LTE Checklist according to KDB 941225

Based on *3GPP/LTE Permit-But-Ask and SAR Guidance*

#	Description	Parameter
1	Identify the operating frequency range of each LTE transmission band used by the device	777 to 787 MHz
2	Identify the channel bandwidths used in each frequency band; 1.4, 3, 5, 10, 15, 20 MHz etc	Band13 : 10MHz
3	Identify the high, middle and low (H, M, L) channel numbers and frequencies in each LTE frequency band	LTE Band13 - Bandwidth: 10MHz Ch No.: 23230 Frequency: 782MHz
4	Specify the UE category and uplink modulations used	UE Category: 3 Uplink modulation: QPSK, 16QAM
5	Descriptions of the LTE transmitter and antenna implementation & identify whether it is a standalone transmitter operating independently of other wireless transmitters in the device or sharing hardware components and/or antenna(s) with other transmitters etc	This model(VS840) has the same HW and one Tx antenna for CDMA US PCS EVDO/LTE. For details, please refer to the antenna distance document and block diagram.
6	Identify the LTE voice/data requirements in each operating mode and exposure condition with respect to head and body test configurations, antenna locations, handset flip-cover or slide positions, antenna diversity conditions etc	* Exposure conditions 1) Body SAR is required because LTE hotspot is supported. - Hotspot SAR: Front/Back/Right Edge/Left Edge/Bottom Edge C /Top Edge is required * For details, please refer to the antenna document.
7	Identify if Maximum Power Reduction (MPR) is optional or mandatory, i.e. built-in by design: a) only mandatory MPR may be considered during SAR testing, when the maximum output power is permanently limited by the MPR implemented within the UE; and only for the applicable RB (resource block) configurations specified in LTE standards b) A-MPR (additional MPR) must be disabled	MPR is mandatory. For details, please see the conducted power table. * Target MPR(10 MHz) - QPSK 1RB 0offset: 0dB, QPSK 1RB 49offset: 0dB - 16QAM 1RB 0offset: 1dB, 16QAM 1RB 49offset: 1dB - QPSK 25RB 13offset: 1dB, 16QAM 25RB 13offset: 2dB - QPSK 50RB 0offset: 1dB, 16QAM 50RB 0offset: 2dB A-MPR is always disabled during the SAR testing.
8	Include the maximum average conducted	Please see the conducted power table.

	output power measured on the required test channels for each channel bandwidth and UL modulation used in each frequency band: a) with 1 RB allocated at the upper edge of a channel b) with 1 RB allocated at the lower edge of a channel c) using 50% RB allocation centered within a channel d) using 100% RB allocation	

	Identify all other U.S. wireless operating modes (3G, Wi-Fi, WiMax, Bluetooth etc), device/exposure configurations (head and body, antenna and handset flip-cover or slide positions, antenna diversity conditions etc.) and frequency bands used for these modes	* Supported band & Exposure conditions
		
		1) Bluetooth 2.4GHZ
		
		  - Exposure conditions: BT SAR is not required due to the lower power
		
		   & antenna separation distance.
		
		2) WiFi 2.4GHz
		
		  - Exposure conditions: Head/Body SAR required
		
		    * WiFi hotspot is supported.

10	Include the maximum average conducted output power measured for the other wireless modes and frequency bands	Please find the conducted power table.
11	Identify the simultaneous transmission conditions for the voice and data configurations supported by all wireless modes, device configurations and frequency bands, for the head and body exposure conditions and device operating configurations (handset flip or cover positions, antenna diversity conditions etc.)	* Simultaneous transmission conditions 1) LTE Hotspot: LTE + WiFi 2) CDMA Voice + LTE 3) CDMA Voice + EVDO 4) CDMA Voice + LTE + WiFi data 5) CDMA Voice + EVDO+ WiFi data 6) EVDO Hotspot: EVDO + WiFi * CDMA EVDO & LTE doesn't transmit simultaneously. * DTM is not supported. For details about the simultaneous transmission configurations, Please refer to the table in VS840 simultaneous SAR case.xlsx
12	When power reduction is applied to certain wireless modes to satisfy SAR compliance for simultaneous transmission conditions, other	CDMA Voice + LTE simultaneously, LTE Tx Power backoff 4dB

	equipment certification or operating requirements, include the maximum average conducted output power measured in each power reduction mode applicable to the simultaneous voice/data transmission configurations for such wireless configurations and frequency bands; and also include details of the power reduction implementation and measurement setup	Please see the power backoff table file.
13	Include descriptions of the test equipment, test software, built-in test firmware etc. required to support testing the device when power reduction is applied to one or more transmitters/antennas for simultaneous voice/data transmission	Does not require
14	When appropriate, include a SAR test plan proposal with respect to the above	Does not require
15	If applicable, include preliminary SAR test data and/or supporting information in laboratory testing inquiries to address specific issues and concerns or for requesting further test reduction considerations appropriate for the device; for example, simultaneous transmission configurations	Does not require