

### WiMAX SAR Test reduction (Tx1)

5 MHz Channel BW							
Channel No.		Low		Middle		High	
Freuency(MHz)		2498.5		2593		2687.5	
SAR(W/kg)		measured	scaled	measured	scaled	measured	scaled
USB Horizontal-A	QPSK 1/2	Test reduction <sup>1</sup>		0.455	0.531	Test Reduction <sup>2</sup>	
USB Horizontal-B		0.455	0.56	1.17	1.365	0.691	0.815
USB vertiacl-C		Test reduction <sup>3</sup>		0.419	0.489	Test Reduction <sup>4</sup>	
USB vertiacl-D				0.319	0.372		
USB tail/end				0.335	0.391		
USB Horizontal-A	16QAM 1/2	Test reduction <sup>5</sup>					
USB Horizontal-B		0.491	0.604	1.12	1.365	0.681	0.855
USB vertiacl-C		Test reduction <sup>6</sup>					
USB vertiacl-D							
USB tail/end							
10 MHz Channel BW							
Channel No.		Low		Middle		High	
Freuency(MHz)		2501		2593		2685	
SAR(W/kg)		measured	scaled	measured	scaled	measured	scaled
USB Horizontal-A	QPSK 1/2	Test reduction <sup>7</sup>		0.581	0.675	Test reduction <sup>8</sup>	
USB Horizontal-B		0.594	0.705	1.06	1.232	0.897	1.104
USB vertiacl-C		Test reduction <sup>9</sup>		0.402	0.467	Test Reduction <sup>10</sup>	
USB vertiacl-D				0.285	0.331		
USB tail/end				0.321	0.373		
USB Horizontal-A	16QAM 1/2	Test reduction <sup>11</sup>					
USB Horizontal-B		0.464	0.548	1.13	1.335	0.851	1.045
USB vertiacl-C		Test reduction <sup>12</sup>					
USB vertiacl-D							
USB tail/end							

<sup>1</sup> Use the scaled SAR to determine test reduction (<0.8 W/kg etc.). SAR value of the Max. Conducted output power channel is less than 0.8 W/kg. Therefore low and high channel SAR test were saved.

<sup>2</sup> See footnote 1, supra.

<sup>3</sup> See footnote 1, supra.

<sup>4</sup> See footnote 1, supra.

<sup>5</sup> The 16QAM maximum output power is  $\leq \frac{1}{4}$  dB higher than QPSK and QPSK SAR is < 0.8 W/kg, 16QAM SAR is not needed.

<sup>6</sup> See footnote 5, supra.

<sup>7</sup> See footnote 1, supra.

<sup>8</sup> See footnote 1, supra.

<sup>9</sup> See footnote 1, supra.

<sup>10</sup> See footnote 1, supra.

<sup>11</sup> See footnote 5, supra.

<sup>12</sup> See footnote 5, supra.

### WiMAX SAR Test reduction (Tx2)

5 MHz Channel BW							
Channel No.		Low		Middle		High	
Freuency(MHz)		2498.5		2593		2687.5	
SAR(W/kg)		measured	scaled	measured	scaled	measured	scaled
USB Horizontal-A	QPSK 1/2	0.048	0.059	Test reduction <sup>13</sup>		Test Reduction <sup>14</sup>	
USB Horizontal-B		0.107	0.132				
USB vertiacI-C		0.076	0.093				
USB vertiacI-D		0.003	0.004				
USB tail/end		0.000137	0.0002				
USB Horizontal-A	16QAM 1/2	Test reduction <sup>15</sup>					
USB Horizontal-B							
USB vertiacI-C							
USB vertiacI-D							
USB tail/end							

10 MHz Channel BW							
Channel No.		Low		Middle		High	
Freuency(MHz)		2501		2593		2685	
SAR(W/kg)		measured	scaled	measured	scaled	measured	scaled
USB Horizontal-A	QPSK 1/2	0.041	0.049	Test reduction <sup>16</sup>		Test reduction <sup>17</sup>	
USB Horizontal-B		0.135	0.162				
USB vertiacI-C		0.087	0.104				
USB vertiacI-D		0.0044	0.005				
USB tail/end		0.00019	0.0002				
USB Horizontal-A	16QAM 1/2	Test reduction <sup>18</sup>					
USB Horizontal-B							
USB vertiacI-C							
USB vertiacI-D							
USB tail/end							

<sup>13</sup> Use the scaled SAR to determine test reduction (<0.8 W/kg etc.). SAR value of the Max. Conducted output power channel is less than 0.8 W/kg. Therefore middle and high channel SAR test were saved.

<sup>14</sup> See footnote 13, supra.

<sup>15</sup> The 16QAM maximum output power is  $\leq \frac{1}{4}$  dB higher than QPSK and QPSK SAR is < 0.8 W/kg, 16QAM SAR is not needed.

<sup>16</sup> See footnote 13, supra.

<sup>17</sup> See footnote 13, supra.

<sup>18</sup> See footnote 15, supra.