**Appendix G:**          **General SAR test reduction and exclusion guidance**

## KDB 447498

Section 4.3 General SAR test reduction and exclusion guidance

For Standalone SAR exclusion consideration, when SAR Exclusion Threshold requirement in KDB 447498 is satisfied, standalone SAR evaluation for general population exposure conditions by measurement or numerical simulation is not required.

The SAR Test Exclusion Threshold for operation in the 2400 – 2483.5 MHz band will be determined as follows

SAR Exclusion Threshold (SARET)

SAR Exclusion Threshold      =          Step 1 + Step 2

**Step 1**

$$NT = [(MP/TSD^A) * \sqrt{f_{GHz}}]$$

NT      =      Numeric Threshold (3.0 for 1-g SAR and 7.5 for 10-g SAR)
MP      =      Max Power of channel (mW) (inc tune up)
$TSD^A$      =      Min Test separation Distance or 50mm (whichever is lower) = 5mm (in this case)

We can transpose this formula to allow us to find the maximum power of a channel allowed and compare this to the measured maximum power.

$$= [(NT \times TSD^A) / \sqrt{f_{GHz}}]$$

For Distances Greater than 50 mm Step 2 applies

**Step 2**

$$(TSD^B - 50mm) * 10\}$$

Where:
$TSD^B$      =      Min Test separation Distance (mm) = 50

**Note:** Step 2 is not required here as the $TSD^A$ is 5mm.

**Operating Frequency 2.402 GHz**

SARET        =        $[(3.0 \times 5) / \sqrt{2.402}]$
SARET        =        9.68mW

**Operating Frequency 2.426 GHz**

SARET        =        $[(3.0 \times 5) / \sqrt{2.426}]$
SARET        =        9.63mW

**Operating Frequency 2.480 GHz**

SARET        =        $[(3.0 \times 5) / \sqrt{2.480}]$
SARET        =        9.53mW

| Channel Frequency (MHz) | EIRP (mW) | SAR Exclusion Threshold (mW) | SAR Evaluation |
|---|---|---|---|
| 2402 | 0.06 | 9.68 | Not Required |
| 2426 | 0.06 | 9.63 | Not Required |
| 2480 | 0.04 | 9.53 | Not Required |

**Therefore standalone SAR evaluation for general population exposure conditions by measurement or numerical simulation is not required.**