Appendix A: FCC Part 1.1307, 1.1310, 2.1091, 2.1093; IC RSS-Gen: RF Exposure

MPE Calculation – Co-Location of Z-wave module FCC ID: YL6-143450L and FCC ID: YL6-143IS205V4

Equation from page 18 of OET 65, Edition 97-01: $S = EIRP / (4 \pi R^2)$

FCC ID: YL6-143IS205V4

EUT operating frequency range: 912 - 924 MHz.

Therefore, limit for uncontrolled exposure: 0.6 mW/cm^2

EIRP = 16 mW

$S = 16/ (4*3.14*20^2) = 0.0032$ mW/cm^2 at 20 cm separation

FCC ID: YL6-143450L

EUT operating frequency: 908.4 MHz.

Therefore, limit for uncontrolled exposure: 0.6 mW/cm^2

Field strength = 89.1 dBuV/m @ 3 m

Using EIRP = E + 20 log(d) – 104.8 = 89.1 + 20 log(3) – 104.8 = -6.16 dBm = 0.24 mW

$S = 0.24/ (4*3.14*20^2) = 0.00005$ mW/cm^2 at 20 cm separation

MPE Summary

FCC ID	Frequency Range (MHz)	MPE (mW/cm^2)	Limit (mW/cm^2)
YL6-143IS205V4	912 – 924	0.0032	0.6
YL6-143450L	908.4	0.00005	0.6

FCC requirement: MPE1 + MPE2 < 0.6

Combined MPE = 0.00325 mW/cm^2

MPE as a fraction of the limit: 0.00325 / 0.6 = 0.54%

Therefore, the uncontrolled exposure limit is met at 20 cm when both transmitters are operating simultaneously.