

(2) Detailed power measurement results of 9 sets UL duty cycle configuration for n41:

0%≤ K1 ≤10% (The mobile phone is connected to the radio communication tester)

Set UL duty cycle=10%, $P_{\max} = 24.50$ (dBm) and $P_{\text{SAR}} = 6.00$ (dB), then $P_{\text{cmax}} = P_{\max} - \text{Max}(P_{\text{SAR}} - P_{\text{offset}} @k1, 0) = 24.50 - \text{Max}(6.00 - 10, 0) = 24.50$ (dBm), $P_{\text{cmax}}(\text{meas.}) = 24.48$ (dBm).

P_{cmax} (Meas.)(dBm)	24.48	UL duty cycle (Meas.)	10%
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10%< K2 ≤20% (The mobile phone is connected to the radio communication tester)

Set UL duty cycle=20%, $P_{\max} = 24.50$ (dBm) and $P_{\text{SAR}} = 6.00$ (dB), then $P_{\text{cmax}} = P_{\max} - \text{Max}(P_{\text{SAR}} - P_{\text{offset}} @k2, 0) = 24.50 - \text{Max}(6.00 - 6.5, 0) = 24.50$ (dBm), $P_{\text{cmax}}(\text{meas.}) = 24.49$ (dBm).

P_{cmax} (Meas.)(dBm)	24.49	UL duty cycle (Meas.)	20%
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20% < K3 ≤ 30% (The mobile phone is connected to the radio communication tester)

Set UL duty cycle=30%, $P_{\max} = 24.50$ (dBm) and $P_{\text{SAR}} = 6.00$ (dB), then $P_{\text{cmax}} = P_{\max} - \text{Max}(P_{\text{SAR}} - P_{\text{offset@k3, 0}}) = 24.50 - \text{Max}(6.00 - 5.0) = 23.50$ (dBm), $P_{\text{cmax}}(\text{meas.}) = 23.10$ (dBm).

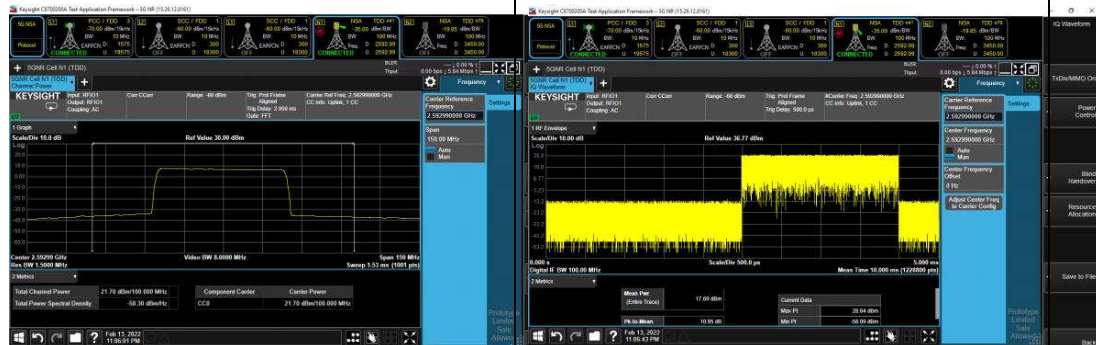
P_{cmax} (Meas.)(dBm)	23.10	UL duty cycle (Meas.)	30%
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30% < K4 ≤ 40% (The mobile phone is connected to the radio communication tester)

Set UL duty cycle=40%, $P_{\max} = 24.50$ (dBm) and $P_{\text{SAR}} = 6.00$ (dB), then $P_{\text{cmax}} = P_{\max} - \text{Max}(P_{\text{SAR}} - P_{\text{offset@k4, 0}}) = 24.50 - \text{Max}(6.00 - 3.5) = 22.00$ (dBm), $P_{\text{cmax}}(\text{meas.}) = 21.70$ (dBm).

P_{cmax} (Meas.)(dBm)	21.70	UL duty cycle (Meas.)	40%
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40%< K5 ≤50% (The mobile phone is connected to the radio communication tester)

Set UL duty cycle=50%, $P_{\max} = 24.50$ (dBm) and $P_{\text{SAR}} = 6.00$ (dB), then $P_{\text{cmax}} = P_{\max} - \text{Max}(P_{\text{SAR}} - P_{\text{offset}} @k5, 0) = 24.50 - \text{Max}(6.00 - 3.0) = 21.50$ (dBm) , $P_{\text{cmax}}(\text{meas.})=21.40$ (dBm).

P_{cmax} (Meas.)(dBm)	21.40	UL duty cycle (Meas.)	50%
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50%< K6 ≤60% (The mobile phone is connected to the radio communication tester)

Set UL duty cycle=60%, $P_{\max} = 24.50$ (dBm) and $P_{\text{SAR}} = 6.00$ (dB), then $P_{\text{cmax}} = P_{\max} - \text{Max}(P_{\text{SAR}} - P_{\text{offset}} @k6, 0) = 24.50 - \text{Max}(6.00 - 2.0) = 20.50$ (dBm) , $P_{\text{cmax}}(\text{meas.})=20.04$ (dBm).

P_{cmax} (Meas.)(dBm)	20.04	UL duty cycle (Meas.)	60%
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60%< K7 ≤70% (The mobile phone is connected to the radio communication tester)

Set UL duty cycle=70%, $P_{\max} = 24.50$ (dBm) and $P_{\text{SAR}} = 6.00$ (dB), then $P_{\text{cmax}} = P_{\max} - \text{Max}(P_{\text{SAR}} - P_{\text{offset@k7, 0}}) = 24.50 - \text{Max}(6.00 - 1.5, 0) = 20.00$ (dBm) , $P_{\text{cmax}}(\text{meas.})=19.61$ (dBm).

P_{cmax} (Meas.)(dBm)	19.61	UL duty cycle (Meas.)	70%
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70%< K8 ≤80% (The mobile phone is connected to the radio communication tester)

Set UL duty cycle=76%, $P_{\max} = 24.50$ (dBm) and $P_{\text{SAR}} = 6.00$ (dB), then $P_{\text{cmax}} = P_{\max} - \text{Max}(P_{\text{SAR}} - P_{\text{offset@k8, 0}}) = 24.50 - \text{Max}(6.00 - 0.5, 0) = 19.00$ (dBm) , $P_{\text{cmax}}(\text{meas.})=18.62$ (dBm).

P_{cmax} (Meas.)(dBm)	18.62	UL duty cycle (Meas.)	76%
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80% <K9 ≤100% (The mobile phone is connected to the radio communication tester)

Set UL duty cycle=88%, $P_{\max} = 24.50$ (dBm) and $P_{\text{SAR}} = 6.00$ (dB), then $P_{\text{cmax}} = P_{\max} - \text{Max}(P_{\text{SAR}} - P_{\text{offset@k9, 0}}) = 24.50 - \text{Max}(6.00 - 0, 0) = 18.50$ (dBm), $P_{\text{cmax}}(\text{meas.}) = 17.59$ (dBm).

When the UL duty cycle is high, such as 100%, the mobile phone and the radio communication tester cannot be established, SAR testing using factory test mode.

SAR testing is performed at $P_{\text{cmax}}(\text{meas.})$, and the measurement SAR(P_{cmax} meas.= 17.59 dBm) will be extended to report SAR(P_{cmax} tune up=18.50 dBm)

P_{cmax} (Meas.)(dBm)	17.59	UL duty cycle (Meas.)	88%
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*If there is only one TDD-UL-DL-Pattern configured, the UL Duty Cycle should be:

$\text{ULDutyCycle} = \text{UL symbols} / \text{Total symbols}$

$= (\text{nrofUplinkSymbols} + 14 * \text{nrofUplinkSlots}) / 14 * \text{Number of Slots via 38.213 v16.5 -11.1}$

*If there is more than one TDD-UL-DL-Pattern configured, the UL Duty Cycle should be:

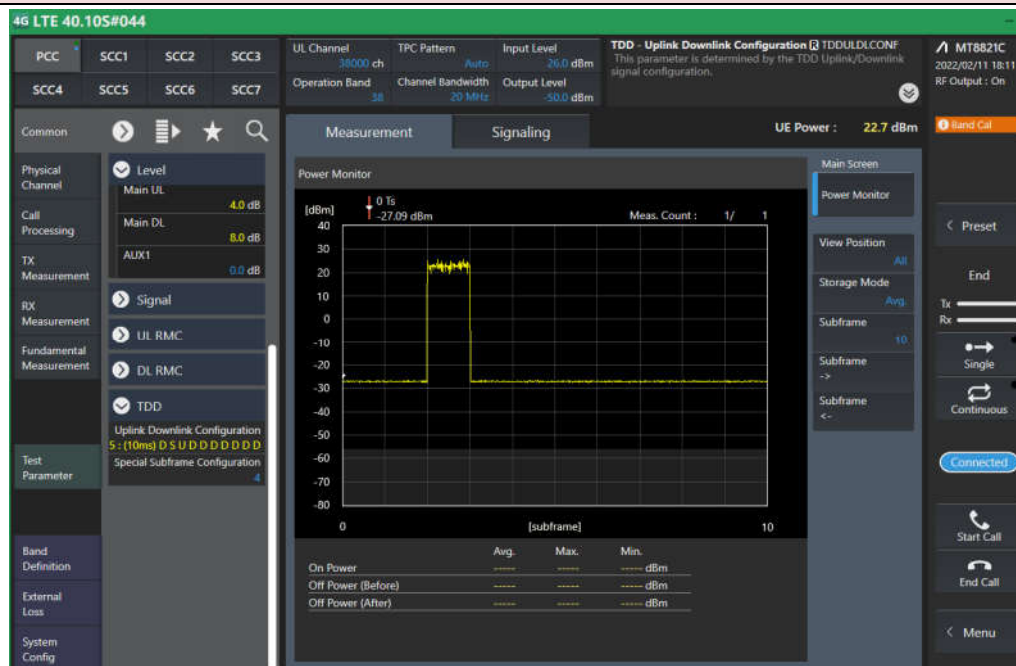
$\text{ULDutyCycle} = (\text{UL symbols}(\text{pattern 1}) + \text{UL symbols}(\text{pattern 2}) [+ \dots]) / 14 * (\text{Number of Slots in pattern1} + \text{pattern2} [+ \dots])$

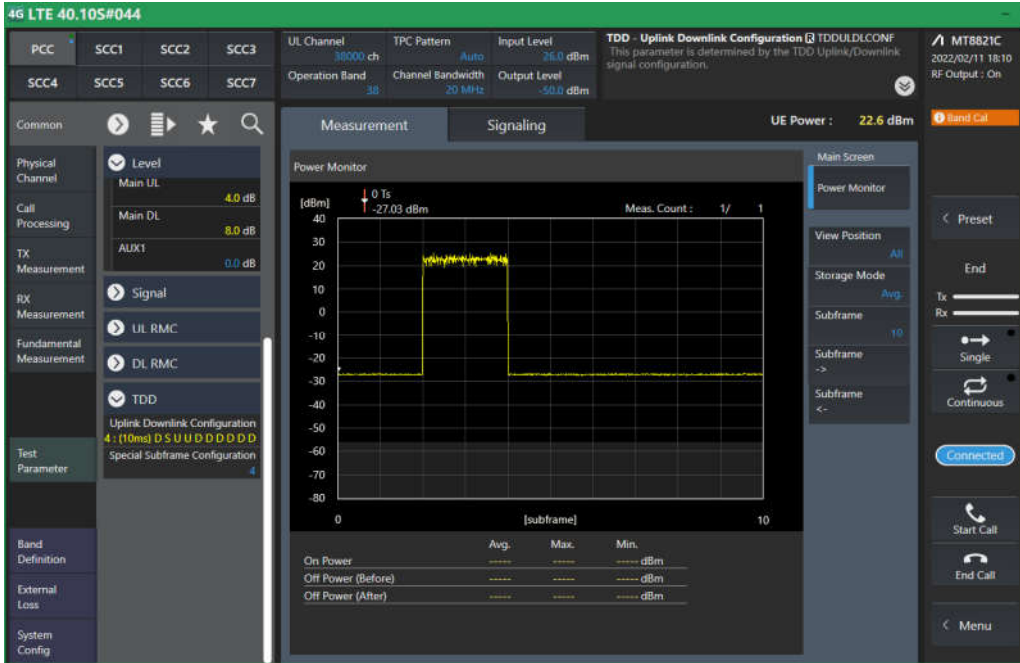
*If dl-UL-TransmissionPeriodicity-v1530 is configured, the UL Duty Cycle should follow dl-UL-TransmissionPeriodicity-v1530 instead.

Note: FDD NR has the same characteristics as TDD NR.

(3) Detailed power measurement results of 6 sets UL duty cycle configuration for B38:

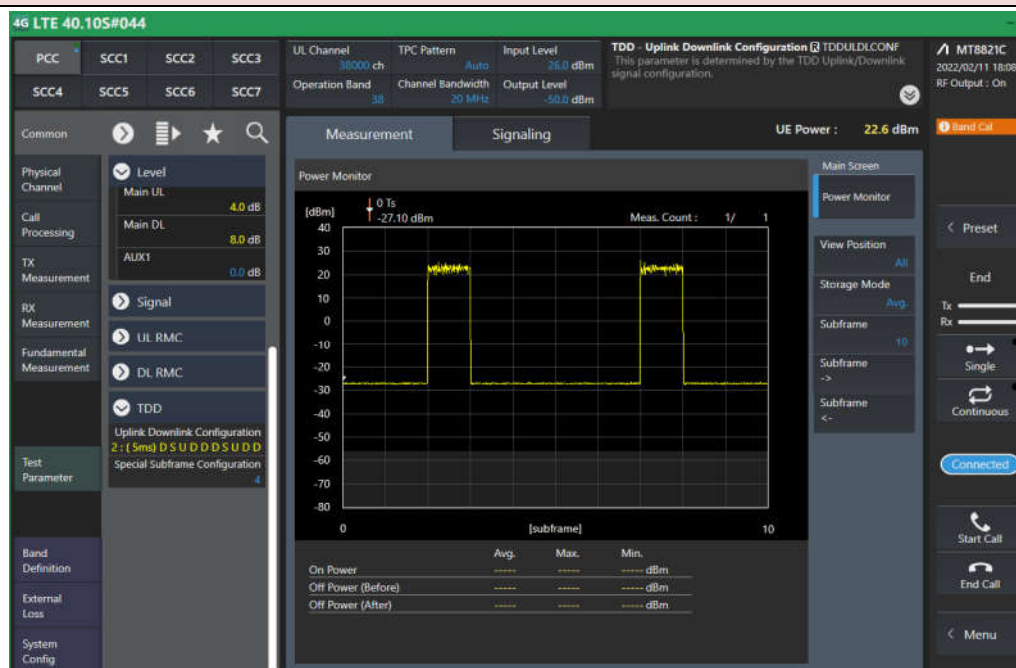
0%< K1 ≤20% (Config5)	P _{cmx} (Meas.)(dBm)	22.70	UL duty cycle (Meas.)	10.71%~11.67%
Set UL duty cycle=10.71% (uplink-downlink configuration 5 and special subframe configuration 4), P _{max} = 23.00 (dBm) and P _{SAR} = 2.50 (dB), then P _{cmx} = P _{max} – Max(P _{SAR} – P _{offset} @k1, 0) = 23.00-Max(2.50-5,0) = 23.00 (dBm) , P _{cmx} (meas.)=22.70 (dBm).				



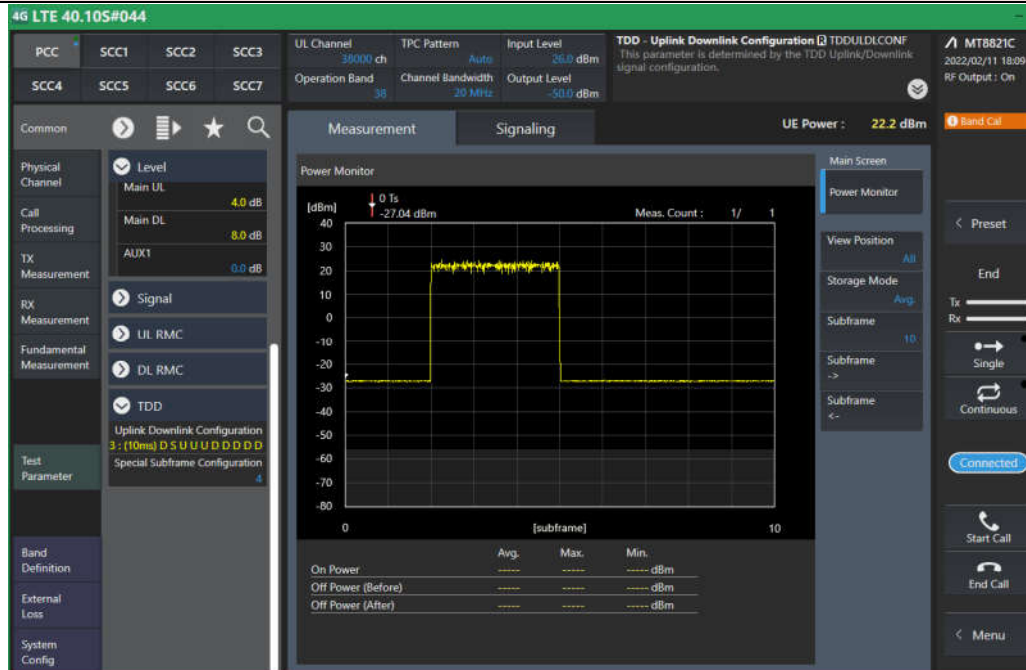
20%< K2≤ 30% (Config4)	P _{max} (Meas.)(dBm)	22.60	UL duty cycle (Meas.)	20.71%~21.67%
Set UL duty cycle=20.71% (uplink-downlink configuration 4 and special subframe configuration 4), P _{max} = 23.00 (dBm) and P _{SAR} = 2.50 (dB), then P _{max} = P _{max} - Max(P _{SAR} - P _{offset} @k2, 0) = 23.00-Max(2.50-3.5,0) = 23.00 (dBm) , P _{max} (meas.)=22.60 (dBm).				
				

20%< K2≤ 30% (Config2)	P _{max} (Meas.)(dBm)	22.60	UL duty cycle (Meas.)	21.43%~23.33%
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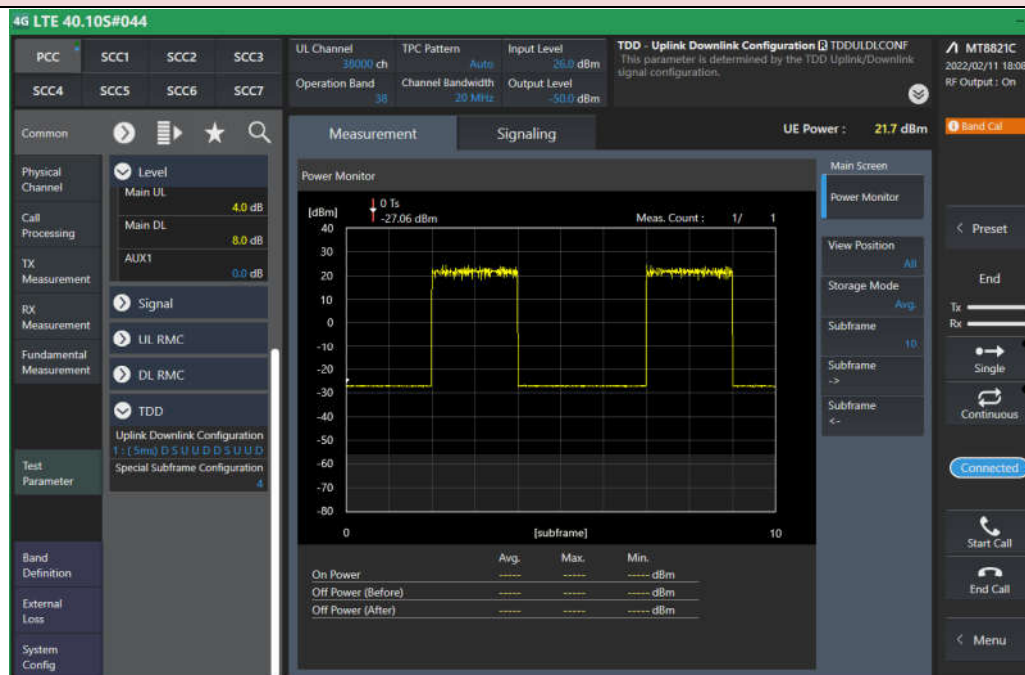
Set UL duty cycle=21.43% (uplink-downlink configuration 2 and special subframe configuration 4),
 $P_{\max} = 23.00$ (dBm) and $P_{\text{SAR}} = 2.50$ (dB), then $P_{\text{cmax}} = P_{\max} - \text{Max}(P_{\text{SAR}} - P_{\text{offset@k2}}, 0) = 23.00 - \text{Max}(2.50 - 3.5, 0) = 23.00$ (dBm) , $P_{\text{cmax}}(\text{meas.})=22.60$ (dBm).



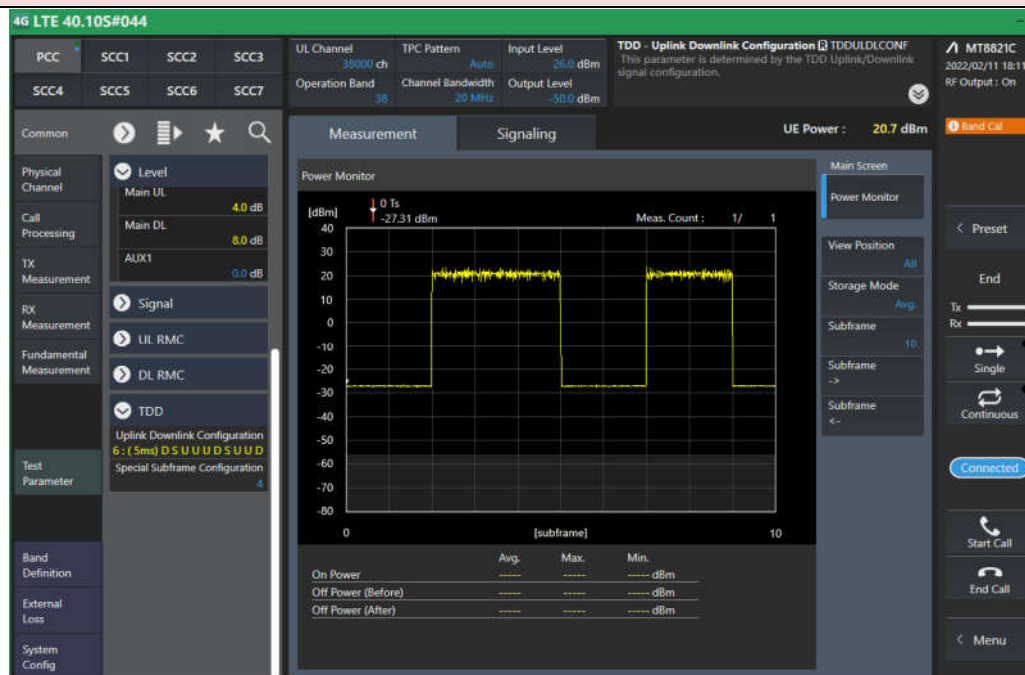
30%< K3 ≤40% (Config3)	P _{cmx} (Meas.)(dBm)	22.20	UL duty cycle (Meas.)	30.71%~31.67%
Set UL duty cycle=30.71% (uplink-downlink configuration 3 and special subframe configuration 4), P _{max} = 23.00 (dBm) and P _{SAR} = 2.50 (dB), then P _{cmx} = P _{max} – Max(P _{SAR} –P _{offset} @k3, 0) = 23.00-Max(2.50-2,0) = 22.50 (dBm) , P _{cmx} (meas.)=22.20 (dBm).				



40%< K4 ≤50% (Config1)	P _{cmx} (Meas.)(dBm)	21.70	UL duty cycle (Meas.)	41.43%~43.33%
Set UL duty cycle=41.43% (uplink-downlink configuration 1 and special subframe configuration 4), P _{max} = 23.00 (dBm) and P _{SAR} = 2.50 (dB), then P _{cmx} = P _{max} - Max(P _{SAR} - P _{offset@k4} , 0) = 23.00-Max(2.50-1.5,0) = 22.00 (dBm) , P _{cmx} (meas.)=21.70 (dBm).				



50%< K5 ≤60% (Config6)	P _{cmx} (Meas.)(dBm)	20.70	UL duty cycle (Meas.)	51.43%~53.33%
Set UL duty cycle=51.43% (uplink-downlink configuration 6 and special subframe configuration 4), P _{max} = 23.00 (dBm) and P _{SAR} = 2.50 (dB), then P _{cmx} = P _{max} - Max(P _{SAR} - P _{offset@k5} , 0) = 23.00-Max(2.50-0.5,0) = 21.00 (dBm) , P _{cmx} (meas.)=20.70 (dBm).				



60%< K6 ≤63.3% (Config0)	P_{cmx}(Meas.)(dBm)	20.20	UL duty cycle (Meas.)	61.43%~63.33%
Set UL duty cycle=61.43% (uplink-downlink configuration 0 and special subframe configuration 4), P _{max} = 23.00 (dBm) and P _{SAR} = 2.50 (dB), then P _{cmx} = P _{max} – Max(P _{SAR} – P _{offset@k6} , 0) = 23.00-Max(2.50-0,0) = 20.50 (dBm) , P _{cmx} (meas.)=20.20 (dBm). SAR testing is performed at P _{cmx} (meas.), and the measurement SAR(P _{cmx} meas.= 20.20 dBm) will be extended to report SAR(P _{cmx} tune up=20.50 dBm).				

Duty cycle = (30720Ts*Ups+Uplink Component*Specials)/ (307200Ts)

Uplink Component=UpPTS

Duty cycle = [(30720Ts*Ups) + UpPTS *Specials]/ (307200Ts)

Different Duty cycles under different configurations:

Uplink-Downlink configuration	Subframe number			Configuration of special subframe							
				Normal cyclice prefix in downlink				Extended cyclice prefix in downlink			
				Normal cyclice prefix in uplink		Extended cyclice prefix in uplink		Normal cyclice prefix in uplink		Extended cyclice prefix in uplink	
	D	S	U	configuration 0~4	configuration 5~9	configuration 0~4	configuration 5~9	configuration 0~3	configuration 4~7	configuration 0~3	configuration 4~7
0	2	2	6	61.43%	62.85%	61.67%	63.33%	61.43%	62.85%	61.67%	63.33%
1	4	2	4	41.43%	42.85%	41.67%	43.33%	41.43%	42.85%	41.67%	43.33%
2	6	2	2	21.43%	22.85%	21.67%	23.33%	21.43%	22.85%	21.67%	23.33%
3	6	1	3	30.71%	31.43%	30.83%	31.67%	30.71%	31.43%	30.83%	31.67%
4	7	1	2	20.71%	21.43%	20.83%	21.67%	20.71%	21.43%	20.83%	21.67%
5	8	1	1	10.71%	11.43%	10.83%	11.67%	10.71%	11.43%	10.83%	11.67%
6	3	2	5	51.43%	52.85%	51.67%	53.33%	51.43%	52.85%	51.67%	53.33%

Note: FDD LTE does not support UL duty cycle detection mechanism.

ANNEX L: Accreditation Certificate

United States Department of Commerce National Institute of Standards and Technology	
	
Certificate of Accreditation to ISO/IEC 17025:2017	
NVLAP LAB CODE: 600118-0	
Telecommunication Technology Labs, CAICT Beijing China	
<i>is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:</i>	
Electromagnetic Compatibility & Telecommunications	
<i>This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated January 2009).</i>	
2020-09-29 through 2021-09-30 Effective Dates	  For the National Voluntary Laboratory Accreditation Program

END OF REPORT