FCCID: V63U-508

RF Exposure evaluation

According to 447498 D01 General RF Exposure Guidance v05
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)] ·[√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where
f(GHz) is the RF channel transmit frequency in GHz
Power and distance are rounded to the nearest mW and mm before calculation
The result is rounded to one decimal place for comparison

eirp = pt x gt = (EXd)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)/106
d = measurement distance in meters (m)---3m
So pt = (EXd)2/30 x gt

RF Exposure evaluation for LWM-5537
Copied from the FCC test report:

Carrier Frequency (MHz)	**Factual Level dBm (mW)**	**conducted output power dBm (mW)**
470.200	-5.3dBm(i.e.0.30 mW)	-5.4dBm(i.e.0.29 mW)
499.700	-5.5dBm(i.e.0.28 mW)	-5.6dBm(i.e.0.28 mW)
607.800	-5.5dBm(i.e 0.28 mW)	-5.6dBm(i.e 0.28 mW)

Carrier Frequency (MHz)	**Reading Level of conducted output power dBm (mW)**	**Antenna Gain (dBi)**	**Output power dBm (mW)**
470.200	-5.4dBm(i.e.0.29 mW)	0	-5.4dBm(i.e.0.29 mW)
499.700	-5.6dBm(i.e.0.28 mW)	0	-5.6dBm(i.e.0.28 mW)
607.800	-5.6dBm(i.e 0.28 mW)	0	-5.6dBm(i.e 0.28 mW)

tune-up tolerance=±1dB,

min. test separation distance = 5mm, since the min distance from the antenna to the outer = 7.0 mm

Field strength = -5.3 dBm=0.30 mW in 470.200MHz

Field strength = -5.5 dBm=0.28 mW in 499.700MHz

Field strength = -5.5 dBm=0.28 mW in 607.800MHz

Max. power of channel after included tune-up tolerance

Field strength = -4.3 dBm=0.37 mW in 470.200MHz

Field strength = -4.5 dBm=0.35 mW in 499.700MHz

Field strength = -4.5 dBm=0.35 mW in 607.800MHz

So (0.37 mW)/5.0mm)x √0.470200 GHz = 0.051 <3

So (0.35 mW)/5.0mm)x √0.499700 GHz = 0.050 <3

So (0.35 mW)/5.0mm)x √0.607800 GHz = 0.055 <3

SAR requirement: S=3.0

General RF Exposure<3

Then SAR evaluation is not required