

## SAR EXCLUSION JUSTIFICATION

This device FCC ID: **EF400155** is excluded from SAR testing by the following justification

The maximum power that the transmitter is capable of is **11.59** mW Applied duty cycle? **yes**

Using the following formula from section 4.3.1 of KDB 447498 at test separation distances  $\leq 50$  mm

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] * [\sqrt{f(\text{GHz})}]$$

When the minimum test separation distance is  $< 5$  mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

Duty Cycle	Max Peak Power (dBm)	Min Separation distance (mm)*	Frequency (GHz)
25.29%	16.61	5	0.922

Value
2.23

"Value" shall be  $\leq 3.0$  for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR

$< 50\text{mm}$ power limits for above frequency and distance	
<u>1-g power limit</u>	<u>10-g power limit</u>
156	391

"source-based" time-averaging based on an inherent property or duty-cycle of a device is allowed. An example of this is the determination of exposure from a device that uses digital technology such as a time-division multiple-access (TDMA) scheme for transmission

**In the case the ACK is received after first transmission: (25.29%)**  
 $\frac{\text{Packet Transmission Time}}{\text{Packet Transmission Time} + \text{Turnaround Time}}$

Maximum Size Packet Transmission Time = 3.047 ms/packet  
 Turnaround Time = 9ms

**In the case the ACK is missed after first transmission: (25.29%)**  
 $\frac{\text{Packet Transmission Time} + \text{Packet Transmission Time}}{\text{Packet Transmission Time} + \text{Turnaround Time} + \text{Packet Transmission Time} + \text{Turnaround Time}}$

Maximum Size Packet Transmission Time = 3.047 ms/packet  
 Turnaround Time & ACK Listen = 9ms