

# **Annex no. 11**

# **Periodic Operation Characteristics**

15.231 (e) Intentional radiators may operate at a periodic rate exceeding that specified in paragraph (a) and may be employed for any type of operation, including operation prohibited in paragraph (a), provided the intentional radiator complies with the provisions of paragraphs (b) through (d) of this Section, except the field strength table in paragraph (b) is replaced by the following:

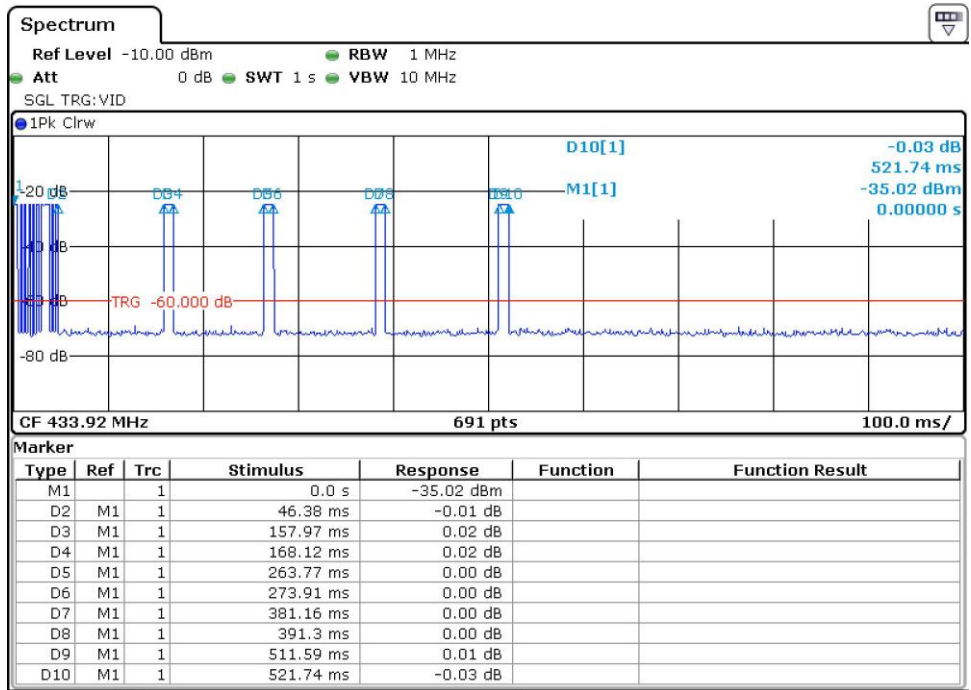
Fundamental Frequency (MHz)	Field Strength of Fundamental (microvolts/meter)	Field Strength of Spurious Emission (microvolts/meter)
40.66 - 40.70	1,000	100
70 - 130	500	50
130 - 174	500 to 1,500 **	50 to 150 **
174 - 260	1,500	150
260 - 470	1,500 to 5,000 **	150 to 500 **
Above 470	5,000	500

\*\* linear interpolations

[Where F is the frequency in MHz, the formulas for calculating the maximum permitted fundamental field strengths are as follows: for the band 130-174 MHz,  $\mu\text{V}/\text{m}$  at 3 meters =  $22.72727(F) - 2454.545$ ; for the band 260-470 MHz,  $\mu\text{V}/\text{m}$  at 3 meters =  $16.6667(F) - 2833.3333$ . The maximum permitted unwanted emission level is 20 dB below the maximum permitted fundamental level.]

In addition, devices operated under the provisions of this paragraph shall be provided with a means for automatically limiting operation so that the duration of each transmission shall not be greater than one second and the silent period between transmissions shall be at least 30 times the duration of the transmission but in no case less than 10 seconds.

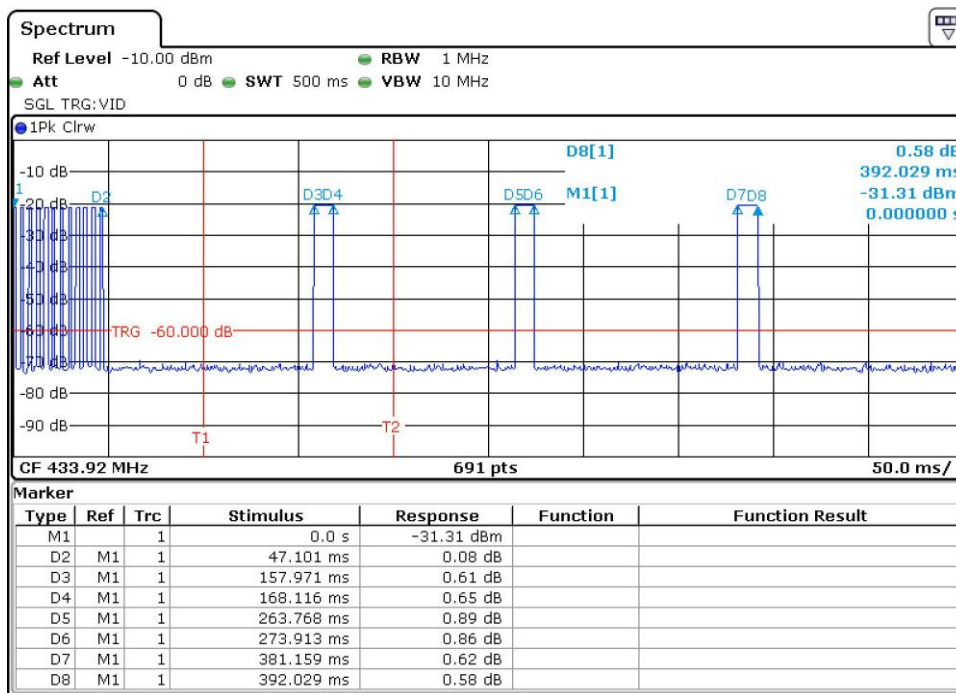
# Single burst



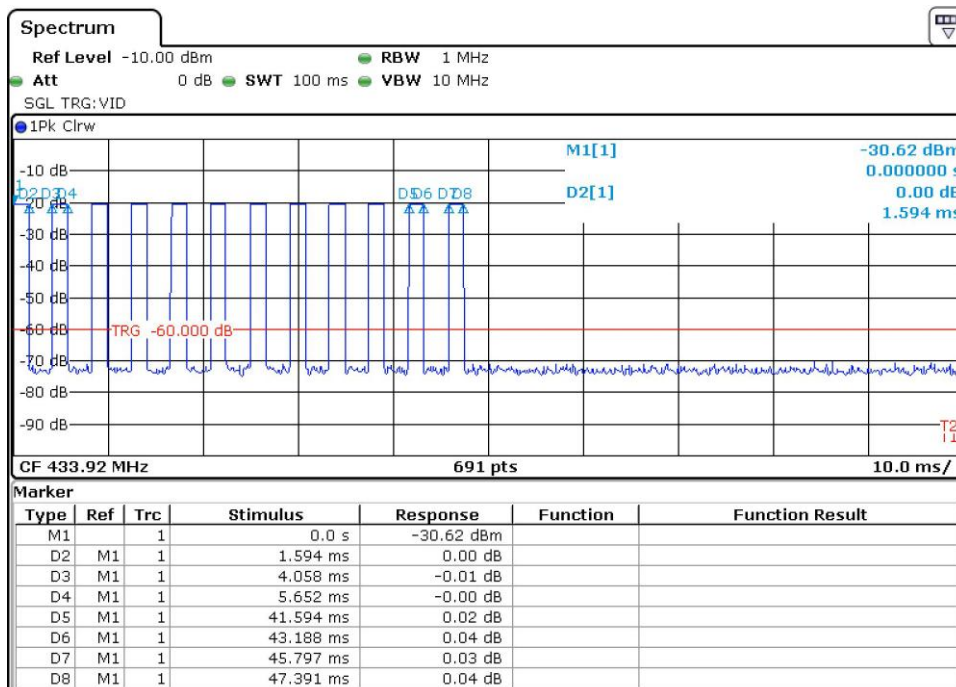
One burst : wake up pattern + 4 frames are sent all 16 seconds.

Burst duration : 521.74 ms  
 Silent period :  $\geq 15.6522$  seconds

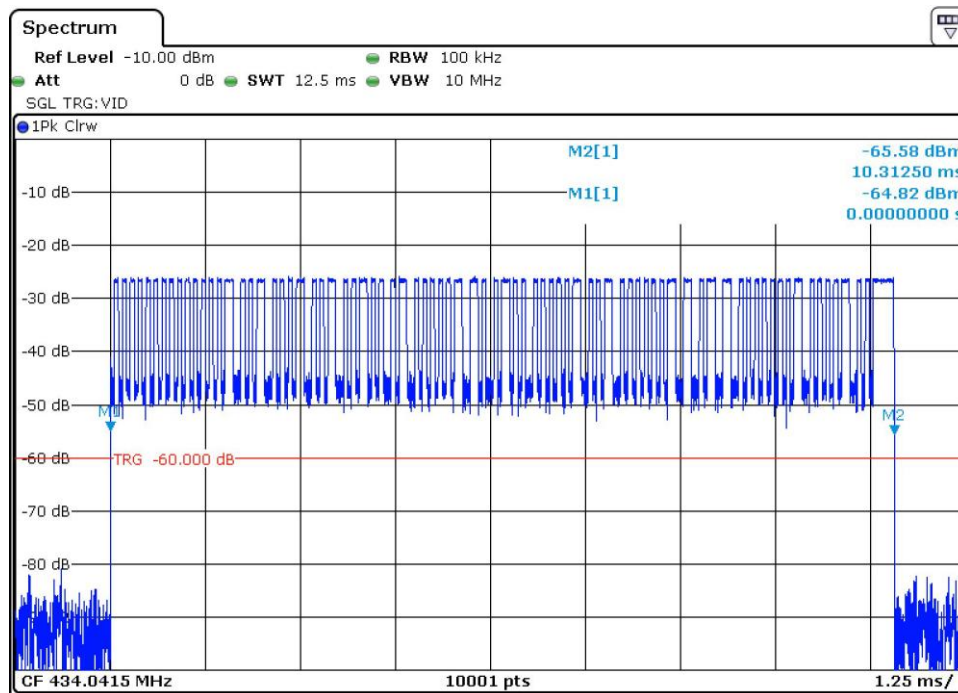
## Single burst



## Wake up pattern (ASK modulated)



## Single frame



(worst case transmission times)

The burst consists: one single pulse train (wake up) of 46.38 ms with 12 single pulses of 1.594 ms = 19.13 ms  
four frames of 10.31 ms

**The measured worst case duration for a single pulse transmission in any 100 ms time window is 19.128 ms.**

**Maximum transmitting duration in every 100 ms period: 19.128 ms**

**Averaging factor =  $20 \cdot \log(19.13/100) = -14.3$  dB**