RADIO FREQUENCY EXPOSURE

EUT Specification

EUT	CB18
Frequency band (Operating)	☒ WLAN: 2.400GHz ~ 2.460GHz ☐ Others
Device category	☒ Portable (<20cm separation) ☐ Mobile (>20cm separation) ☐ Others
Exposure classification	☐ Occupational/Controlled exposure (S = 5mW/cm^2) ☒ General Population/Uncontrolled exposure (S=1mW/cm^2)
Antenna diversity	☒ Single antenna ☐ Multiple antennas ☐ Tx diversity ☐ Rx diversity ☒ Tx/Rx diversity
Max. output power	2.400-2.460GHz: 0.24mW
Antenna gain (Max)	0 dBi
Evaluation applied	☐ MPE Evaluation* ☐ SAR Evaluation ☒ N/A

Remark:

1. *The maximum output power is 0.24mW at 2460MHz (with 1 numeric antenna gain.)*
2. *DTS device is not subject to routine RF evaluation; MPE estimate is used to justify the compliance.*
3. *For mobile or fixed location transmitters, no SAR consideration applied. The maximum power density is 1.0 mW/cm^2 even if the calculation indicates that the power density would be larger.*

TEST RESULTS

No non-compliance noted.

eirp = pt× gt = $(E\times d)^2/30$

Where:

Pt = transmitter output power in watts,

gt = numeric gain of the transmitting antenna (unitless),

E = electric field strength in V/m, --- $10^{(dBuV/m)/20)}/10^6$

d = measurement distance in meters (m) --- 3m

So Pt = (E×d)2/30×gt

Maximum Field strength: 89.02 dBuV/m @3m –Channel high:2460MHz

Refer to FCC Part 15C 15.249 Test Report page 12.

Ant gain = 0dBi; so Ant numeric gain=1

So, Pt= $\{[(10^{(89.02/20)}/10^6)\times 3]^2/30\times 1\}\times 1000mW = 0.24$ mW

Standard Requirement:

According to 447498 D01 General RF Exposure Guidance v05

1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* ≤ 50 mm are determined by:

[(*max. power of channel, including tune-up tolerance, mW*)/(*min. test separation distance, mm*)] · [$\sqrt{f_{(GHz)}}$] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR,[16] where

- $f_{(GHz)}$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation[17]
- The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum *test separation distance* is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum *test separation distance* is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

Tune-up Maximum rated power (mW)		0.24
Body	Antenna to user (mm)	5
	Frequency(GHz)	2.460
	Test result	0.075
	SAR exclusion threshold	3

Per KDB 447498 D01v05r01 exclusion thresholds is 0.075< 3, RF exposure evaluation is not required.