

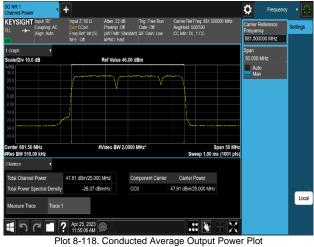
Plot 8-117. Conducted Average Output Power Plot (MSR 3C_DSS B(n)5_2C_10M+10M+LTE B5_1C_5M_2T_QPSK - Mid Channel. Port 1)



(MSR 2C_NR n5_1C_5M+LTE B5_1C_5M_2T_QPSK - Low Channel, Port 1)



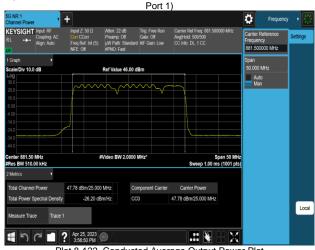
Plot 8-121. Conducted Average Output Power Plot (MSR 3C_NR n5_2C_10M+10M+LTE B5_1C_5M_2T_QPSK - Middle Channel, Port 1)



(MSR 3C_DSS B(n)5_2C_10M+10M+12B B5_1C_5M_2T_16QAM - Mid Channel. Port 1)



(MSR 2C_NR n5_1C_5M+LTE B5_1C_5M_2T_16QAM - Low Channel,



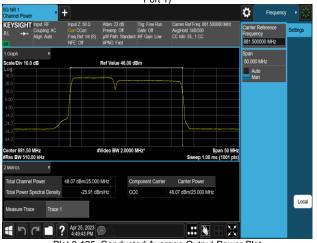
Plot 8-122. Conducted Average Output Power Plot (MSR 3C_NR n5_2C_10M+10M+LTE B5_1C_5M_2T_16QAM - Middle Channel, Port 1)

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Plot 8-123. Conducted Average Output Power Plot (MSR 2C_DSS B(n)5_1C_10M+NR n5_1C_5M_2T_QPSK - Low Channel, Port 1)



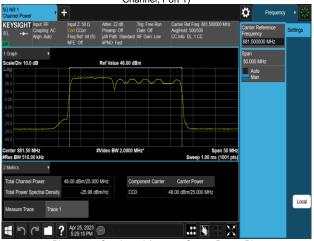
Plot 8-125. Conducted Average Output Power Plot (MSR 2C_DSS B(n)5_1C_10M+NR n5_1C_15M_2T_QPSK - Middle Channel, Port 1)



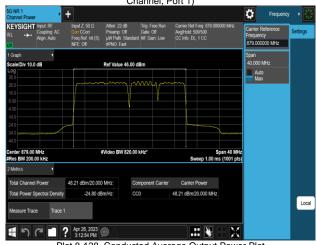
Plot 8-127. Conducted Average Output Power Plot (MSR 3C_DSS B(n)5_1C_10M+NR n5_1C_5M+LTE B5_1C_5M_2T_QPSK - Low Channel, Port 1)



Plot 8-124. Conducted Average Output Power Plot (MSR 2C_DSS B(n)5_1C_10M+NR n5_1C_5M_2T_16QAM - Low Channel. Port 1)



Plot 8-126. Conducted Average Output Power Plot (MSR 2C_DSS B(n)5_1C_10M+NR n5_1C_15M_2T_16QAM- Middle Channel, Port 1)



Plot 8-128. Conducted Average Output Power Plot (MSR 3C_DSS B(n)5_1C_10M+NR n5_1C_5M+LTE B5_1C_5M_2T_16QAM - Low Channel, Port 1)

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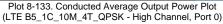
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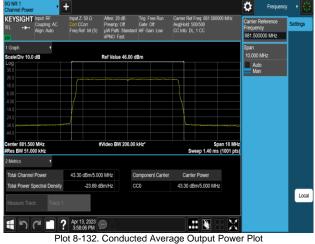
Plot 8-130. Conducted Average Output Power Plot (MSR 3C_DSS B(n)5_1C_10M+NR n5_1C_10M+LTE B5 1C 5M 2T 16QAM - Middle Channel, Port 1)



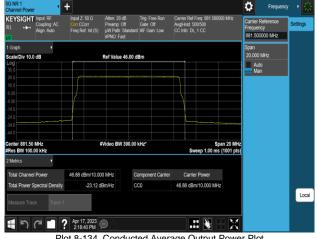
Plot 8-131. Conducted Average Output Power Plot (LTE B5 1C 5M 4T QPSK - Low Channel, Port 0)







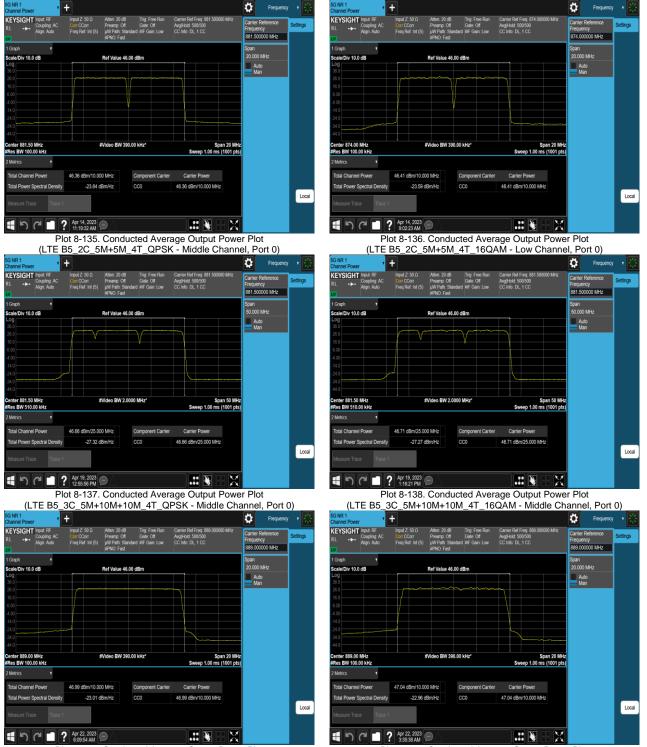
Plot 8-132. Conducted Average Output Power Plot (LTE B5 1C 5M 4T 256QAM - Middle Channel, Port 0)



Plot 8-134. Conducted Average Output Power Plot (LTE B5_1C_10M_4T_256QAM - Middle Channel, Port 0)

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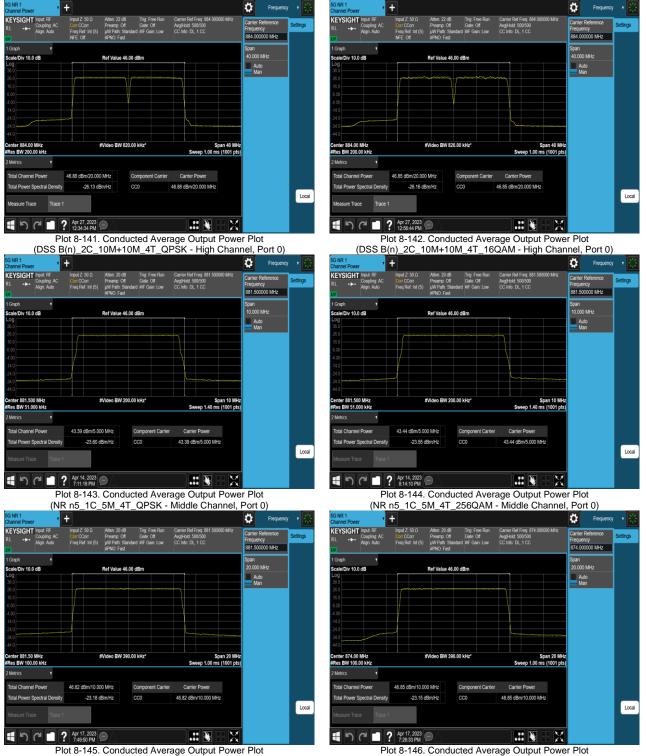




Plot 8-139. Conducted Average Output Power Plot (DSS_B(n)_10M(4:6 Ratio)_1C_4T_QPSK - Low Channel, Port 0) Plot 8-140. Conducted Average Output Power Plot (DSS_B(n)_10M(9:1 Ratio)_1C_4T_QPSK - High Channel, Port 0)

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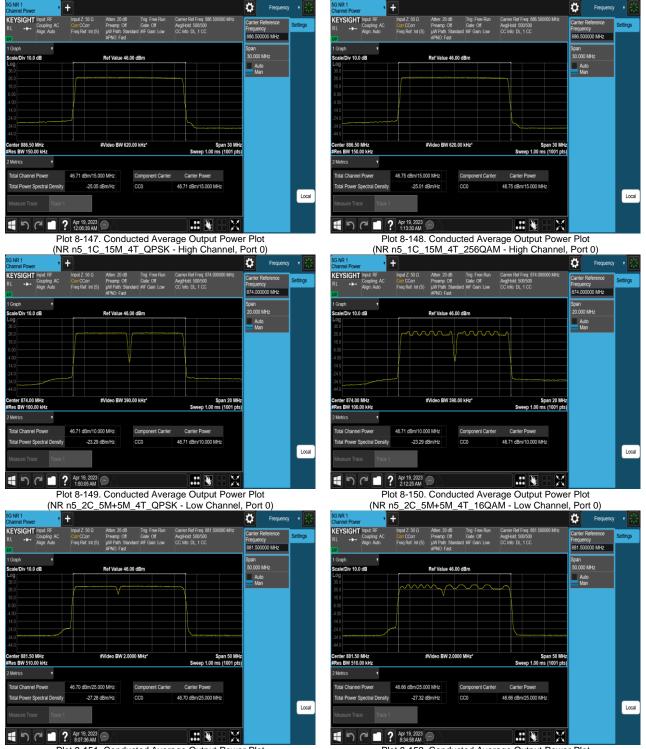


Plot 8-146. Conducted Average Output Power Plot (NR n5_1C_10M_4T_256QAM - Low Channel, Port 0)

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(NR n5_1C_10M_4T_QPSK - Middle Channel, Port 0)





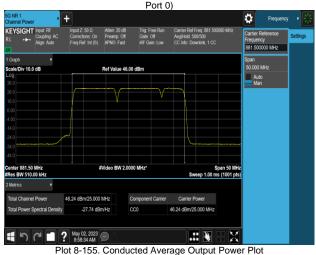
Plot 8-151. Conducted Average Output Power Plot (NR n5_2C_10M+15M_4T_QPSK - Middle Channel, Port 0) Plot 8-152. Conducted Average Output Power Plot (NR n5_2C_10M+15M_4T_16QAM - Middle Channel, Port 0)

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Plot 8-153. Conducted Average Output Power Plot (MSR 2C_DSS B(n)5_2C_10M+LTE B5_5M_4T_QPSK - Middle Channel,



(MSR 3C_DSS B(n)5_2C_10M+10M+12B B5_1C_5M_4T_QPSK - Middle Channel, Port 0)



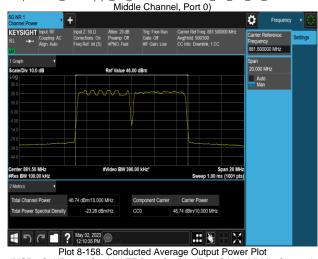
Plot 8-157. Conducted Average Output Power Plot (MSR 2C_NR n5_1C_5M+LTE B5_1C_5M_4T_QPSK - Middle Channel, Port 0)



Plot 8-154. Conducted Average Output Power Plot (MSR 2C_DSS B(n)5_2C_10M+LTE B5_5M_4T_16QAM - Low Channel,



Plot 8-156. Conducted Average Output Power Plot (MSR 3C_DSS B(n)5_2C_100H10M+LTE B5_1C_5M_4T_16QAM -



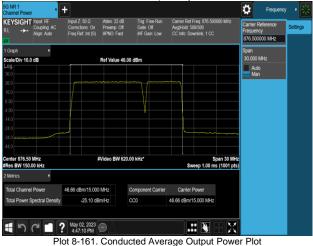
(MSR 2C_NR n5_1C_5M+LTE B5_1C_5M_4T_16QAM - Middle Channel, Port 0)

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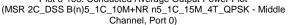


Plot 8-159. Conducted Average Output Power Plot (MSR 3C_NR n5_2C_10M+10M+LTE B5_1C_5M_4T_QPSK - Middle Channel. Port 0)



(MSR 2C_DSS B(n)5_1C_10M+NR n5_1C_5M_4T_QPSK - Low Channel, Port 0)



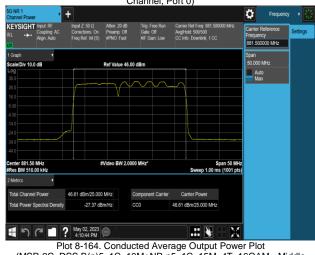




Plot 8-160. Conducted Average Output Power Plot (MSR 3C_NR n5_2C_10M+10M+LTE B5_1C_5M_4T_16QAM - Middle Channel. Port 0)



Plot 8-162. Conducted Average Output Power Plot (MSR 2C_DSS B(n)5_1C_10M+NR n5_1C_5M_4T_16QAM - Low Channel, Port 0)



(MSR 2C_DSS B(n)5_1C_10M+NR n5_1C_15M_4T_16QAM - Middle Channel, Port 0)

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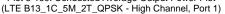


Plot 8-165. Conducted Average Output Power Plot (MSR 3C_DSS B(n)5_1C_10M+MSR 2C_NR n5_1C_5M+LTE B5 1C 5M 4T QPSK - Low Channel, Port 0)



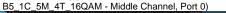
Plot 8-167. Conducted Average Output Power Plot (MSR 3C_DSS B(n)5_1C_10M+NR n5_1C_10M+LTE B5_1C_5M_4T_QPSK - Middle Channel, Port 0)





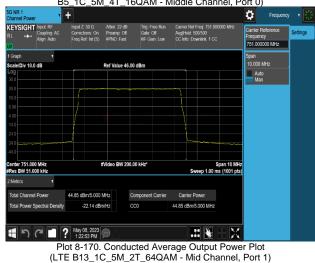


Plot 8-166. Conducted Average Output Power Plot (MSR 3C_DSS B(n)5_1C_10M+NR n5_1C_5M+LTE





Plot 8-168. Conducted Average Output Power Plot (MSR 3C_DSS B(n)5_1C_10M+NR n5_1C_10M+LTE B5_1C_5M_4T_16QAM - Middle Channel, Port 0)



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Plot 8-175. Conducted Average Output Power Plot (LTE_B13_5M(LTE)_+NB-IoT(1IB)_1C_2T_QPSK - Mid Channel, Port 1) Plot 8-176. Conducted Average Output Power Plot (LTE_B13_10M(LTE)+NB-IoT(2IB)_1C_2T_QPSK - Mid Channel, Port 0)

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Plot 8-182. Conducted Average Output Power Plot (LTE B13_2C_5M+5M_4T_16QAM - Mid Channel, Port 0)

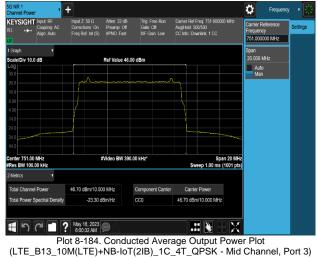
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(LTE B13_2C_5M+5M_4T_QPSK - Mid Channel, Port 0)





Plot 8-183. Conducted Average Output Power Plot (LTE_B13_5M(LTE)+NB-IoT(1IB)_1C_4T_QPSK - Mid Channel, Port 3)



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8.4 Peak To Average Ratio

Test Overview

The peak to average ratio measurement is performed at the conducted port of the EUT. The spectrum analyzers Complementary Cumulative Distribution Function (CCDF) measurement profile is used to determine the largest deviation between the average and the peak power of the EUT in a given bandwidth. The CCDF curve shows how much time the peak waveform spends at or above a given average power level. The percent of time the signal spends at or above the level defines the probability for that particular power level.

Test Procedure Used

KDB 971168 D01 v03r01 – Section 5.7 ANSI C63.26-2015 – Section 5.2.3.4

Test Setting

The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The spectrum analyzer settings were as follows:

- 1. The signal analyzer's CCDF function is enabled.
- 2. Frequency = carrier center frequency
- 3. Measurement BW ≥ OBW or specified reference bandwidth
- 4. The signal analyzer was set to collect one million samples to generate the CCDF curve
- 5. The measurement interval was set depending on the type of signal analyzed. For continuous signals (>98% duty cycle), the measurement interval was set to 1ms.

Test Setup

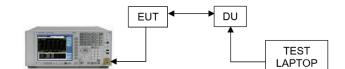


Figure 8-3. Test Instrument & Measurement Setup

<u>Limit</u>

The peak-to-average power ratio (PAPR) limit shall not exceed 13 dB for more than 0.1% of the time.

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Channel Port	Dort	PAPR (dB)				Limit
	Poli	QPSK	16QAM	64QAM	256QAM	(dB)
Low	0	8.42	8.38	8.53	8.35	≤ 13
Low	1	8.41	8.41	8.52	8.31	≤ 13
Middle	0	8.39	8.39	8.49	8.34	≤ 13
wildule	1	8.41	8.43	8.51	8.36	≤ 13
High	0	8.40	8.41	8.46	8.40	≤ 13
High 1	1	8.35	8.37	8.48	8.38	≤ 13

Table 8-110. Peak To Average Power Ratio Summary Data (LTE B5_1C_5M_2T)

Channel Port	Dort		Limit			
	Poli	QPSK	16QAM	64QAM	256QAM	(dB)
Low	0	7.64	7.61	7.62	7.64	≤ 13
LOW	Low 1	7.64	7.61	7.61	7.65	≤ 13
Middle	0	7.59	7.59	7.59	7.60	≤ 13
wilddie	1	7.58	7.59	7.58	7.60	≤ 13
High	0	7.78	7.83	7.79	7.81	≤ 13
High 1	1	7.78	7.82	7.77	7.80	≤ 13

Table 8-111. Peak To Average Power Ratio Summary Data (LTE B5_1C_10M_2T)

Channel	Port	PAPF	Limit	
Channel	POIL	QPSK	16QAM	(dB)
Low	0	7.99	8.00	≤ 13
Low	1	8.02	7.98	≤ 13
Middle	0	8.02	7.99	≤ 13
Middle	1	7.99	8.01	≤ 13
High	0	7.83	7.83	≤ 13
High	1	7.82	7.86	≤ 13

Table 8-112. Peak To Average Power Ratio Summary Data (LTE B5_2C_5M+5M_2T)

Channel Port		PAPF	Limit	
		QPSK	16QAM	(dB)
Middle	0	8.11	8.05	≤ 13
widdle	1	8.07	8.08	≤ 13

Table 8-113. Peak To Average Power Ratio Summary Data (LTE B5_3C_5M+10M+10M_2T)

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DCC Datia	Channel	Dert		Limit			
DSS Ratio	Channel	Port	QPSK	16QAM	64QAM	256QAM	(dB)
	Low	0	8.00	8.01	8.43	8.02	≤ 13
	Low	1	7.98	7.99	8.41	7.99	≤ 13
LTE 9 : NR 1	Middle	0	8.00	8.02	8.28	8.02	≤ 13
LIE9.NKI	Midule	1	8.00	8.02	8.38	8.02	≤ 13
	High	0	8.13	8.05	8.31	8.04	≤ 13
	High	1	8.10	8.04	8.35	8.06	≤ 13
	Low	0	8.01	8.02	8.01	8.03	≤ 13
	LOW	1	7.98	8.03	8.00	8.02	≤ 13
LTE 8 : NR 2	Middle	0	8.01	8.04	8.04	8.04	≤ 13
LIE 0. NR Z	wildule	1	8.03	8.06	8.03	8.05	≤ 13
	High	0	8.14	8.10	8.11	8.11	≤ 13
	підп	1	8.13	8.08	8.09	8.11	≤ 13
	Low	0	8.00	8.06	8.03	8.07	≤ 13
	LOW	1	8.02	8.04	8.03	8.06	≤ 13
LTE 7 : NR 3	Middle	0	8.04	8.07	8.06	8.07	≤ 13
LIE7. NR 3	wildule	1	8.04	8.05	8.06	8.06	≤ 13
	High	0	8.17	8.15	8.11	8.15	≤ 13
	riigii	1	8.15	8.17	8.13	8.14	≤ 13
	Low	0	8.03	8.07	8.05	8.13	≤ 13
	LOW	1	8.04	8.06	8.04	8.10	≤ 13
LTE 6 : NR 4	Middle	0	8.07	8.09	8.06	8.09	≤ 13
		1	8.06	8.08	8.07	8.09	≤ 13
	High	0	8.03	8.07	8.05	8.13	≤ 13
		1	8.04	8.06	8.04	8.10	≤ 13
	Low	0	8.06	8.08	8.09	8.11	≤ 13
		1	8.08	8.07	8.09	8.09	≤ 13
LTE 5 : NR 5	Middle	0	8.08	8.10	8.07	8.10	≤ 13
	wildale	1	8.07	8.09	8.07	8.09	≤ 13
	High	0	8.21	8.24	8.22	8.22	≤ 13
	riigii	1	8.19	8.23	8.19	8.21	≤ 13
	Low	0	8.10	8.09	8.13	8.16	≤ 13
	LOW	1	8.10	8.11	8.11	8.15	≤ 13
LTE 4 : NR 6	Middle	0	8.09	8.08	8.08	8.10	≤ 13
	Wildale	1	8.09	8.08	8.09	8.10	≤ 13
	High	0	8.29	8.27	8.23	8.29	≤ 13
	riigii	1	8.26	8.23	8.23	8.24	≤ 13
	Low	0	8.09	8.14	8.09	8.17	≤ 13
	LOW	1	8.11	8.13	8.14	8.18	≤ 13
LTE 3 : NR 7	Middle	0	8.10	8.10	8.09	8.12	≤ 13
	ivildulo	1	8.11	8.13	8.10	8.10	≤ 13
	High	0	8.29	8.32	8.29	8.30	≤ 13
	· "9"	1	8.27	8.28	8.25	8.29	≤ 13
	Low	0	8.13	8.14	8.11	8.19	≤ 13
	2011	1	8.13	8.15	8.11	8.18	≤ 13
LTE 2 : NR 8	Middle	0	8.15	8.14	8.10	8.12	≤ 13
	maalo	1	8.12	8.13	8.10	8.11	≤ 13
	High	0	8.32	8.33	8.32	8.31	≤ 13
	i ngi	1	8.32	8.30	8.30 / Data (DSS B(I	8.30	≤ 13

Table 8-114. Peak To Average Power Ratio Summary Data (DSS B(n)5_1C_10M_2T)

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DSS Ratio Chanr	Channel Port		PAPF	Limit	
	Channel	Poll	QPSK	16QAM	(dB)
	Low	0	8.01	8.04	≤ 13
LOV	Low 1		8.00	8.01	≤ 13
LTE 9 : NR 1	Middle	0	8.00	8.04	≤ 13
LIE 9. NK I	Midule	1	8.03	7.99	≤ 13
	High	0	8.14	8.16	≤ 13
		1	8.16	8.14	≤ 13

Table 8-115. Peak To Average Power Ratio Summary Data (DSS B(n)5_2C_10M+10M_2T)

Channel Port	Dort		Limit			
	QPSK	16QAM	64QAM	256QAM	(dB)	
Low	0	8.41	8.34	8.37	8.40	≤ 13
Low	1	8.34	8.34	8.36	8.36	≤ 13
Middle	0	8.33	8.31	8.36	8.43	≤ 13
Middle	1	8.40	8.33	8.39	8.39	≤ 13
Lliab	0	8.31	8.36	8.37	8.40	≤ 13
High 1	1	8.32	8.34	8.38	8.39	≤ 13

Table 8-116. Peak To Average Power Ratio Summary Data (NR n5_1C_5M_2T)

Channel	Dort		Limit			
Channel	Port	QPSK	16QAM	64QAM	256QAM	(dB)
Low	0	7.62	7.64	7.63	7.61	≤ 13
Low	1	7.60	7.64	7.62	7.62	≤ 13
Middle	0	7.60	7.61	7.60	7.58	≤ 13
Middle	1	7.60	7.61	7.59	7.56	≤ 13
0	0	7.83	7.81	7.81	7.77	≤ 13
High	1	7.80	7.79	7.77	7.76	≤ 13

Table 8-117. Peak To Average Power Ratio Summary Data (NR n5_1C_10M_2T)

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Channel Port	Dort		Limit			
	FOIL	QPSK	16QAM	64QAM	256QAM	(dB)
Low	0	7.67	7.70	7.70	7.66	≤ 13
LOW	1	7.67	7.71	7.69	7.68	≤ 13
Middle	0	7.59	7.60	7.59	7.60	≤ 13
wildule	1	7.60	7.61	7.58	7.59	≤ 13
High 0 1	0	7.86	7.93	7.86	7.89	≤ 13
	1	7.86	7.92	7.87	7.89	≤ 13

Table 8-118. Peak To Average Power Ratio Summary Data (NR n5_1C_15M_2T)

Channel	Dent	PAPR (dB)		Limit
	Port	QPSK	16QAM	(dB)
Low	0	7.96	7.96	≤ 13
Low	1	8.02	7.95	≤ 13
Middle	0	8.01	8.00	≤ 13
Middle	1	8.01	8.00	≤ 13
High	0	8.04	8.03	≤ 13
	1	8.04	8.03	≤ 13

Table 8-119. Peak To Average Power Ratio Summary Data (NR n5_2C_5M+5M_2T)

Channel	Dort	PAPR (dB)		Limit
	Port –	QPSK	16QAM	(dB)
Middlo	0	8.04	8.07	≤ 13
Middle	1	8.03	8.03	≤ 13

Table 8-120. Peak To Average Power Ratio Summary Data (NR n5_2C_10M+15M_2T)

DSS Ratio Cha	Channel	Channel Port	PAPR (dB)		Limit
	Channel		QPSK	16QAM	(dB)
Low	Low	0	8.03	7.99	≤ 13
	LOW	1	8.01	8.02	≤ 13
	Middle	0	8.06	8.02	≤ 13
LTE 9 : NR 1		1	8.07	8.03	≤ 13
	High	0	8.20	8.15	≤ 13
		1	8.20	8.14	≤ 13

 Table 8-121. Peak To Average Power Ratio Summary Data (MSR 2C_DSS B(n)5_1C_10M+LTE B5_1C_5M_2T)

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DSS Ratio Chan	Channel	Channel Dort	PAPR (dB)		Limit
	Channel	Port	QPSK	16QAM	(dB)
LTE 9 : NR 1 Middle	1 Middlo	0	8.17	8.21	≤ 13
	Midule	1	8.17	8.16	≤ 13

Table 8-122. Peak To Average Power Ratio Summary Data (MSR 3C_DSS B(n)5_2C_10M+10M+LTE B5_1C_5M_2T)

Channel	Port	PAPF	Limit	
	FOIL	QPSK	16QAM	(dB)
Low	0	7.98	7.99	≤ 13
LOW	1	7.97	7.95	≤ 13
Middle	0	7.99	8.01	≤ 13
Middle	1	7.99	7.99	≤ 13
High -	0	8.04	8.02	≤ 13
	1	8.00	8.01	≤ 13

Table 8-123. Peak To Average Power Ratio Summary Data (MSR 2C_NR n5_1C_5M+LTE B5_1C_5M_2T)

Channel Port	Dort	PAPF	Limit	
	Poli	QPSK	16QAM	(dB)
NA: -I -II -	0	8.14	8.10	≤ 13
Middle	1	8.14	8.12	≤ 13

Table 8-124. Peak To Average Power Ratio Summary Data (MSR 3C_NR n5_2C_10M+10M+LTEB5_1C_5M_2T)

DSS Ratio	Channel	annel Port	PAPR (dB)		Limit
			QPSK	16QAM	(dB)
	Low	0	7.99	8.01	≤ 13
	Low	1	8.01	8.03	≤ 13
	Middle	0	8.01	8.03	≤ 13
LTE 9 : NR 1		1	8.04	8.04	≤ 13
	High	0	8.15	8.10	≤ 13
		1	8.14	8.17	≤ 13

Table 8-125. Peak To Average Power Ratio Summary Data (MSR 2C_DSS B(n)5_1C_10M+NR n5_1C_5M_2T)

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DSS Ratio Ch	Channel Dart	PAPR (dB)		Limit	
	Channel	Port	QPSK	16QAM	(dB)
LTE 9 : NR 1 Mic	I Middle 0	0	8.04	8.09	≤ 13
		8.06	8.04	≤ 13	

Table 8-126. Peak To Average Power Ratio Summary Data (MSR 2C_DSS B(n)5_1C_10M+NR n5_1C_15M_2T)

DSS Ratio	Channel	Channel Port	PAPR (dB)		Limit
	Channel		QPSK	16QAM	(dB)
	Low	0	7.97	7.98	≤ 13
	LOW	1	7.98	7.99	≤ 13
	Middle	0	8.00	7.99	≤ 13
		1	8.04	8.01	≤ 13
	High	0	8.18	8.14	≤ 13
		1	8.11	8.13	≤ 13

Table 8-127. Peak To Average Power Ratio Summary Data (MSR 3C_DSS B(n)5_1C_10M+NR n5_1C_5M+LTE B5_1C_5M_2T)

DSS Ratio C	Channel Port	PAPR (dB)		Limit	
		Port	QPSK	16QAM	(dB)
LTE 9 : NR 1 N	Middle 0 1	0	8.16	8.17	≤ 13
		8.14	8.15	≤ 13	

 Table 8-128. Peak To Average Power Ratio Summary Data (MSR 3C_DSS B(n)5_1C_10M+NR n5_1C_10M+LTE B5_1C_5M_2T)

FCC ID: A3LRF4461D-13A	element	MEASUREMENT REPORT (CERTIFICATION)	SUNG	Approved by: Technical Manager
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Channel	Port	PAPR (dB)				Limit
	Poli	QPSK	16QAM	64QAM	256QAM	(dB)
Low	0	8.27	8.41	8.34	8.31	≤ 13
Low –	1	8.25	8.41	8.33	8.31	≤ 13
Middle	0	8.28	8.43	8.34	8.30	≤ 13
Middle	1	8.29	8.44	8.34	8.29	≤ 13
High -	0	8.27	8.42	8.35	8.29	≤ 13
	1	8.28	8.43	8.33	8.28	≤ 13

Table 8-129. Peak To Average Power Ratio Summary Data (LTE B13_1C_5M_2T)

Channel Port	PAPR (dB)				Limit	
	Pon	QPSK	16QAM	64QAM	256QAM	(dB)
Middle	0	7.61	7.60	7.62	7.59	≤ 13
	1	7.60	7.59	7.62	7.59	≤ 13

Table 8-130. Peak To Average Power Ratio Summary Data (LTE B13_1C_10M_2T)

Channel	Port	PAPF	Limit	
		QPSK	16QAM	(dB)
Middle	0	7.64	7.65	≤ 13
	1	7.63	7.64	≤ 13

Table 8-131. Peak To Average Power Ratio Summary Data (LTE B13_2C_5M+5M_2T)

Channel Port	Port	PAPR (dB)	Limit
		QPSK	(dB)
Low	0	8.48	≤ 13
Low	1	8.47	≤ 13
Middle	0	8.39	≤ 13
IVIIdale	1	8.40	≤ 13
High	0	8.45	≤ 13
High	1	8.44	≤ 13

Table 8-132. Peak To Average Power Ratio Summary Data (LTE B13_1C_5M+NB-IoT(1IB)_2T)

		PAPR (dB)						
Channel Port	Port	QPSK						
		LTE B13_1C_10M+ NB-IoT(2GB)	LTE B13_1C_10M+ NB-IoT(GB+IB)	LTE B13_1C_10M+ NB-IoT(IB+GB)	LTE B13_1C_10M+ NB-IoT(2IB)	(dB)		
Middle	0	7.78	7.86	7.87	7.76	≤ 13		
Middle –	1	7.78	7.87	7.87	7.76	≤ 13		

Table 8-133. Peak To Average Power Ratio Summary Data (LTE B13_1C_10M+NB-loT_2T)

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Channel	Port	PAPR (dB)				Limit
Channel	POIL	QPSK	16QAM	64QAM	256QAM	(dB)
	0	8.45	8.42	8.32	8.35	≤ 13
Low	1	8.42	8.41	8.25	8.35	≤ 13
Low	2	8.44	8.37	8.34	8.37	≤ 13
	3	8.40	8.37	8.31	8.36	≤ 13
	0	8.47	8.40	8.32	8.38	≤ 13
Middle	1	8.46	8.43	8.28	8.35	≤ 13
Widdle	2	8.47	8.35	8.34	8.35	≤ 13
	3	8.37	8.35	8.32	8.34	≤ 13
	0	8.38	8.35	8.26	8.34	≤ 13
Lliab	1	8.41	8.35	8.27	8.32	≤ 13
High	2	8.42	8.34	8.31	8.30	≤ 13
	3	8.39	8.31	8.33	8.30	≤ 13

Table 8-134. Peak To Average Power Ratio Summary Data (LTE B5_1C_5M_4T)

Channel	Dort	PAPR (dB)				Limit
Channel	Port	QPSK	16QAM	64QAM	256QAM	(dB)
	0	8.35	8.37	8.39	8.42	≤ 13
Low	1	8.36	8.36	8.36	8.40	≤ 13
Low	2	7.63	7.63	7.64	7.65	≤ 13
	3	7.63	7.65	7.64	7.66	≤ 13
	0	8.38	8.36	8.35	8.44	≤ 13
Middle	1	8.37	8.34	8.33	8.40	≤ 13
Middle	2	7.62	7.62	7.61	7.62	≤ 13
	3	7.61	7.62	7.62	7.62	≤ 13
	0	8.38	8.34	8.36	8.41	≤ 13
High	1	8.36	8.37	8.36	8.39	≤ 13
riigh	2	7.82	7.74	7.80	7.82	≤ 13
	3	7.81	7.77	7.79	7.81	≤ 13

 Table 8-135. Peak To Average Power Ratio Summary Data (LTE B5_1C_10M_4T)

FCC ID: A3LRF4461D-13A	element)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Channel	Port	PAPF	Limit	
Channel	POIL	QPSK	16QAM	(dB)
	0	8.47	8.44	≤ 13
Low	1	8.47	8.44	≤ 13
LOW	2	8.04	8.02	≤ 13
	3	8.03	8.02	≤ 13
	0	8.44	8.43	≤ 13
Middle	1	8.43	8.45	≤ 13
widdle	2	8.07	8.06	≤ 13
	3	8.07	8.06	≤ 13
	0	8.46	8.52	≤ 13
High	1	8.39	8.51	≤ 13
High	2	8.07	8.12	≤ 13
	3	8.07	8.12	≤ 13

Table 8-136. Peak To Average Power Ratio Summary Data (LTE B5_2C_5M+5M_4T)

Channel	Port	PAPF	Limit	
		QPSK	16QAM	(dB)
Middle	0	8.39	8.38	≤ 13
	1	8.36	8.40	≤ 13
	2	7.88	7.91	≤ 13
	3	7.88	7.91	≤ 13

Table 8-137. Peak To Average Power Ratio Summary Data (LTE B5_3C_5M+10M+10M_4T)

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		Dest	PAPR (dB)				Limit
DSS Ratio	Channel	Port	QPSK	16QAM	64QAM	256QAM	(dB)
		0	8.51	8.52	8.85	8.54	≤ 13
		1	8.45	8.56	8.82	8.48	≤ 13
	Low	2	8.01	8.02	8.51	8.04	≤ 13
		3	8.00	8.04	8.49	8.05	≤ 13
		0	8.48	8.54	8.80	8.54	≤ 13
	Middle	1	8.49	8.49	8.78	8.53	≤ 13
LTE 9 : NR 1	Middle	2	8.03	8.09	8.38	8.06	≤ 13
		3	8.04	8.07	8.44	8.07	≤ 13
		0	8.50	8.48	8.81	8.54	≤ 13
	Llink	1	8.50	8.47	8.87	8.51	≤ 13
	High	2	8.05	8.06	8.46	8.08	≤ 13
		3	8.08	8.07	8.47	8.07	≤ 13
		0	8.54	8.66	8.62	8.58	≤ 13
	Low	1	8.57	8.68	8.58	8.56	≤ 13
		2	8.05	8.08	8.06	8.05	≤ 13
		3	8.06	8.06	8.06	8.06	≤ 13
	Middle	0	8.56	8.57	8.62	8.62	≤ 13
		1	8.54	8.58	8.62	8.55	≤ 13
LTE 8 : NR 2		2	8.06	8.07	8.07	8.07	≤ 13
		3	8.05	8.07	8.07	8.07	≤ 13
	High	0	8.59	8.56	8.61	8.50	≤ 13
		1	8.62	8.56	8.56	8.52	≤ 13
		2	8.13	8.07	8.13	8.09	≤ 13
		3	8.14	8.06	8.13	8.08	≤ 13
		0	8.82	8.80	8.90	8.95	≤ 13
	Law	1	8.83	8.82	8.88	9.00	≤ 13
	Low	2	8.11	8.11	8.13	8.14	≤ 13
		3	8.11	8.11	8.13	8.13	≤ 13
		0	8.82	8.84	8.95	9.01	≤ 13
	Middle	1	8.82	8.79	8.91	8.95	≤ 13
LTE 4 : NR 6	Middle	2	8.11	8.10	8.13	8.10	≤ 13
		3	8.12	8.09	8.13	8.10	≤ 13
		0	8.84	8.79	8.88	8.90	≤ 13
	ا المرام	1	8.84	8.76	8.77	8.86	≤ 13
	High	2	8.27	8.20	8.27	8.27	≤ 13
		3	8.25	8.21	8.28	8.27	≤ 13

 Table 8-138. Peak To Average Power Ratio Summary Data (DSS B(n)5_1C_10M_4T)

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DSS Ratio C	Channel	Port	PAPF	PAPR (dB)		
DSS Ratio	Channel	Poll	QPSK	16QAM	(dB)	
		0	8.15	8.57	≤ 13	
	Low	1	8.51	8.52	≤ 13	
	Low	2	8.04	8.06	≤ 13	
		3	8.05	8.04	≤ 13	
		0	8.51	8.52	≤ 13	
LTE 9 : NR 1	Middle	1	8.52	8.48	≤ 13	
LIE 9. NK I	wildule	2	8.04	8.05	≤ 13	
		3	8.04	8.05	≤ 13	
		0	8.47	8.57	≤ 13	
	High	1	8.51	8.50	≤ 13	
	High	2	8.16	8.17	≤ 13	
		3	8.16	8.19	≤ 13	

Table 8-139. Peak To Average Power Ratio Summary Data (DSS B(n)5_2C_10M+10M_4T)

Channel	Dort		Limit			
Channel	Port	QPSK	16QAM	64QAM	256QAM	(dB)
	0	8.37	8.28	8.39	8.34	≤ 13
Low	1	8.39	8.30	8.36	8.36	≤ 13
LOW	2	8.39	8.28	8.32	8.31	≤ 13
	3	8.40	8.27	8.36	8.33	≤ 13
	0	8.35	8.37	8.32	8.35	≤ 13
Middlo	1	8.37	8.29	8.32	8.39	≤ 13
Middle	2	8.39	8.30	8.39	8.36	≤ 13
	3	8.39	8.34	8.36	8.39	≤ 13
	0	8.36	8.35	8.35	8.31	≤ 13
High	1	8.39	8.32	8.32	8.36	≤ 13
High	2	8.41	8.31	8.36	8.32	≤ 13
	3	8.41	8.32	8.34	8.32	≤ 13

Table 8-140. Peak To Average Power Ratio Summary Data (NR n5_1C_5M_4T)

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Channel	Dort		Limit			
Channel	Port	QPSK	16QAM	64QAM	256QAM	(dB)
	0	8.36	8.33	8.43	8.42	≤ 13
Low	1	8.38	8.31	8.40	8.43	≤ 13
LOW	2	7.64	7.62	7.65	7.65	≤ 13
	3	7.63	7.62	7.64	7.65	≤ 13
0	0	8.37	8.31	8.39	8.44	≤ 13
Middle	1	8.38	8.30	8.38	8.45	≤ 13
Middle	2	7.60	7.60	7.61	7.61	≤ 13
	3	7.60	7.61	7.60	7.61	≤ 13
	0	8.40	8.32	8.36	8.43	≤ 13
Lliab	1	8.39	8.30	8.37	8.42	≤ 13
High	2	7.80	7.75	7.80	7.80	≤ 13
	3	7.81	7.75	7.81	7.83	≤ 13

Table 8-141. Peak To Average Power Ratio Summary Data (NR n5_1C_10M_4T)

Channel	Dort		Limit			
Channel	Port	QPSK	16QAM	64QAM	256QAM	(dB)
	0	8.36	8.34	8.41	8.32	≤ 13
Low	1	8.36	8.31	8.38	8.30	≤ 13
Low	2	7.69	7.68	7.67	7.69	≤ 13
	3	7.68	7.68	7.67	7.67	≤ 13
	0	8.37	8.33	8.42	8.33	≤ 13
Middle	1	8.37	8.30	8.43	8.33	≤ 13
Middle	2	7.62	7.61	7.62	7.64	≤ 13
	3	7.62	7.62	7.63	7.64	≤ 13
	0	8.36	8.27	8.36	8.35	≤ 13
High	1	8.34	8.27	8.38	8.33	≤ 13
riigh	2	7.90	7.89	7.90	7.89	≤ 13
	3	7.90	7.90	7.91	7.90	≤ 13

 Table 8-142. Peak To Average Power Ratio Summary Data (NR n5_1C_15M_4T)

FCC ID: A3LRF4461D-13A	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Channel	Dort	PAPF	Limit	
Channel	Port	QPSK	16QAM	(dB)
	0	8.43	8.42	≤ 13
Low	1	8.39	8.41	≤ 13
LOW	2	8.00	8.02	≤ 13
	3	8.00	8.01	≤ 13
	0	8.45	8.40	≤ 13
Middle	1	8.41	8.46	≤ 13
Middle	2	8.05	8.03	≤ 13
	3	8.01	8.03	≤ 13
	0	8.41	8.42	≤ 13
Lliab	1	8.44	8.39	≤ 13
High	2	8.08	8.07	≤ 13
	3	8.02	8.06	≤ 13

Table 8-143. Peak To Average Power Ratio Summary Data (NR n5_2C_5M+5M_4T)

Channel Port	PAPF	Limit		
	Poit	QPSK	16QAM	(dB)
0	0	8.40	8.36	≤ 13
Middlo	1	8.43	8.38	≤ 13
Middle –	2	8.08	8.09	≤ 13
	3	7.90	7.89	≤ 13

Table 8-144. Peak To Average Power Ratio Summary Data (NR n5_2C_10M+15M_4T)

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DSS Ratio Channel	Channel	el Port	PAPR (dB)		Limit
DSS Ralio		Pon	QPSK	16QAM	(dB)
		0	8.45	8.38	≤ 13
	Low	1	8.44	8.43	≤ 13
	Low	2	7.96	8.01	≤ 13
		3	7.99	7.98	≤ 13
		0	8.47	8.39	≤ 13
LTE 9 : NR 1	Middle	1	8.47	8.41	≤ 13
	Midule	2	8.03	8.03	≤ 13
	3	3	8.06	8.03	≤ 13
		0	8.48	8.37	≤ 13
	Lliab	1	8.39	8.36	≤ 13
	High	2	8.14	8.15	≤ 13
		3	8.23	8.15	≤ 13

 Table 8-145. Peak To Average Power Ratio Summary Data (MSR 2C_DSS B(n)5_1C_10M+LTE B5_1C_5M_4T)

DSS Ratio	Channel	PAPR PAPR	R (dB)	Limit												
DSS Ralio			Port	QPSK	16QAM	(dB)										
		0	8.45	8.48	≤ 13											
LTE 9 : NR 1 Middle	Middlo	1	8.46	8.46	≤ 13											
	Midule	2	8.18	8.22	≤ 13											
		3	8.20	8.20	≤ 13											

Table 8-146. Peak To Average Power Ratio Summary Data (MSR 3C_DSS B(n)5_2C_10M+10M+LTE B5_1C_5M_4T)

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Channel	Port	PAPR (dB)		Limit
Channe	Poli	QPSK	16QAM	(dB)
	0	8.36	8.40	≤ 13
Low	1	8.38	8.39	≤ 13
LOW	2	7.98	8.03	≤ 13
	3	8.01	8.03	≤ 13
	0	8.33	8.38	≤ 13
Middle	1	8.40	8.35	≤ 13
Middle	2	8.01	8.03	≤ 13
3	3	8.00	8.03	≤ 13
	0	8.39	8.37	≤ 13
High	1	8.38	8.39	≤ 13
High –	2	8.07	8.06	≤ 13
	3	8.06	8.04	≤ 13

Table 8-147. Peak To Average Power Ratio Summary Data (MSR 2C_NR n5_1C_5M+LTE B5_1C_5M_4T)

Channel	Dort	PAPF	Limit (dB)	
Channel Port		QPSK		16QAM
	0	8.42	8.37	≤ 13
Middle	1	8.43	8.39	≤ 13
	2	8.17	8.14	≤ 13
	3	8.18	8.18	≤ 13

Table 8-148. Peak To Average Power Ratio Summary Data (MSR 3C_NR n5_2C_10M+10M+LTE B5_1C_5M_4T)

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Channel	Dort	PAPR (dB)		Limit
	Port	QPSK	16QAM	(dB)
	0	8.59	8.67	≤ 13
Low	1	8.62	8.66	≤ 13
LOW	2	8.24	8.26	≤ 13
	3	8.24	8.29	≤ 13
	0	8.61	8.63	≤ 13
Middle	1	8.68	8.66	≤ 13
Middle	2	8.27	8.31	≤ 13
	3	8.27	8.28	≤ 13
	0	8.63	8.69	≤ 13
High	1	8.62	8.58	≤ 13
High	2	8.42	8.38	≤ 13
	3	8.40	8.36	≤ 13

 Table 8-149. Peak To Average Power Ratio Summary Data (MSR 2C_DSS B(n)5_1C_10M+NR n5_1C_5M_4T)

Channel	Port	PAPR (dB)		Limit
		QPSK	16QAM	(dB)
	0	8.52	8.51	≤ 13
Mid	1	8.54	8.50	≤ 13
	2	8.22	8.27	≤ 13
	3	8.20	8.20	≤ 13

Table 8-150. Peak To Average Power Ratio Summary Data (MSR 2C_DSS B(n)5_1C_10M+NR n5_1C_15M_4T)

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Channel	Dort	PAPR (dB)		Limit
Channel	Port	QPSK	16QAM	(dB)
	0	8.45	8.54	≤ 13
Low	1	8.48	8.58	≤ 13
LOW	2	8.10	8.11	≤ 13
	3	8.16	8.10	≤ 13
	0	8.56	8.59	≤ 13
Middle	1	8.59	8.46	≤ 13
Middle	2	8.18	8.21	≤ 13
	3	8.21	8.25	≤ 13
	0	8.60	8.54	≤ 13
High	1	8.54	8.67	≤ 13
High	2	8.26	8.40	≤ 13
	3	8.30	8.24	≤ 13

Table 8-151. Peak To Average Power Ratio Summary Data (MSR 3C_DSS B(n)5_1C_10M+NR n5_1C_5M+LTE B5_1C_5M_4T)

Channel	Port	PAPR (dB)		Limit
		QPSK	16QAM	(dB)
	0	8.50	8.57	≤ 13
Middle	1	8.49	8.55	≤ 13
	2	8.24	8.23	≤ 13
	3	8.30	8.30	≤ 13

Table 8-152. Peak To Average Power Ratio Summary Data (MSR 3C_DSS B(n)5_1C_10M+NR n5_1C_10M+LTE B5_1C_5M_4T)

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Channel	Port	PAPR (dB)			Limit	
	Poli	QPSK	16QAM	64QAM	256QAM	(dB)
	0	8.42	8.34	8.31	8.36	≤ 13
Low	1	8.42	8.35	8.34	8.34	≤ 13
LOW	2	8.42	8.34	8.32	8.36	≤ 13
	3	8.42	8.34	8.31	8.34	≤ 13
	0	8.44	8.33	8.32	8.34	≤ 13
Middle	1	8.43	8.33	8.32	8.36	≤ 13
widdie	2	8.43	8.33	8.33	8.34	≤ 13
	3	8.42	8.34	8.30	8.34	≤ 13
High	0	8.42	8.34	8.30	8.35	≤ 13
	1	8.41	8.36	8.33	8.35	≤ 13
	2	8.41	8.32	8.34	8.35	≤ 13
	3	8.41	8.33	8.31	8.36	≤ 13

Table 8-153. Peak To Average Power Ratio Summary Data (LTE B13_1C_5M_4T)

Channel	Port	PAPR (dB)				Limit
	POIL	QPSK	16QAM	64QAM	256QAM	(dB)
Middle	0	8.37	8.35	8.31	8.41	≤ 13
	1	8.35	8.36	8.35	8.41	≤ 13
	2	7.62	7.63	7.62	7.63	≤ 13
	3	7.61	7.61	7.62	7.62	≤ 13

Table 8-154. Peak To Average Power Ratio Summary Data (LTE B13_1C_10M_4T)

Channel	Port	PAPF	Limit	
		QPSK	16QAM	(dB)
Middle	0	8.40	8.42	≤ 13
	1	8.41	8.39	≤ 13
	2	7.67	7.67	≤ 13
	3	7.66	7.65	≤ 13

Table 8-155. Peak To Average Power Ratio Summary Data (LTE B13_2C_5M+5M_4T)

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Channel	Port	PAPR (dB)	Limit
	FOIL	QPSK	(dB)
	0	8.49	≤ 13
Low	1	8.52	≤ 13
LOW	2	8.52	≤ 13
	3	8.50	≤ 13
	0	8.40	≤ 13
Middle	1	8.38	≤ 13
WIGGle	2	8.40	≤ 13
	3	8.39	≤ 13
	0	8.45	≤ 13
High	1	8.46	≤ 13
	2	8.49	≤ 13
	3	8.48	≤ 13

Table 8-156. Peak To Average Power Ratio Summary Data (LTE B13_1C_5M+NB-loT(1IB)_4T)

		PAPR (dB)					
Channel	Port	QPSK					
		LTE B13_1C_10M+ NB-IoT(2GB)	LTE B13_1C_10M+ NB-IoT(GB+IB)	LTE B13_1C_10M+ NB-IoT(IB+GB)	LTE B13_1C_10M+ NB-IoT(2IB)	(dB)	
Middle	0	8.66	8.47	8.50	8.42	≤ 13	
	1	8.69	8.46	8.51	8.44	≤ 13	
	2	7.76	7.88	7.88	8.46	≤ 13	
	3	7.76	7.87	7.88	8.46	≤ 13	

Table 7 103. Peak To Average Power Ratio Summary Data (LTE B13_1C_10M+NB-loT_4T)

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