

Industry Canada Spec	RSS-102
Derivative	Issue 5
Date	Mar-15

Power Calculation for IC

Power Sources

	Zigbee	Z wave	Unit
Radiated Measured Power (dBm)	22.3	5	dBm
Margin on Peak (dB)	1	1	dBm
Max Radiated Power dBm	23.3	6	dBm
Linear Max Radiated Power (mW)	213.8	4.0	mW
Duty Cycle	0.27	0.10	
Average Radiated Power Linear (mW)	57.72	0.40	mW
Sum power linear (mW)	57.72	0.40	mW To be used for Sar Purposes

Limit Calculation (per 2.5.2)  $1.31 \times 10^{-2} \cdot f^{0.6834}$

	Z wave	Zigbee	
Frequency	908	2450	Mhz
2.5.2 limit	1.38	2.71	Watts

Under RSS-102 section 2.5.2

Limit	Zigbee	2.71	Watts
	Z wave	1.38	Watts
Measured	Zigbee	0.21	Watts
	Z wave	0.00	Watts

Pass Margin		2.50	Watts
		1.37	Watts

For 200mm spacing

FCC Spec	447498 D01 General RF Exposure Guidance v06
Derivative	v06
Date	23 September 2015

Power Calculation for IC

Power Sources

	Zigbee	Z wave	
Measured Conducted Power (dBm)	18.8	4	dBm
Antenna Gain (dBi)	3.5	1	dBi
Margin (dB)	2	1	dB
Max Radiated Power	24.3	6.0	dBm
Linear Max Power	269.2	4.0	mW
Duty	0.27	0.10	
Average Power Linear (mW)	72.67	0.40	mW
Frequency	2445.00	908.00	MHz

Calculation based on 447498, section 4.3.1 a

Sep Distance	200	200	mm
Result	0.57	0.00	
Total	0.57	As per FCC 4.3.2	
FCC Limit	<3 for 1g SAR	<7.5 for 10g SAR	
<b>Pass Margin</b>	<b>2.43</b>	<b>9.43</b>	