Analysis Report

The equipment under test (EUT) is a transmitter for Luma Light Pool operating at 315MHz which is operated by a SAW resonator oscillator. The EUT is powered by one 3.0V Size CR 2025 battery. For more detailed features description, please refer to the user's manual.

Type of the antenna: Integral Antenna
Modulation Type: Pulse modulation
Antenna Gain: 0dBi
The nominal conducted output power specified: -16.00dBm (+/- 3dB)
The nominal radiated output power (e.r.p) specified: -18.15dBm (+/- 3dB)

According to the KDB 447498:

The worst-case peak radiated emission for the EUT is 80.2dBµV/m at 3m in the frequency 315MHz
The EIRP = [(FS*D) ^2 / 30] mW= -15.03dBm
The ERP = EIRP – 2.15 = -17.18 dBm
which is within the production variation.

The maximun conducted output power specified is -13.0dBm = 0.05mW
The source- based time-averaging conducted output power
= 0.05 * Duty Cycle mW < 0.05 mW (Duty Cycle < 100%)

The SAR Exclusion Threshold Level:
= 3.0 * (min. test separation distance, mm) / sqrt(freq. in GHz)
= 3.0 * 5 / sqrt (0.315) mW
= 26.7 mW

Since the source-based time-averaging conducted output power is well below the SAR low threshold level, so the EUT is considered to comply with SAR requirement without testing.

The duty cycle is simply the on-time divided by the period:
The duration of one cycle   = 73.333ms
Effective period of the cycle   = 4.5652ms+391.3µs x33=17.4781ms
DC = 17.4781ms / 73.333ms = 0.2383 or 23.83 %

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