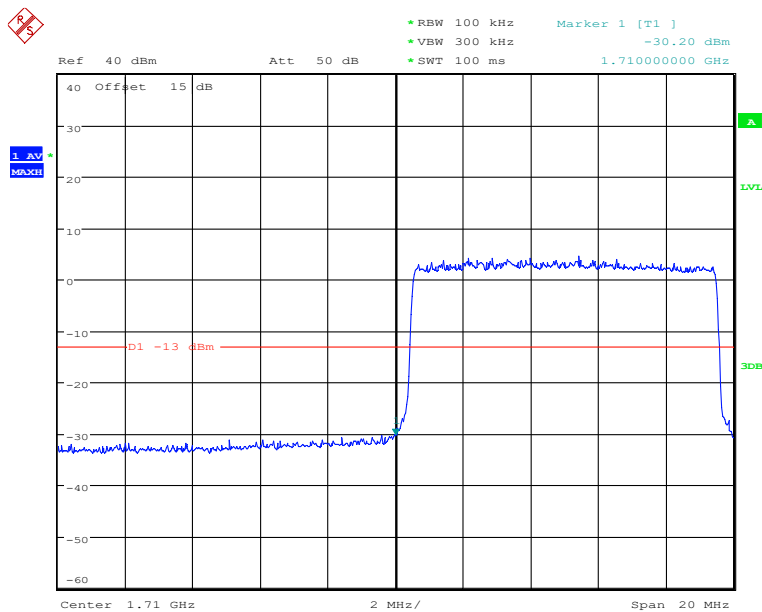
LTE Band66, 5MHz bandwidth, 16QAM,(25,0) Mode, Above 1780MHz

Report No.:B19W50598-WWAN_Rev1



Date: 22.FEB.2020 04:14:24

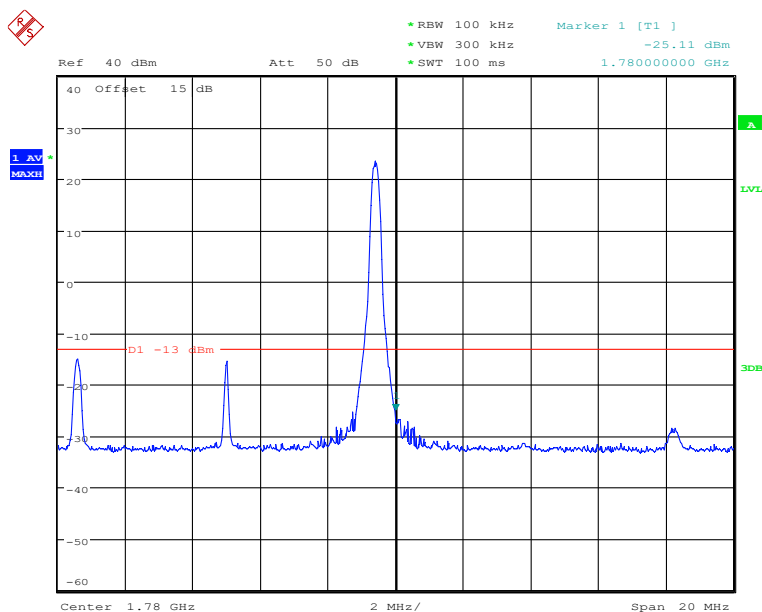
LTE Band66, 10MHz bandwidth, QPSK,(1,0) Mode , Below 1710MHz



Date: 22.FEB.2020 04:14:38

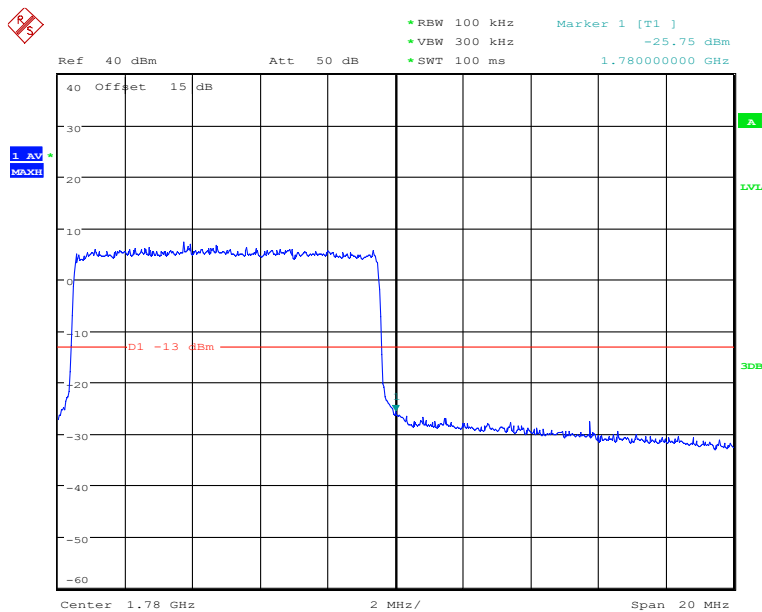
LTE Band66, 10MHz bandwidth, QPSK,(50,0) Mode , Below 1710MHz

Report No.:B19W50598-WWAN_Rev1



Date: 22.FEB.2020 04:13:28

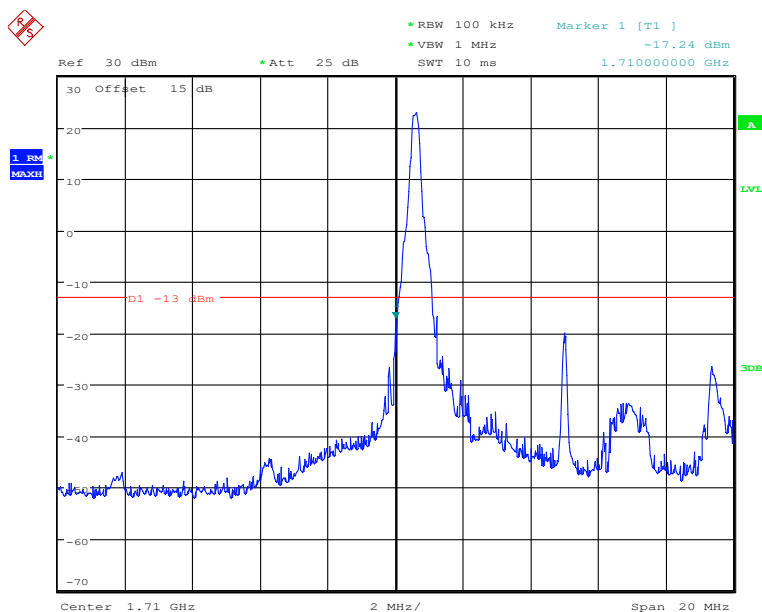
LTE Band66, 10MHz bandwidth, QPSK,(1,50) Mode, Above 1780MHz



Date: 22.FEB.2020 04:13:42

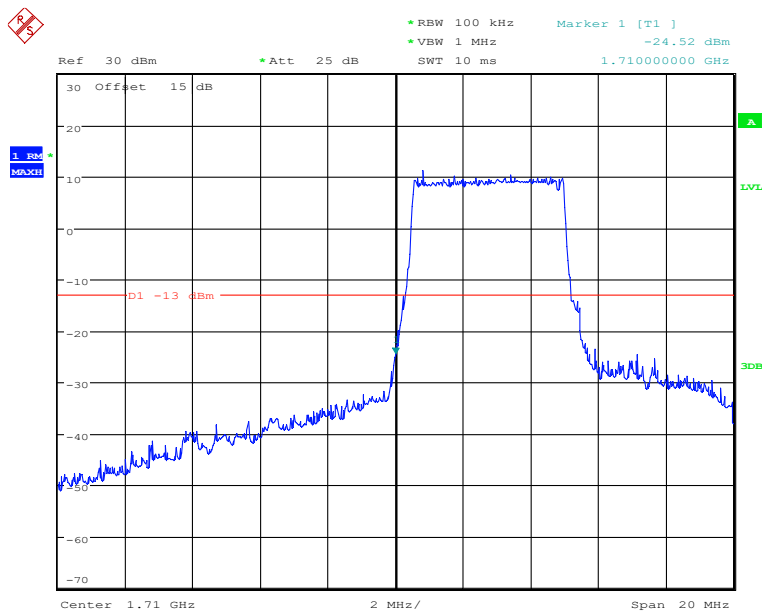
LTE Band66, 10MHz bandwidth, QPSK,(50,0) Mode, Above 1780MHz

Report No.:B19W50598-WWAN_Rev1



Date: 25.FEB.2020 02:59:03

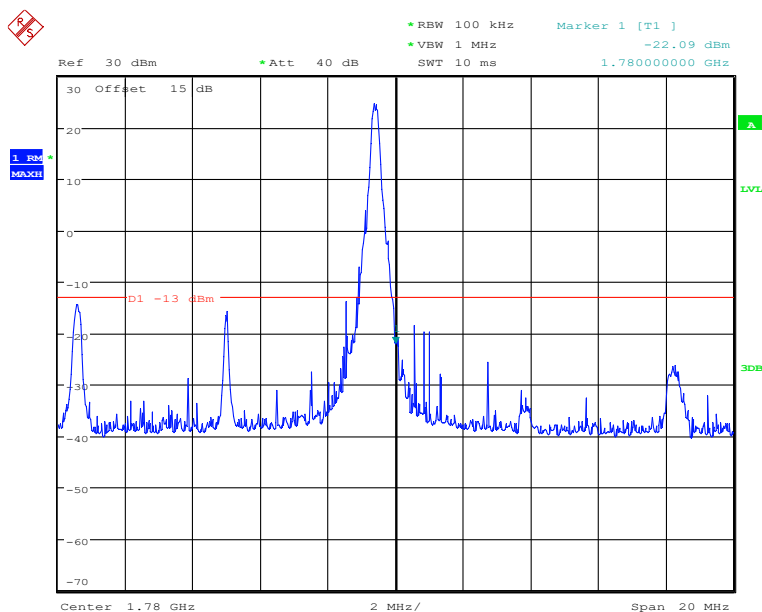
LTE Band66, 10MHz bandwidth, 16QAM,(1,0) Mode , Below 1710MHz



Date: 25.FEB.2020 02:59:23

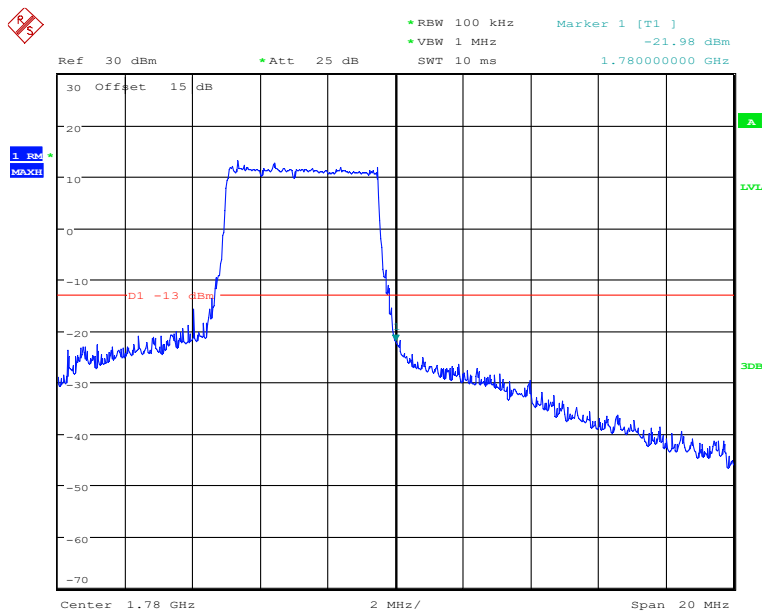
LTE Band66, 10MHz bandwidth, 16QAM,(50,0) Mode , Below 1710MHz

Report No.:B19W50598-WWAN_Rev1



Date: 25.FEB.2020 03:01:06

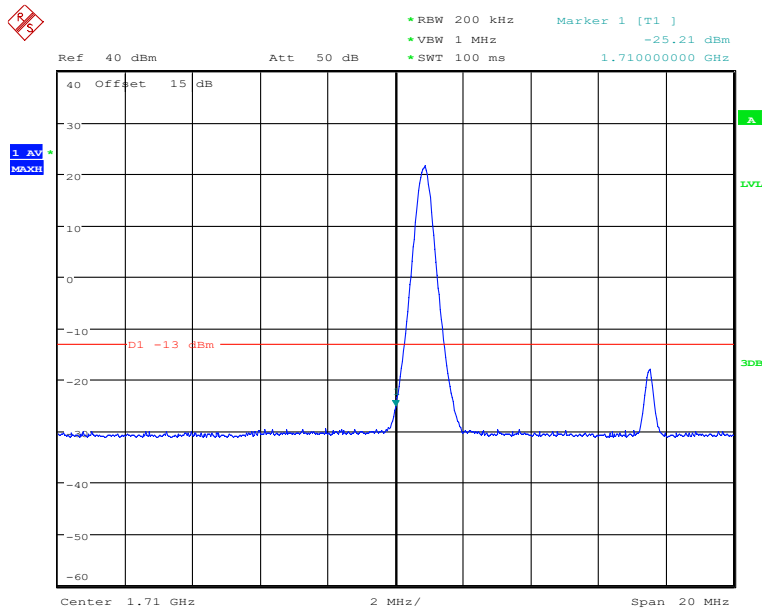
LTE Band66, 10MHz bandwidth, 16QAM,(1,50) Mode, Above 1780MHz



Date: 25.FEB.2020 02:59:59

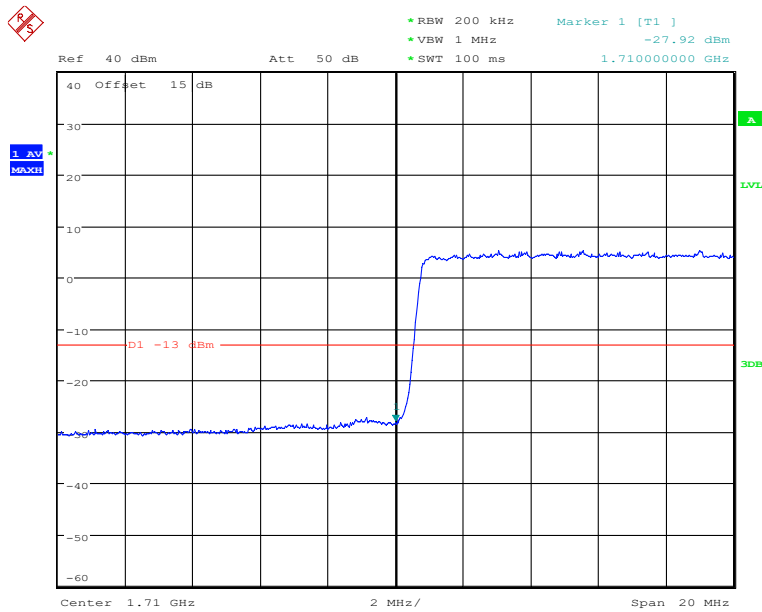
LTE Band66, 10MHz bandwidth, 16QAM,(50,0) Mode, Above 1780MHz

Report No.:B19W50598-WWAN_Rev1



Date: 22.FEB.2020 04:18:07

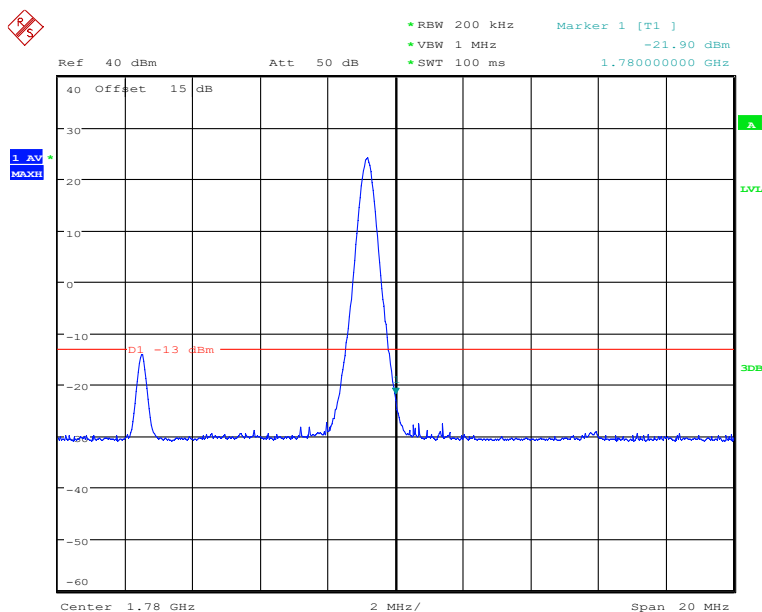
LTE Band66, 15MHz bandwidth, QPSK,(1,0) Mode , Below 1710MHz



Date: 22.FEB.2020 04:18:48

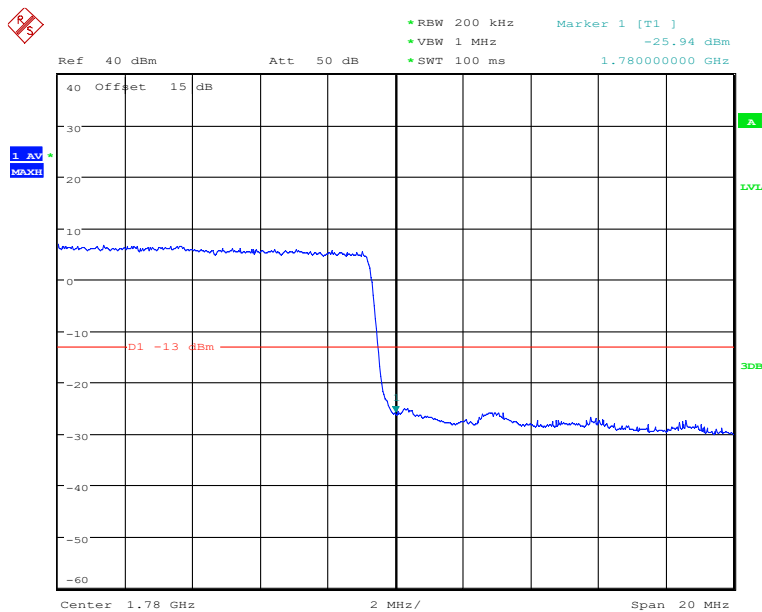
LTE Band66, 15MHz bandwidth, QPSK,(75,0) Mode , Below 1710MHz

Report No.:B19W50598-WWAN_Rev1



Date: 22.FEB.2020 04:19:51

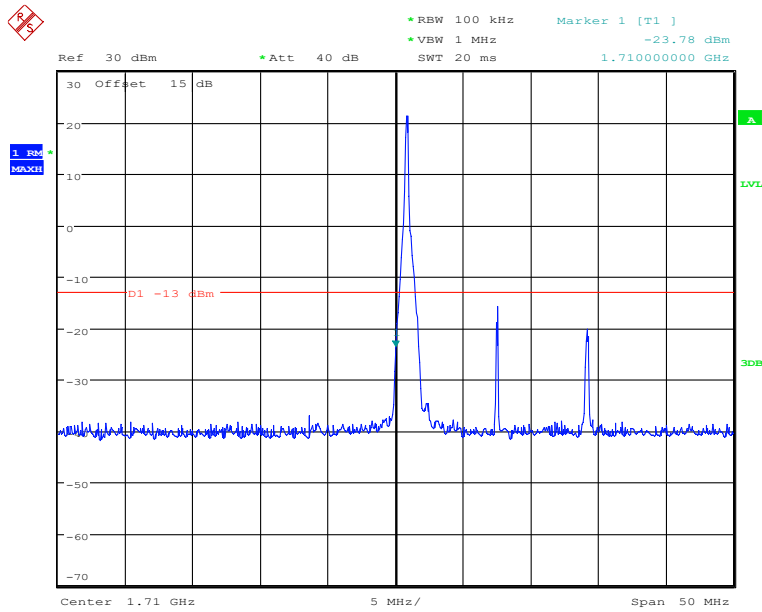
LTE Band66, 15MHz bandwidth, QPSK,(1,75) Mode, Above 1780MHz



Date: 22.FEB.2020 04:19:31

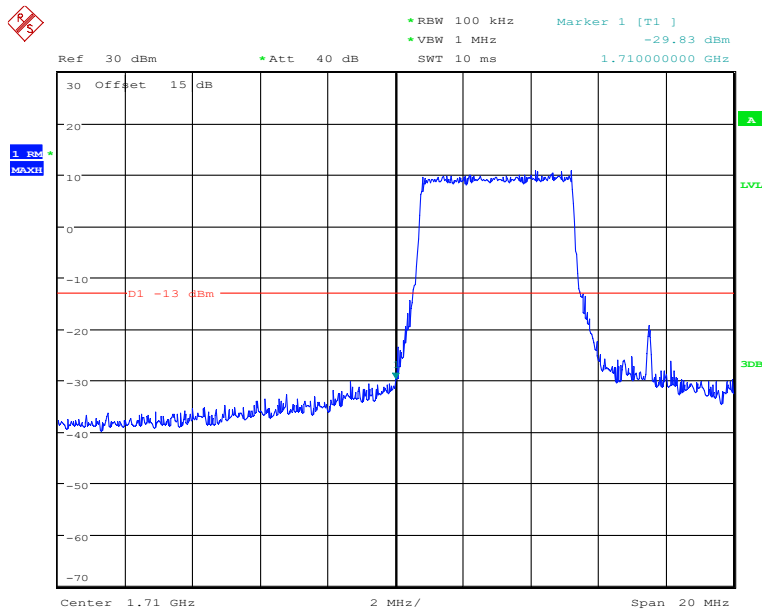
LTE Band66, 15MHz bandwidth, QPSK,(75,0) Mode, Above 1780MHz

Report No.:B19W50598-WWAN_Rev1



Date: 25.FEB.2020 03:04:09

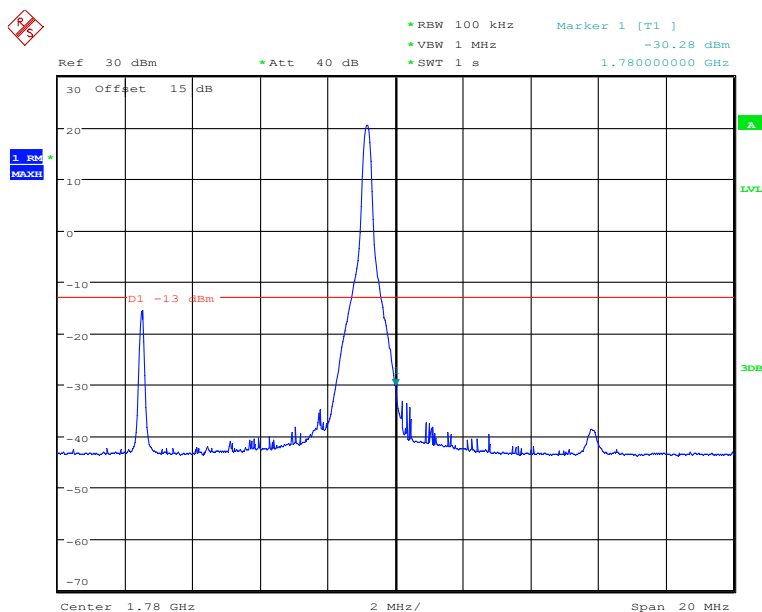
LTE Band66, 15MHz bandwidth, 16QAM,(1,0) Mode , Below 1710MHz



Date: 25.FEB.2020 03:03:42

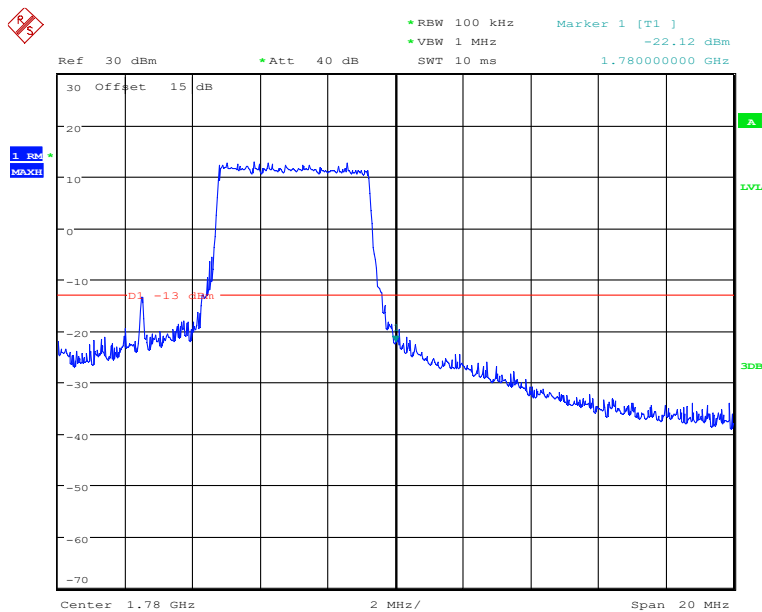
LTE Band66, 15MHz bandwidth, 16QAM,(75,0) Mode , Below 1710MHz

Report No.:B19W50598-WWAN_Rev1



Date: 25.FEB.2020 03:02:34

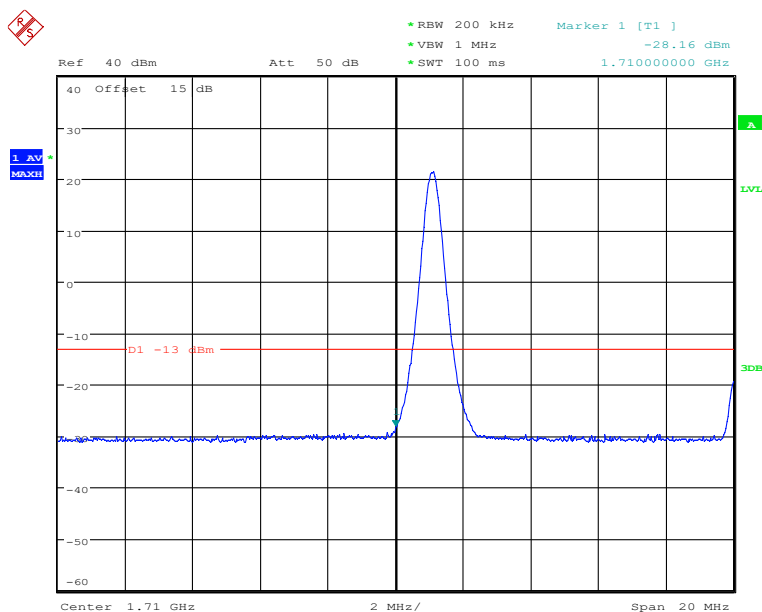
LTE Band66, 15MHz bandwidth, 16QAM,(1,75) Mode, Above 1780MHz



Date: 25.FEB.2020 03:03:00

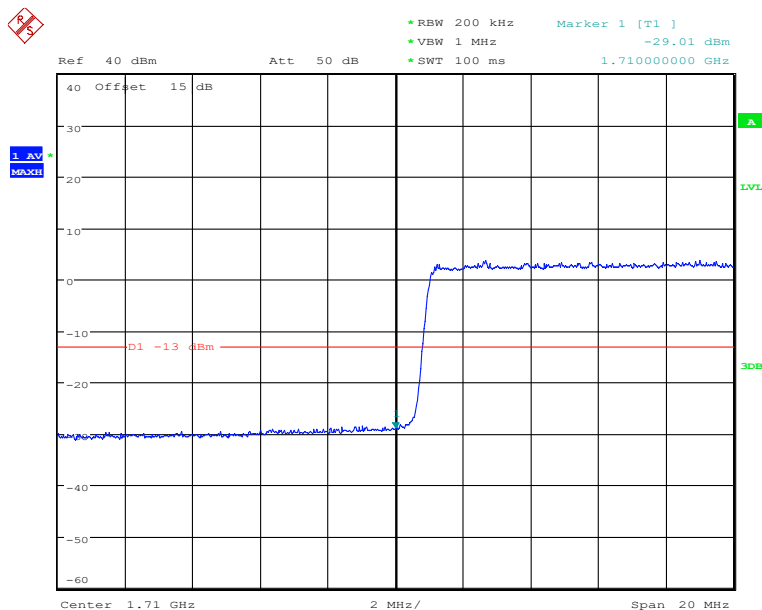
LTE Band66, 15MHz bandwidth, 16QAM,(75,0) Mode, Above 1780MHz

Report No.:B19W50598-WWAN_Rev1



Date: 22.FEB.2020 04:21:34

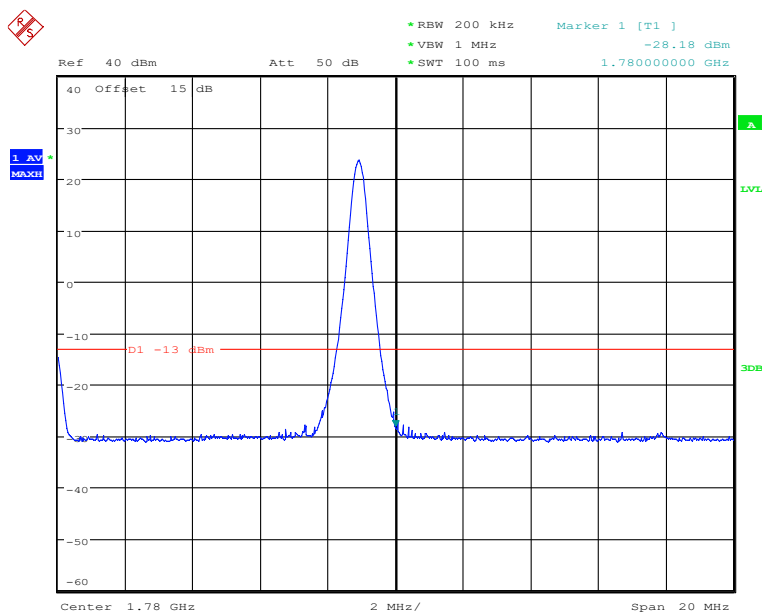
LTE Band66, 20MHz bandwidth, QPSK,(1,0) Mode , Below 1710MHz



Date: 22.FEB.2020 04:21:51

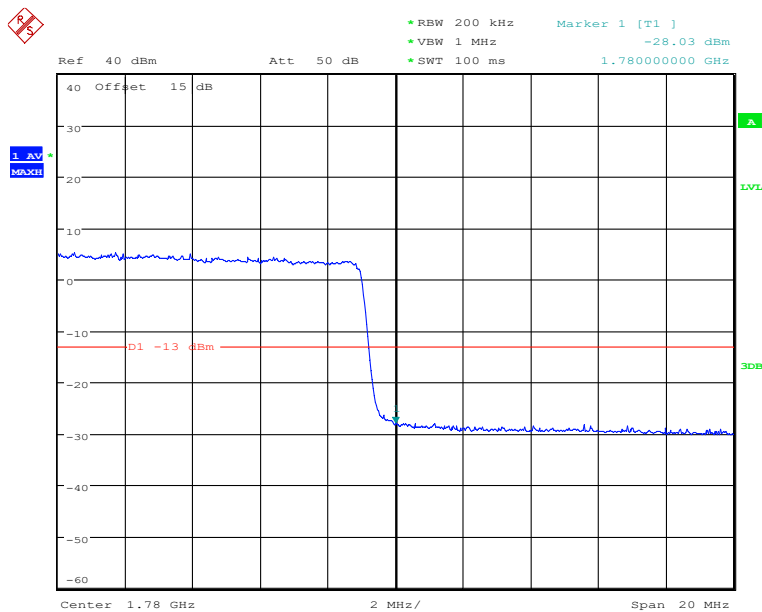
LTE Band66, 20MHz bandwidth, QPSK,(100,0) Mode , Below 1710MHz

Report No.:B19W50598-WWAN_Rev1



Date: 22.FEB.2020 04:22:34

LTE Band66, 20MHz bandwidth, QPSK,(1,100) Mode, Above 1780MHz



Date: 22.FEB.2020 04:22:18

LTE Band66, 20MHz bandwidth, QPSK,(100,0) Mode, Above 1780MHz

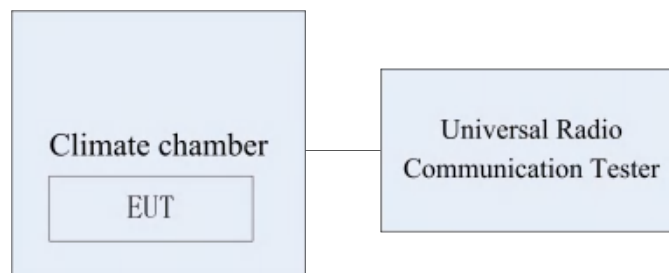
5.6 Frequency Stability over Temperature Variation

Specifications:	FCC Part 2.1055, 22.355, 24.235, 27.54, 90.213 RSS-130 4.3, RSS-132 4.3, RSS-133 6.3, RSS-199 4.3
DUT Serial Number:	868822040009761
Test conditions:	Ambient Temperature:15°C-35°C Relative Humidity:30%-60% Air pressure: 86-106kPa
Test Results:	--

Limit	
Frequency deviation [ppm]	±2.5

Test Setup

The EUT was placed in a temperature chamber, demonstrated as figure T. The Wireless Telecommunications Test Set was used to set the Tx channel and power level, modulate the TX signal with different bit patterns and measure the frequency of Tx.



Test Method

- 1、 The EUT was turned off and placed in the temperature chamber.
- 2、 The temperature of the chamber was set to -30°C and allowed to stabilize.
- 3、 The EUT temperature was allowed to stabilize for 45 minutes.
- 4、 The EUT was turned on and set to transmit with Wireless Telecommunications Test Set.
- 5、 The maximum transmit frequency deviation during one minute period was measured by Wireless Communications Test Set.
- 6、 The steps 3-5 were repeated for -30°C, -20°C, -10°C, 0°C, 10°C, 20°C, 30°C, 40°C and 50°C.

5.6.1 GSM Band Frequency Stability over Temperature Variation Results

Band	Offset	Temperature[°C]								
		-30	-20	-10	0	10	20	30	40	50
GSM850 GMSK	Hz	11.56	10.82	13.53	13.20	9.98	11.59	6.26	14.40	19.31
	ppm	0.014	0.013	0.016	0.016	0.012	0.014	0.007	0.017	0.023
GSM850 8PSK	Hz	12.24	12.40	13.66	13.62	4.26	13.30	7.36	14.69	13.11
	ppm	0.015	0.015	0.016	0.016	0.005	0.016	0.009	0.018	0.016
PCS1900 GMSK	Hz	-2.39	-2.74	-3.45	1.23	3.91	-4.84	-0.52	3.91	16.21
	ppm	-0.001	-0.001	-0.002	0.001	0.002	-0.003	-0.000	0.002	0.009
PCS1900 8PSK	Hz	-2.45	5.07	-3.81	-0.52	5.42	-0.32	1.26	-1.45	15.34
	ppm	-0.001	0.003	-0.002	-0.000	0.003	-0.000	0.001	-0.001	0.008

5.6.2 WCDMA Band Frequency Stability over Temperature Variation Results

Band	Offset	Temperature[°C]								
		-30	-20	-10	0	10	20	30	40	50
2	Hz	6.26	-3.98	-1.95	-5.14	-5.25	2.65	2.37	7.62	6.17
	ppm	0.003	-0.002	-0.001	-0.003	-0.003	0.001	0.001	0.004	0.003
4	Hz	5.44	-4.07	-0.34	1.34	-2.78	-0.58	-2.03	1.33	-1.24
	ppm	0.003	-0.002	-0.000	0.001	-0.002	-0.000	-0.001	0.001	-0.001
5	Hz	5.04	0.12	0.34	0.57	-1.87	0.54	-2.15	0.11	0.07
	ppm	0.006	0.000	0.000	0.001	-0.002	0.001	-0.003	0.000	0.000

5.6.3 LTE Band Frequency Stability over Temperature Variation Results

Band	Offset	Temperature[°C]								
		-30	-20	-10	0	10	20	30	40	50
7	Hz	3.41	-0.56	0.32	0.55	1.57	-0.35	0.34	2.01	-4.09
	ppm	0.001	-0.000	0.000	0.000	0.001	-0.000	0.000	0.001	-0.002
12	Hz	5.67	2.87	6.25	3.48	4.27	1.46	1.14	4.33	-1.82
	ppm	0.008	0.004	0.009	0.005	0.006	0.002	0.002	0.006	-0.003
13	Hz	1.60	4.90	3.68	5.35	4.07	3.49	5.55	3.77	2.69
	ppm	0.002	0.007	0.005	0.007	0.005	0.005	0.007	0.005	0.004
25	Hz	3.31	0.86	1.64	0.29	1.69	1.54	-1.41	-1.71	1.36
	ppm	0.002	0.000	0.001	0.000	0.001	0.001	-0.001	-0.001	0.001
26	Hz	1.37	4.85	2.50	0.52	1.73	1.91	2.78	1.04	0.24
	ppm	0.002	0.006	0.003	0.001	0.002	0.002	0.003	0.001	0.000
41	Hz	4.69	-7.31	2.58	3.77	-1.96	0.98	-6.27	-5.22	3.58
	ppm	0.002	-0.003	0.001	0.001	-0.001	0.000	-0.002	-0.002	0.001
66	Hz	5.59	1.98	1.20	1.85	1.76	0.58	1.41	0.89	-2.07
	ppm	0.003	0.001	0.001	0.001	0.001	0.000	0.001	0.001	-0.001

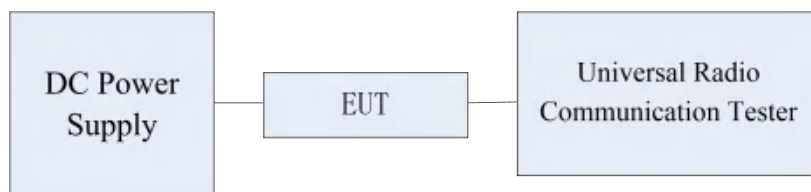
5.7 Frequency Stability over Voltage Variation

Specifications:	FCC Part 2.1055, 22.355, 24.235, 27.54, 90.213 RSS-130 4.3, RSS-132 4.3, RSS-133 6.3, RSS-199 4.3
DUT Serial Number:	868822040009761
Test conditions:	Ambient Temperature:15°C-35°C Relative Humidity:30%-60% Air pressure: 86-106kPa
Test Results:	--

Limit	
Frequency deviation [ppm]	±2.5

Test Setup

The EUT was placed in a shielding chamber and powered by an adjustable power supply, demonstrated as figure V. A Wireless Telecommunications Test Set was used to set the TX channel and power level, modulate the TX signal with different bit patterns and measure the frequency of TX.



Test Method

The EUT was powered by the adjustable power supply. The frequency stability is measured by the Wireless Telecommunications Test Set.

5.7.1 GSM Band Frequency Stability over Voltage Variation Results

Test data:

Band	Offset	Voltage (V)		
		3.30	3.80	4.20
GSM850 GMSK	Hz	5.45	-2.50	1.94
	ppm	0.007	-0.003	0.002
GSM850 8PSK	Hz	2.73	3.15	-0.98
	ppm	0.003	0.004	-0.001
PCS1900 GMSK	Hz	1.24	-3.31	3.05
	ppm	0.001	-0.002	0.002
PCS1900 8PSK	Hz	-4.15	0.82	-1.57
	ppm	-0.002	0.000	-0.001

5.7.2 WCDMA Band Frequency Stability over Voltage Variation Results

Test data:

Band	Offset	Voltage (V)		
		3.30	3.80	4.20
2	Hz	4.61	-6.37	2.95
	ppm	0.002	-0.003	0.002
4	Hz	-3.56	-5.21	2.85
	ppm	-0.002	-0.003	0.002
5	Hz	5.64	2.81	-3.45
	ppm	0.007	0.003	-0.004

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5.7.3 LTE Band Frequency Stability over Voltage Variation Results

Test data:

Band	Offset	Voltage (V)		
		3.30	3.80	4.20
7	Hz	4.33	-2.75	3.18
	ppm	0.002	-0.001	0.001
12	Hz	-2.51	-1.96	4.15
	ppm	-0.004	-0.003	0.006
13	Hz	0.87	-1.52	2.43
	ppm	0.001	-0.002	0.003
25	Hz	4.35	5.87	-3.11
	ppm	0.002	0.003	-0.002
26	Hz	6.74	-12.59	-8.93
	ppm	0.008	-0.015	-0.011
41	Hz	5.18	-8.25	6.79
	ppm	0.002	-0.003	0.003
66	Hz	-6.19	-4.83	3.59
	ppm	-0.004	-0.003	0.002

5.8 Peak to Average Ratio

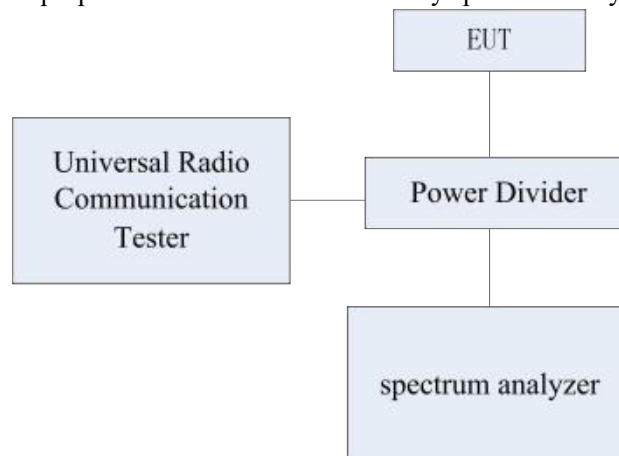
Specifications:	FCC Part 24.232, 27.50, RSS-130 4.4
DUT Serial Number:	868822040009761
Test conditions:	Ambient Temperature:15°C-35°C Relative Humidity:30%-60% Air pressure: 86-106kPa
Test Results:	--

Limit

The EUT meets the requirement of having a peak to average ratio of less than 13dB.

Test Setup

During the test, the EUT was controlled via the Wireless Communications Test Set to ensure max power transmission and proper modulation and measured by spectrum analyzer.



Test Method

The transmitter output was connected to a CMW500 through a coaxial RF cable and directional coupler, and configured to operate at maximum power. The peak to average ratio was measured at the required operating frequencies in each Band on the Spectrum Analyzer.

5.8.1 GSM850 Peak to Average Ratio Results

Frequency (MHz)	EUT channel No.	Modulation	Peak to Average Ratio
836.6	190	GMSK	10.76
		8PSK	12.06

5.8.2 GSM1900 Peak to Average Ratio Results

Frequency (MHz)	EUT channel No.	Modulation	Peak to Average Ratio
1880	661	GMSK	10.89
		8PSK	10.31

5.8.3 WCDMA B2 Peak to Average Ratio Results

Frequency (MHz)	EUT channel No.	Modulation	Peak to Average Ratio
1880	9400	QPSK	6.64
		16QAM	5.61

5.8.4 WCDMA B4 Peak to Average Ratio Results

Frequency (MHz)	EUT channel No.	Modulation	Peak to Average Ratio
1732.4	1412	QPSK	7.07
		16QAM	7.41

5.8.5 WCDMA B5 Peak to Average Ratio Results

Frequency (MHz)	EUT channel No.	Modulation	Peak to Average Ratio
836.4	4182	QPSK	5.74
		16QAM	6.27

5.8.6 LTE B7 Peak to Average Ratio Results

Frequency (MHz)	EUT channel No.	bandwidth	Modulation	Peak to Average Ratio
2535MHz	21100	10MHz	QPSK	6.40
			16QAM	6.46

5.8.7 LTE B12 Peak to Average Ratio Results

Frequency (MHz)	EUT channel No.	bandwidth	Modulation	Peak to Average Ratio
707.5MHz	23095	10MHz	QPSK	6.07
			16QAM	6.35

5.8.8 LTE B13 Peak to Average Ratio Results

Frequency (MHz)	EUT channel No.	bandwidth	Modulation	Peak to Average Ratio
782.0MHz	23230	10MHz	QPSK	5.95
			16QAM	5.71

5.8.10 LTE B25 Peak to Average Ratio Results

Frequency (MHz)	EUT channel No.	bandwidth	Modulation	Peak to Average Ratio
1882.5MHz	26365	10MHz	QPSK	6.29
			16QAM	6.31

5.8.9 LTE B26 Peak to Average Ratio Results

Frequency (MHz)	EUT channel No.	bandwidth	Modulation	Peak to Average Ratio
831.5MHz	26865	10MHz	QPSK	6.06
			16QAM	5.74

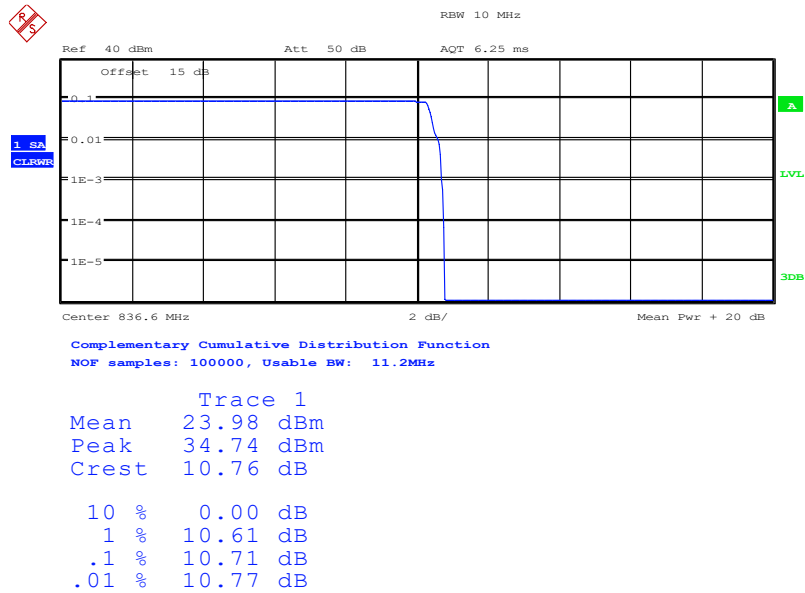
5.8.10 LTE B41 Peak to Average Ratio Results

Frequency (MHz)	EUT channel No.	bandwidth	Modulation	Peak to Average Ratio
2593MHz	40620	10MHz	QPSK	9.32
			16QAM	11.35

5.8.11 LTE B66 Peak to Average Ratio Results

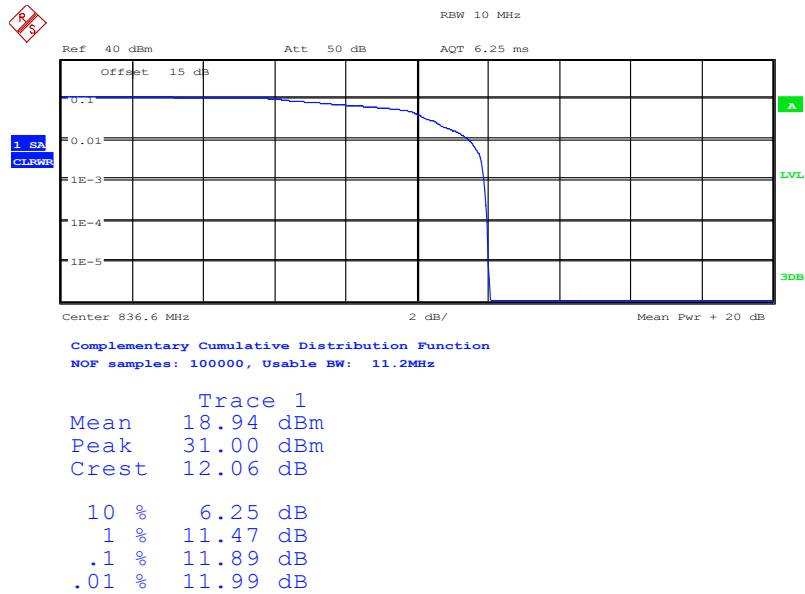
Frequency (MHz)	EUT channel No.	bandwidth	Modulation	Peak to Average Ratio
1745MHz	132322	10MHz	QPSK	6.23
			16QAM	6.63

Graphical for Peak to Average Ratio Results



Date: 22.FEB.2020 05:26:11

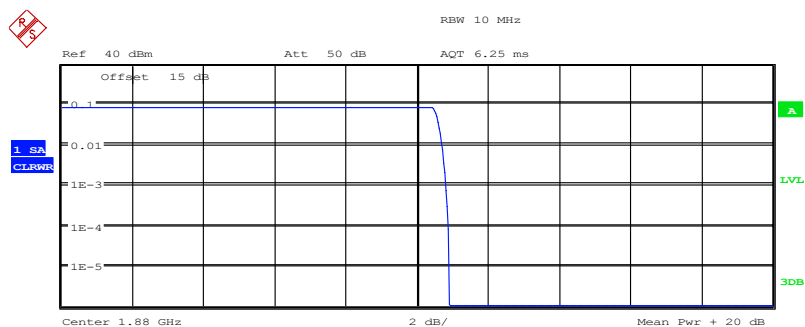
GSM850, GMSK



Date: 22.FEB.2020 06:23:23

GSM850,8PSK

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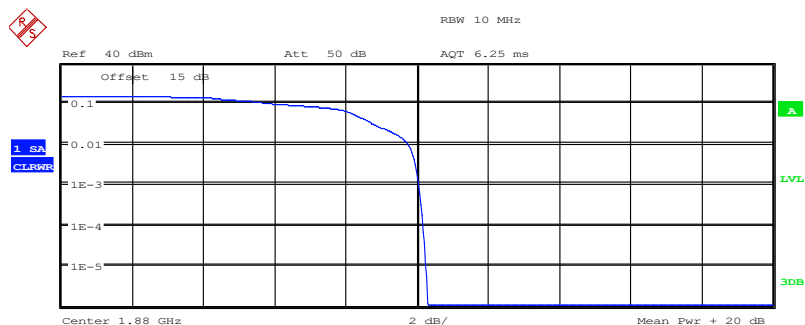


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

Trace 1	
Mean	17.04 dBm
Peak	27.94 dBm
Crest	10.89 dB
10 %	0.00 dB
1 %	10.71 dB
.1 %	10.83 dB
.01 %	10.90 dB

Date: 22.FEB.2020 05:28:33

PCS1900, GMSK



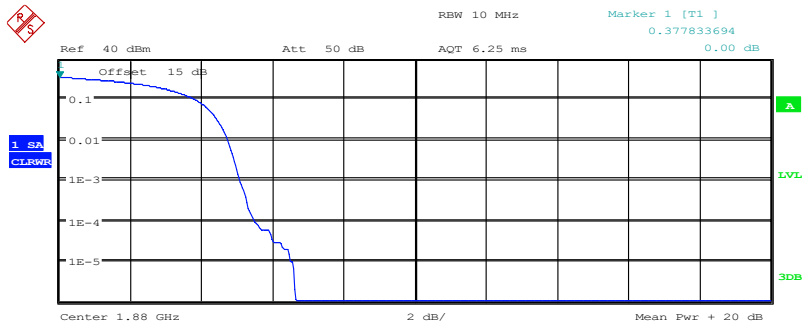
Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

Trace 1	
Mean	12.48 dBm
Peak	22.79 dBm
Crest	10.31 dB
10 %	6.12 dB
1 %	9.74 dB
.1 %	10.06 dB
.01 %	10.19 dB

Date: 22.FEB.2020 06:19:52

PCS1900, 8PSK

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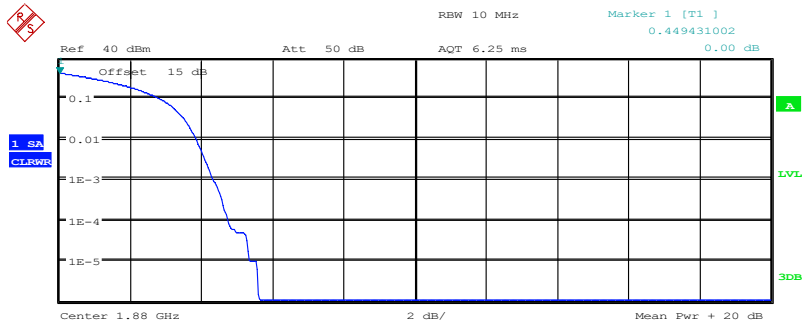
Complementary Cumulative Distribution Function
 NOF samples: 100000, Usable BW: 11.2MHz

Trace 1
 Mean 19.18 dBm
 Peak 25.82 dBm
 Crest 6.64 dB

10 % 3.81 dB
 1 % 4.74 dB
 .1 % 5.10 dB
 .01 % 5.48 dB

Date: 22.FEB.2020 04:39:01

WCDMA Band2, QPSK



Complementary Cumulative Distribution Function
 NOF samples: 100000, Usable BW: 11.2MHz

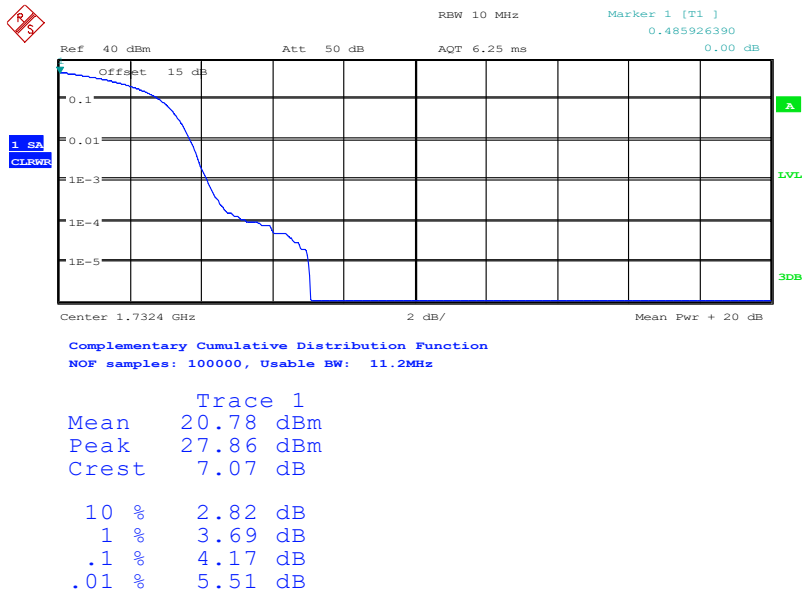
Trace 1
 Mean 20.21 dBm
 Peak 25.82 dBm
 Crest 5.61 dB

10 % 2.85 dB
 1 % 3.85 dB
 .1 % 4.33 dB
 .01 % 4.74 dB

Date: 22.FEB.2020 04:39:59

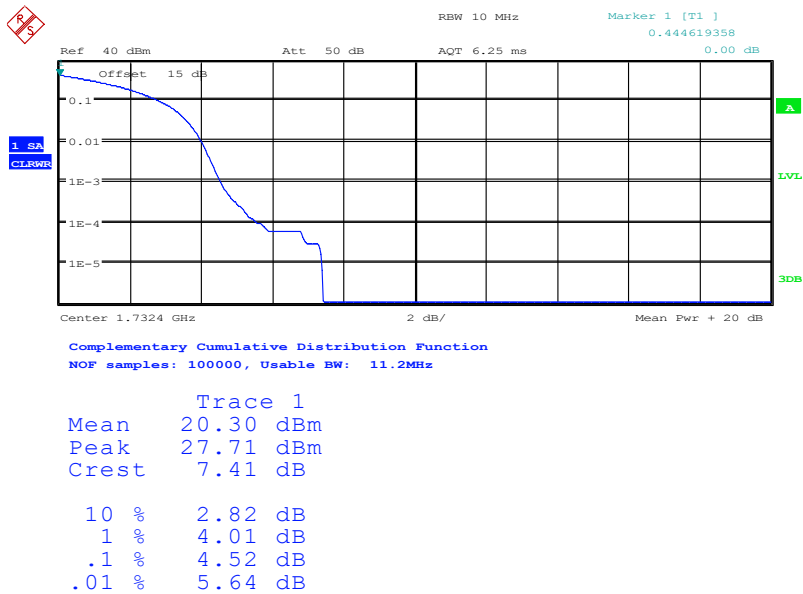
WCDMA Band2, 16QAM

Report No.:B19W50598-WWAN_Rev1



Date: 22.FEB.2020 04:42:15

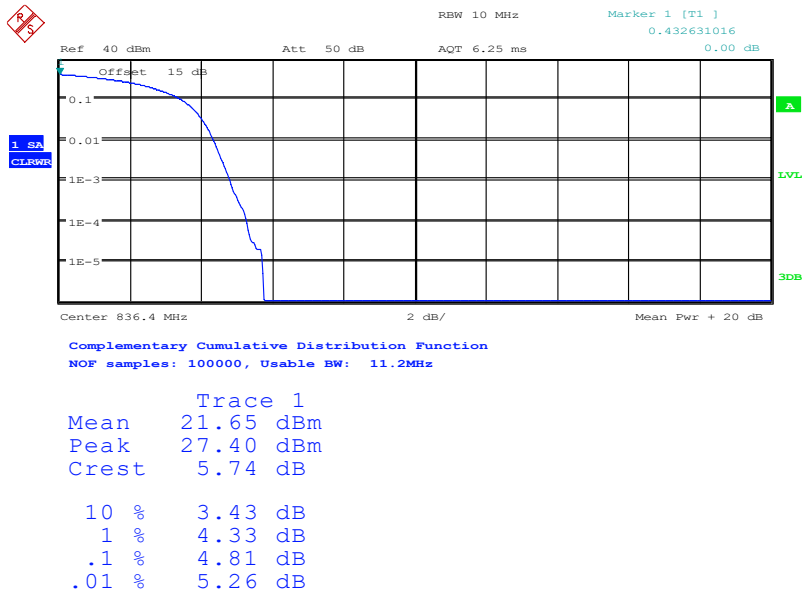
WCDMA Band4, QPSK



Date: 22.FEB.2020 04:42:28

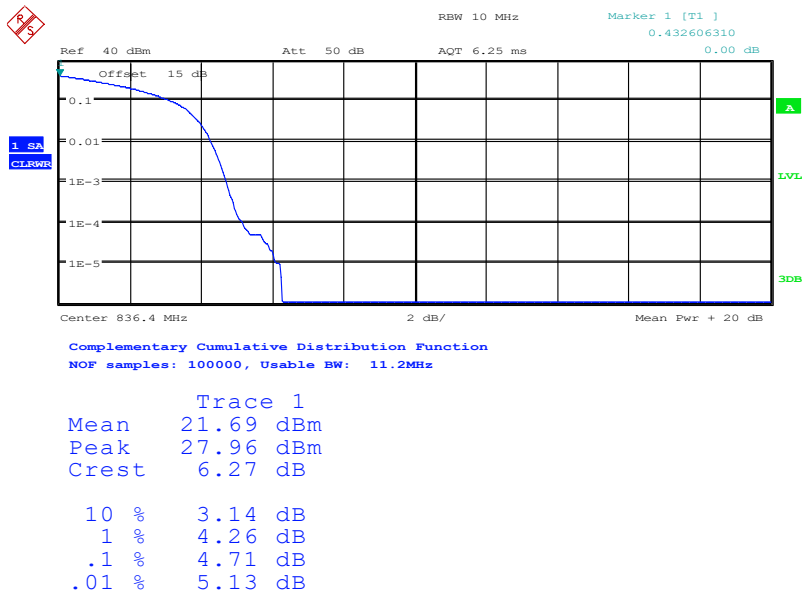
WCDMA Band4, 16QAM

Report No.:B19W50598-WWAN_Rev1



Date: 22.FEB.2020 04:43:53

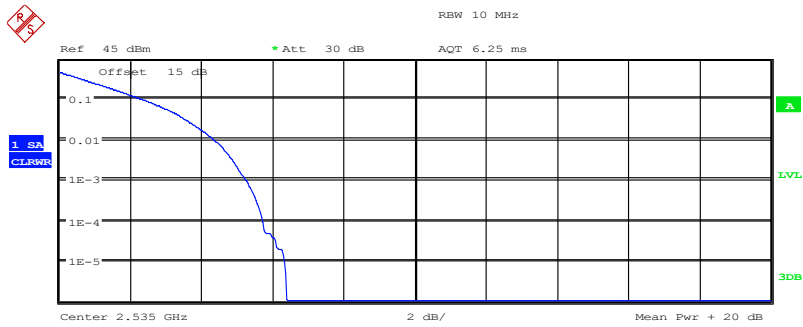
WCDMA Band5, QPSK



Date: 22.FEB.2020 04:43:39

WCDMA Band5, 16QAM

Report No.:B19W50598-WWAN_Rev1

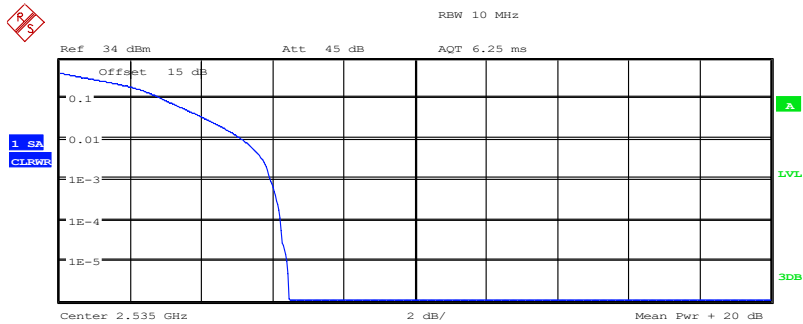


Center 2.535 GHz 2 dB/ Mean Pwr + 20 dB
 Complementary Cumulative Distribution Function
 NOF samples: 100000, Usable BW: 11.2MHz

Trace 1	
Mean	21.90 dBm
Peak	28.31 dBm
Crest	6.40 dB
10 %	2.37 dB
1 %	4.36 dB
.1 %	5.26 dB
.01 %	5.74 dB

Date: 21.FEB.2020 03:58:33

LTE Band7, QPSK



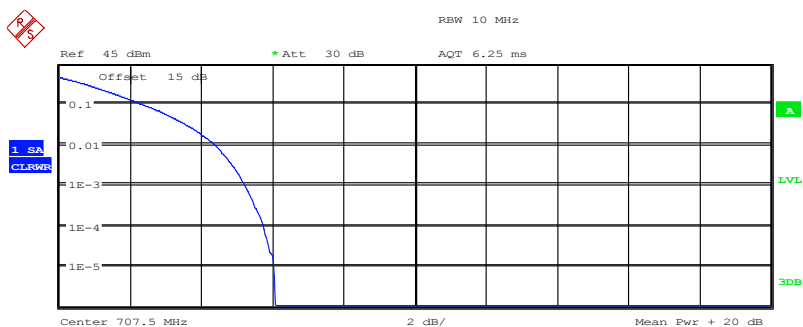
Center 2.535 GHz 2 dB/ Mean Pwr + 20 dB
 Complementary Cumulative Distribution Function
 NOF samples: 100000, Usable BW: 11.2MHz

Trace 1	
Mean	20.32 dBm
Peak	26.78 dBm
Crest	6.46 dB
10 %	2.92 dB
1 %	5.13 dB
.1 %	5.93 dB
.01 %	6.22 dB

Date: 25.FEB.2020 16:55:02

LTE Band7, 16QAM

Report No.:B19W50598-WWAN_Rev1

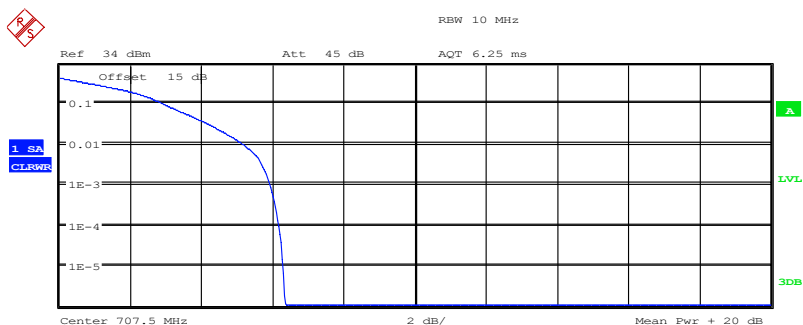


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

Trace 1	
Mean	22.91 dBm
Peak	28.98 dBm
Crest	6.07 dB
10 %	2.37 dB
1 %	4.36 dB
.1 %	5.22 dB
.01 %	5.74 dB

Date: 21.FEB.2020 03:59:19

LTE Band12, QPSK



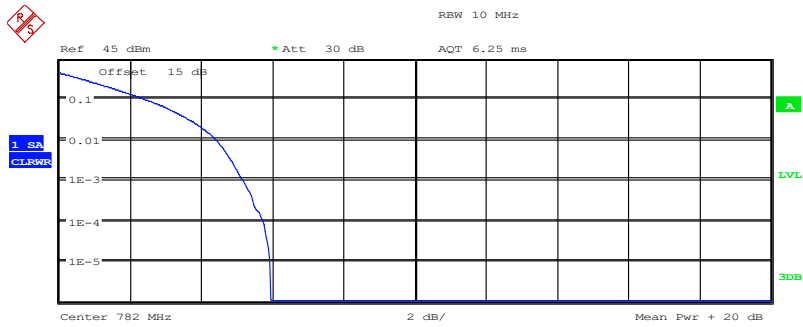
Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

Trace 1	
Mean	22.04 dBm
Peak	28.39 dBm
Crest	6.35 dB
10 %	2.95 dB
1 %	5.16 dB
.1 %	5.93 dB
.01 %	6.19 dB

Date: 25.FEB.2020 16:56:02

LTE Band12, 16QAM

Report No.:B19W50598-WWAN_Rev1



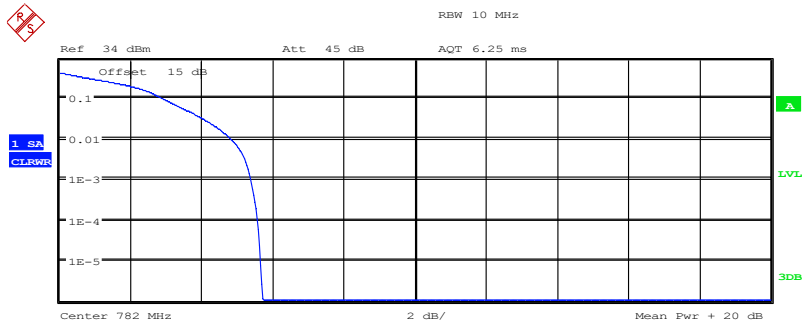
Complementary Cumulative Distribution Function
 NOF samples: 100000, Usable BW: 11.2MHz

Trace 1
 Mean 23.31 dBm
 Peak 29.27 dBm
 Crest 5.95 dB

10 % 2.44 dB
 1 % 4.42 dB
 .1 % 5.16 dB
 .01 % 5.74 dB

Date: 21.FEB.2020 04:00:44

LTE Band13, QPSK



Complementary Cumulative Distribution Function
 NOF samples: 100000, Usable BW: 11.2MHz

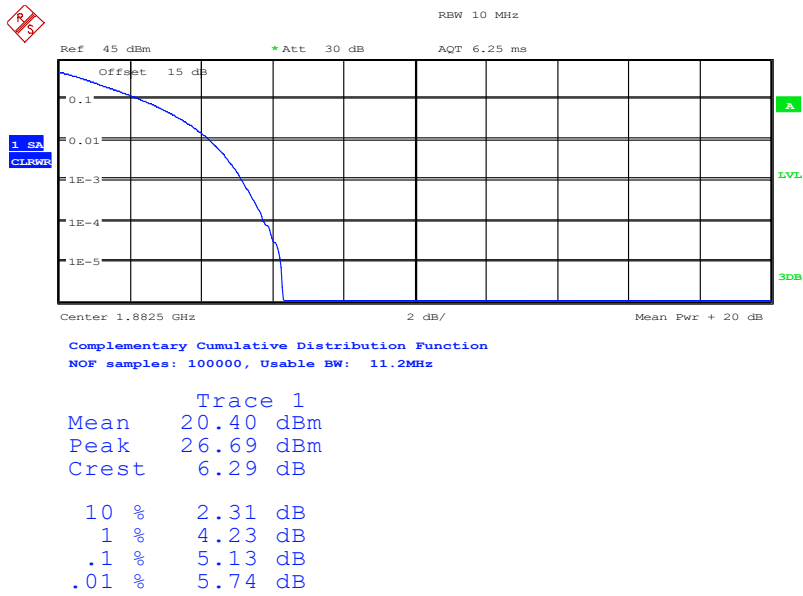
Trace 1
 Mean 22.19 dBm
 Peak 27.90 dBm
 Crest 5.71 dB

10 % 2.92 dB
 1 % 4.84 dB
 .1 % 5.38 dB
 .01 % 5.58 dB

Date: 25.FEB.2020 16:57:21

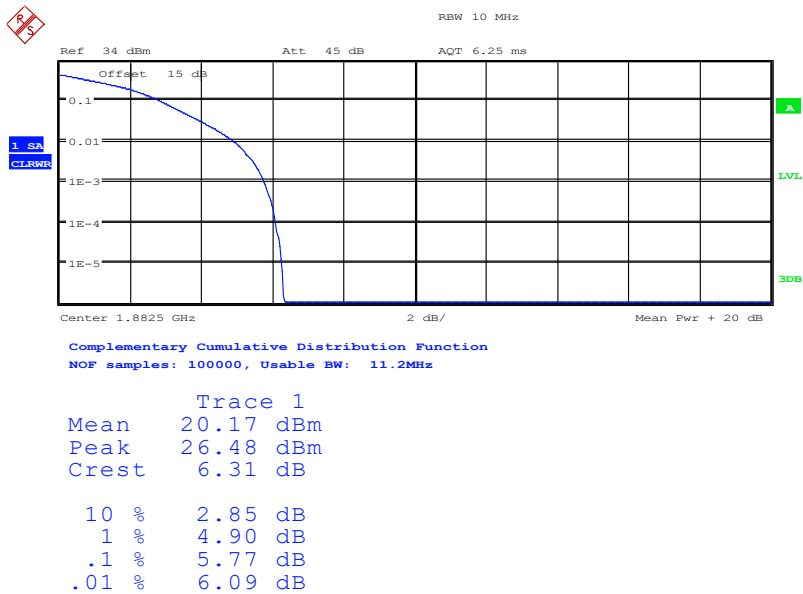
LTE Band13, 16QAM

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Date: 21.FEB.2020 04:01:22

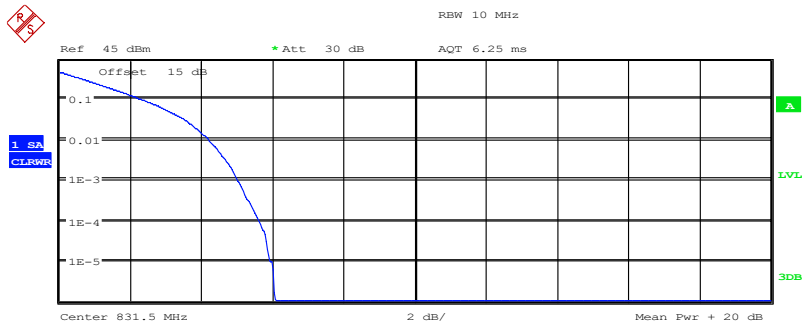
LTE Band25, QPSK



Date: 25.FEB.2020 16:57:58

LTE Band25, 16QAM

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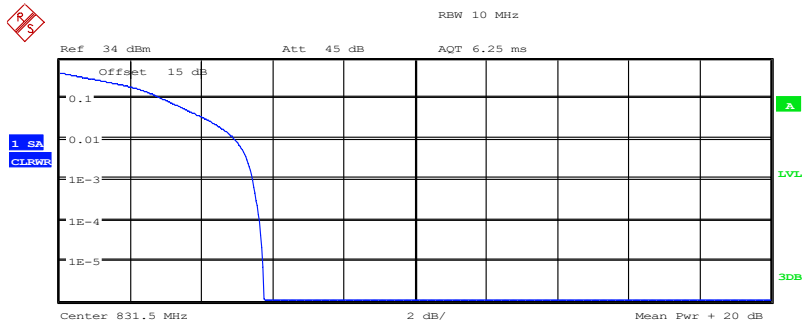


Complementary Cumulative Distribution Function
 NOF samples: 100000, Usable BW: 11.2MHz

Trace 1	
Mean	22.44 dBm
Peak	28.50 dBm
Crest	6.06 dB
10 %	2.34 dB
1 %	4.20 dB
.1 %	5.03 dB
.01 %	5.61 dB

Date: 21.FEB.2020 04:02:14

LTE Band26, QPSK



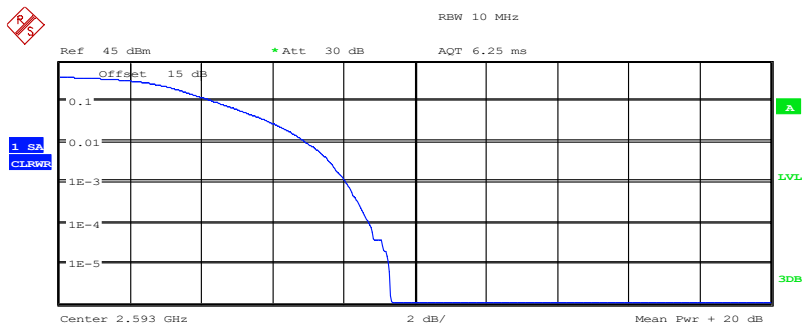
Complementary Cumulative Distribution Function
 NOF samples: 100000, Usable BW: 11.2MHz

Trace 1	
Mean	21.39 dBm
Peak	27.13 dBm
Crest	5.74 dB
10 %	2.92 dB
1 %	4.94 dB
.1 %	5.45 dB
.01 %	5.64 dB

Date: 25.FEB.2020 16:59:20

LTE Band26, 16QAM

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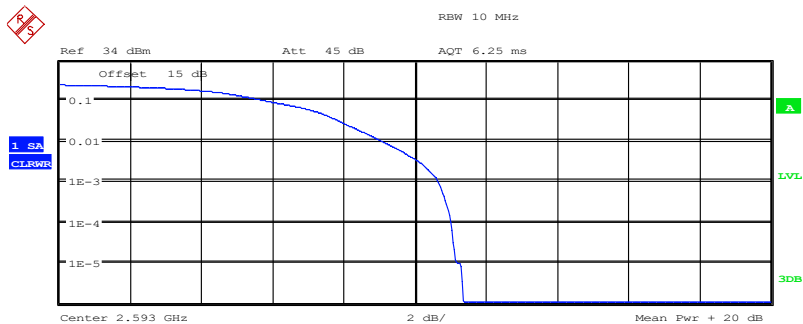


Complementary Cumulative Distribution Function
 NOF samples: 100000, Usable BW: 11.2MHz

Trace 1	
Mean	17.96 dBm
Peak	27.28 dBm
Crest	9.32 dB
10 %	4.39 dB
1 %	6.92 dB
.1 %	8.08 dB
.01 %	8.72 dB

Date: 21.FEB.2020 04:04:26

LTE Band41, QPSK



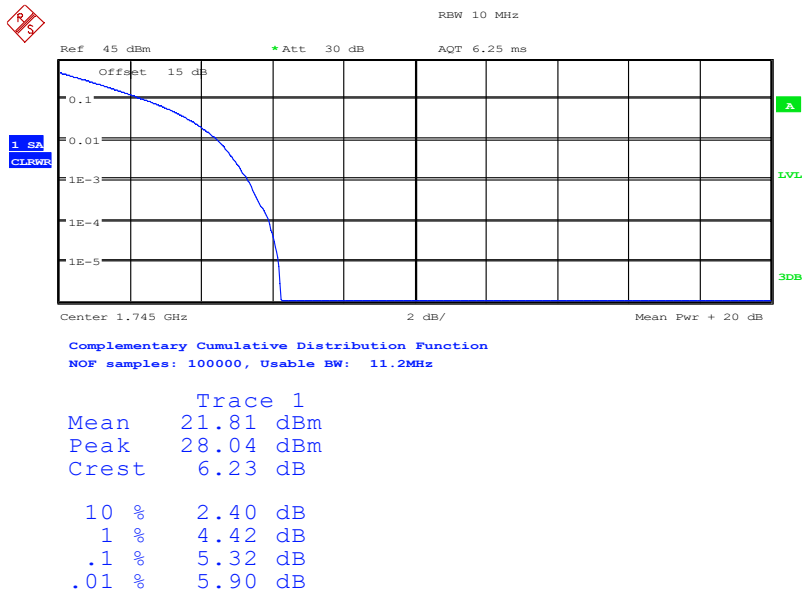
Complementary Cumulative Distribution Function
 NOF samples: 100000, Usable BW: 11.2MHz

Trace 1	
Mean	15.29 dBm
Peak	26.64 dBm
Crest	11.35 dB
10 %	5.87 dB
1 %	9.10 dB
.1 %	10.67 dB
.01 %	11.03 dB

Date: 25.FEB.2020 17:02:10

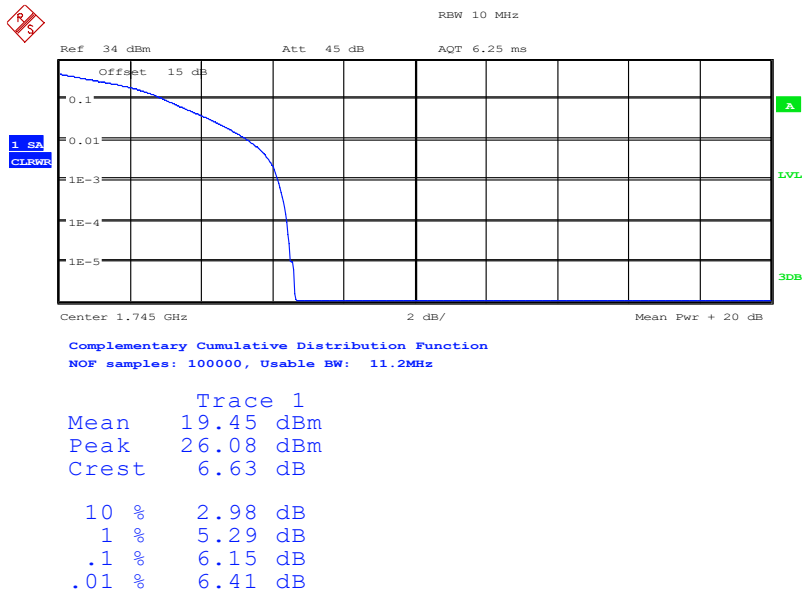
LTE Band41, 16QAM

Report No.:B19W50598-WWAN_Rev1



Date: 21.FEB.2020 04:02:45

LTE Band66, QPSK



Date: 25.FEB.2020 17:00:31

LTE Band66, 16QAM

5.9 ERP and EIRP

Specifications:	FCC Part 2.1046, 22.913(a), 24.232(c), 27.50, 90.635(b) RSS-130 4.4, RSS-132 4.4, RSS-133 6.4, RSS-139 4.4, RSS-199 4.4
DUT Serial Number:	868822040004135
Test conditions:	Ambient Temperature:15°C-35°C Relative Humidity:30%-60% Air pressure: 86-106kPa
Test Results:	--

Limit Level Construction:

This is the test for the maximum radiated power from the EUT.

According to Part 24.232(c), "Mobile/portable stations are limited to 2 watts e.i.r.p. Peak power" and 24.232(c) specifies that "Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage."

According to 22.913(a), The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts."

According to Part 27.50(d), "Fixed, mobile, and portable (handheld) stations operating in the 1710–1755 MHz band are limited to 1 watt EIRP".

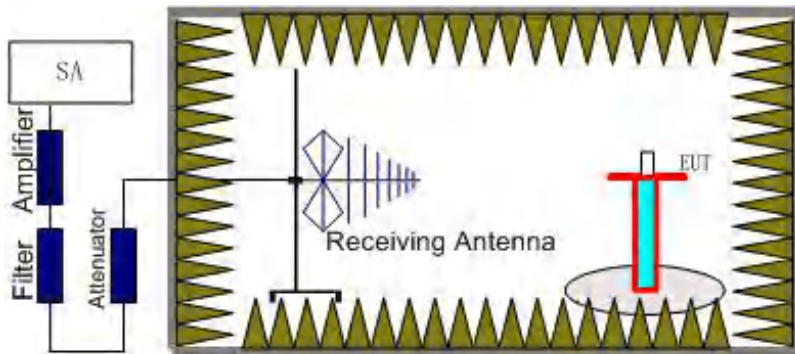
According to Part 27.50(h)(2) "Mobile stations are limited to 2.0 watts EIRP".

According to Part 27.50(c), specifies "Portable stations (hand-held de-vices) are limited to 3 watts ERP."

Method of Measurement

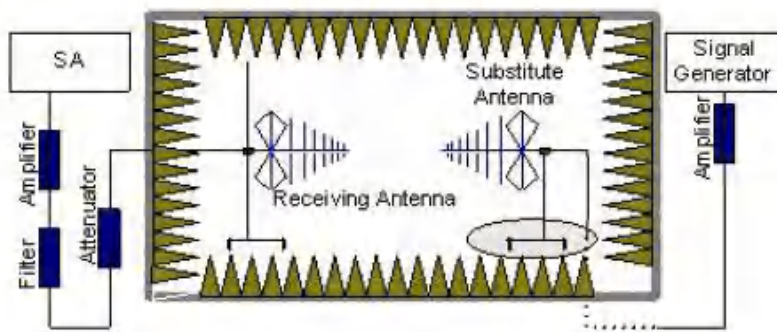
The measurements procedures in TIA-603E-2016 are used.

1. EUT was placed on a 1.5 meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna is 1.5m. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all transmit frequencies in three channels (High, Middle, Low) were measured with peak detector.



2. The EUT is then put into continuously transmitting mode at its maximum power level during the test. And the maximum value of the receiver should be recorded as (Pr).

3. The EUT shall be replaced by a substitution antenna. The test setup refers to figure below.



In the chamber, an substitution antenna for the frequency band of interest is placed at thereference point of the chamber. An RF Signal source for the frequency band of interest isconnected to the substitution antenna with a cable that has been constructed to not interferewith the radiation pattern of the antenna. A power (P_{Mea}) is applied to the input of thesubstitution antenna, and adjust the level of the signal generator output until the value of thereceiver reach the previously recorded (P_r). The power of signal source (P_{Mea}) is recorded. Thetest should be performed by rotating the test item and adjusting the receiving antennapolarization.

4. A amplifier should be connected to the Signal Source output port. And the cable should beconnect between the Amplifier and the Substitution Antenna.

The cable loss (P_{cl}), the Substitution Antenna Gain (G_a) and the Amplifier Gain (P_{Ag}) should berecorded after test.

The measurement results are obtained as described below:

$$\text{Power(EIRP)} = P_{Mea} + P_{Ag} - P_{cl} + G_a$$

5. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15dBi) and known input power.

6. ERP can be calculated from EIRP by subtracting the gain of the dipole,

$$\text{ERP} = \text{S.G output(dBM)} - \text{cable loss (dB)} + \text{antenna gain (dBd)}$$

$$\text{EIRP} = \text{S.G output(dBM)} - \text{cable loss (dB)} + \text{antenna gain (dBi)}$$

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5.9.1 GSM 850 Measurement result

GPRS(GMSK)

Frequency [MHz]	Generator output power(P_g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	ERP [dBm]	Antenna Polarization [H/V]
824.2	35.62	3.4	-0.96	31.26	V
836.6	35.81	3.4	-0.96	31.45	V
848.8	35.11	3.4	-0.96	30.75	V

GPRS(8PSK)

Frequency [MHz]	Generator output power(P_g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	ERP [dBm]	Antenna Polarization [H/V]
824.2	34.99	3.4	-0.96	30.63	V
836.6	35.02	3.4	-0.96	30.66	V
848.8	34.92	3.4	-0.96	30.56	V

5.9.2 PCS 1900 Measurement result

GPRS(GMSK)

Frequency [MHz]	Generator output power(P_g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	EIRP [dBm]	Antenna Polarization [H/V]
1850.2	25.12	5.0	10.4	30.52	V
1880.0	24.50	5.0	10.4	29.90	V
1909.8	24.14	5.1	10.4	29.44	V

GPRS(8PSK)

Frequency [MHz]	Generator output power(P_g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	EIRP [dBm]	Antenna Polarization [H/V]
1850.2	25.10	5.0	10.4	30.50	V

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1880.0	24.75	5.0	10.4	30.15	V
1909.8	24.88	5.1	10.4	30.18	V

5.9.3 WCDMA Band 2 Measurement result

Frequency [MHz]	Generator output power(P_g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	EIRP [dBm]	Antenna Polarization [H/V]
1852.4	15.87	5.0	10.4	21.27	V
1880.0	15.96	5.0	10.4	21.36	V
1907.6	15.13	5.1	10.4	20.43	V

5.9.4 WCDMA Band 4 Measurement result

Frequency [MHz]	Generator output power(P_g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	EIRP [dBm]	Antenna Polarization [H/V]
1712.4	15.62	4.8	10.4	21.22	V
1732.6	15.63	4.9	10.4	21.13	V
1752.6	15.32	4.9	10.4	20.82	V

5.9.5 WCDMA Band 5 Measurement result

Frequency [MHz]	Generator output power(P_g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	ERP [dBm]	Antenna Polarization [H/V]
826.4	24.60	3.4	-0.96	20.24	V
836.4	24.58	3.4	-0.96	20.22	V
846.6	25.00	3.4	-0.96	20.64	V

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5.9.6 LTE Band 7 Measurement result

LTE Band 7_20 MHz_QPSK

Frequency [MHz]	Generator output power(P_g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	EIRP [dBm]	Antenna Polarization [H/V]
2510.0	18.12	5.9	9.0	21.22	V
2535.0	18.16	5.9	9.0	21.26	V
2576.0	18.04	5.9	9.0	21.14	V

LTE Band 7_20 MHz_16QAM

Frequency [MHz]	Generator output power(P_g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	EIRP [dBm]	Antenna Polarization [H/V]
2510.0	17.41	5.9	9.0	20.51	V
2535.0	17.72	5.9	9.0	20.82	V
2576.0	17.43	5.9	9.0	20.53	V

5.9.7 LTE Band 12 Measurement result

LTE Band 12_10MHz_QPSK

Frequency [MHz]	Generator output power(P_g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	ERP [dBm]	Antenna Polarization [H/V]
699.0	24.68	3.1	-0.96	20.62	V
707.5	24.71	3.1	-0.96	20.65	V
716.0	24.43	3.1	-0.96	20.37	V

LTE Band 12_10MHz_16QAM

Frequency [MHz]	Generator output power(P_g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	ERP [dBm]	Antenna Polarization [H/V]
699.0	24.52	3.1	-0.96	20.46	V

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707.5	24.20	3.1	-0.96	20.14	V
716.0	24.32	3.1	-0.96	20.26	V

5.9.8 LTE Band 13 Measurement result

LTE Band 13_10MHz_QPSK

Frequency [MHz]	Generator output power(P _g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	ERP [dBm]	Antenna Polarization [H/V]
777.0	24.32	3.3	-0.96	20.06	V
782.0	24.85	3.3	-0.96	20.59	V
787.0	24.66	3.3	-0.96	20.40	V

LTE Band 13_10MHz_16QAM

Frequency [MHz]	Generator output power(P _g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	ERP [dBm]	Antenna Polarization [H/V]
777.0	24.31	3.3	-0.96	20.05	V
782.0	24.52	3.3	-0.96	20.26	V
787.0	24.38	3.3	-0.96	20.12	V

5.9.9 LTE Band 25 Measurement result

LTE Band 25_20MHz_QPSK

Frequency [MHz]	Generator output power(P _g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	EIRP [dBm]	Antenna Polarization [H/V]
1860.0	17.12	5.9	9.0	20.22	V
1882.5	17.99	5.9	9.0	21.09	V
1905.0	17.43	5.9	9.0	20.53	V

LTE Band 25_20MHz_16QAM

Frequency	Generator	Cable loss	Antenna	EIRP	Antenna
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[MHz]	output power(P_g) [dBm]	[dB]	Gain [dB]	[dBm]	Polarization [H/V]
1860.0	17.09	5.9	9.0	20.13	V
1882.5	17.85	5.9	9.0	20.95	V
1905.0	17.42	5.9	9.0	20.52	V

5.9.10 LTE Band 26 Measurement result

LTE Band 26_10MHz_QPSK

Frequency [MHz]	Generator output power(P_g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	ERP [dBm]	Antenna Polarization [H/V]
824.0	24.82	3.4	-0.96	20.46	V
831.5	24.36	3.4	-0.96	20.00	V
840.0	24.63	3.4	-0.96	20.27	V

LTE Band 26_10MHz_16QAM

Frequency [MHz]	Generator output power(P_g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	ERP [dBm]	Antenna Polarization [H/V]
824.0	24.62	3.4	-0.96	20.26	V
831.5	24.16	3.4	-0.96	19.80	V
840.0	24.53	3.4	-0.96	20.17	V

5.9.11 LTE Band 41 Measurement result

LTE Band 41_20MHz_QPSK

Frequency [MHz]	Generator output power(P_g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	EIRP [dBm]	Antenna Polarization [H/V]
2505.0	17.52	5.9	9.0	20.62	V
2593.0	17.36	6.0	9.0	20.36	V

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2690.0	17.52	6.0	9.1	20.42	V
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LTE Band 41_20MHz_16QAM

Frequency [MHz]	Generator output power(P_g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	EIRP [dBm]	Antenna Polarization [H/V]
2505.0	17.33	5.9	9.0	20.43	V
2593.0	17.30	6.0	9.0	20.30	V
2690.0	17.22	6.0	9.1	20.12	V

5.9.12 LTE Band 66 Measurement result

LTE Band 66_20MHz_QPSK

Frequency [MHz]	Generator output power(P_g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	EIRP [dBm]	Antenna Polarization [H/V]
1710.0	15.34	4.8	10.4	20.94	V
1745.0	15.96	4.9	10.4	21.46	V
1780.0	15.52	4.9	10.4	21.02	V

LTE Band 66_20MHz_16QAM

Frequency [MHz]	Generator output power(P_g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	EIRP [dBm]	Antenna Polarization [H/V]
1710.0	15.21	4.8	10.4	20.81	V
1745.0	15.71	4.9	10.4	21.21	V
1780.0	15.36	4.9	10.4	20.86	V

Annex A EUT Photos

See the document "SIM7600G/SIM7600G miniPCIE-External Photos".

See the document "SIM7600G/SIM7600G miniPCIE-Internal Photos".

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ANNEX B Deviations from Prescribed Test Methods

No deviation from Prescribed Test Methods.

*****End Of Report*****